Important Bird Areas in Antarctica

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Cover photograph

Adélie Penguin colony at Seabee Hook, Cape Hallett, Important Bird Area (IBA) ANT170 and Antarctic Specially Protected Area (ASPA) No.106. © *era-images* C. Harris 2010.

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Disclaimer

Any opinion, finding, conclusions or recommendations expressed in this work are those of the authors and do not necessarily reflect the views of the National Science Foundation or the governments or organisations that have supported the work.

Contents

List of acronyms and abbreviations

ACAP	Agreement on the Conservation of Albatrosses and Petrels
ADD	Antarctic Digital Database
ASPA	Antarctic Specially Protected Area
ASMA	Antarctic Specially Managed Area
ASI	Antarctic Site Inventory
ATS	Antarctic Treaty System
ATCM	Antarctic Treaty Consultative Meeting
CCAMLR	Convention on the Conservation of Antarctic Marine Living Resources
CEMP	CCAMLR Ecosystem Monitoring Programme
CI	Confidence Interval
COMNAP	Council of Managers of National Antarctic Programs
ERA	Environmental Research & Assessment
IAATO	International Association of Antarctica Tour Operators
IBA	Important Bird Area
IUCN	International Union for Conservation of Nature
NOAA	National Oceanic and Atmospheric Administration
SCAR	Scientific Committee on Antarctic Research

IUCN Red List status

NE	Not Evaluated
DD	Data Deficient
LC	Least Concern
NT	Near Threatened
VU	Vulnerable
EN	Endangered
CR	Critically Endangered
EW	Extinct in the Wild
EX	Extinct

Site Account Map legend

- *Aptenodytes* penguin - indicative location of breeding colony
- *Pygoscelis* or *Eudyptes* penguin - indicative location of breeding colony
- Flying bird - indicative location of breeding colony
- Station (year round)
- Station (summer only)
- Field hut
- Helicopter landing site
- Important Bird Area
- Important Bird Area - delisted
- Antarctic Specially Protected Area (ASPA)
- Antarctic Specially Managed Area (ASMA)
- Permanent ice
- Ice shelf
- Ice free ground
- Ocean

Introduction

Identifying those areas of Antarctica that are most important for birds has its roots in efforts to compile data on the distribution and abundance of Antarctic bird species initiated by the Scientific Committee on Antarctic Research (SCAR) Bird Biology Sub-Committee as early as the 1980s, then Chaired by John Croxall. Around the same time, BirdLife International established the Important Bird Area (IBA)[1] programme to provide a means of identifying sites of international conservation significance for the world's birds. To achieve this, BirdLife International has worked closely with organisations and individuals in the countries concerned. It was natural, therefore, that in the 1990s BirdLife International and SCAR formed a collaboration to compile an IBA inventory for Antarctica. This was initiated at the XXV SCAR Meeting in Concepción, Chile in 1998. Criteria for selection appropriate to Antarctica were agreed at the next meeting held in 2000 in Tokyo, Japan, based on IBA designation criteria established by BirdLife and used elsewhere in the world. SCAR and BirdLife International then held workshops on IBAs in Jena, Germany, in 2002 and in Texel, The Netherlands in 2004, and an initial list of IBAs was identified, which was reappraised by Fijn (2005).

After a gap of several years and with support from the United Kingdom, the initiative was renewed in 2010 to develop a definitive list for the Antarctic Peninsula, South Shetland Islands and South Orkney Islands, which was published in 2011 (Harris *et al*. 2011). This study identified 101 sites that met the BirdLife / SCAR IBA selection criteria (see definitions of IBA criteria below), and full details were published on the Data Zone of the BirdLife web site, from where this report can also be downloaded.

With further support from the Governments of Australia, New Zealand, Norway and the United States, and the Pew Charitable Trusts and British Birdwatching Fair 2014, the analysis was extended to include the remainder of Antarctica over 2013-15. First, global population estimates for each species, which determine the thresholds at which a site qualifies as an IBA, were reviewed and updated (Table 1). Drawing predominantly on peer-reviewed literature, in some cases supplemented by unpublished data made available by the science community and personal communications, breeding colony data were then analysed to identify those that meet the criteria, including a spatial analysis to assess where the criterion of 10 000 seabird pairs present within a defined areal unit was met.

The analysis proceeded on a regional basis, circulating initial results to specialists working in these regions for review and comment. As a result, revisions were made and the results for each region were then combined into a consolidated list for the whole of Antarctica. This list proposed 205 IBAs, and was circulated for further comment to more than 90 Antarctic bird scientists world-wide. Following a final round of consultation, the list was revised to give a total of 204 IBAs.

There are no definitive rules to determine the spatial extent of an IBA, and therefore no clear guidance on how to aggregate the breeding site data that determine whether an area meets the IBA selection criteria (Harris *et al.* 2011). A problem that arises in this context is known as the Modifiable Areal Unit Problem, which is a recognised difficulty in spatial analysis that arises when "the areal units … used in …geographical studies are arbitrary, modifiable, and subject to the whims and fancies of whoever is doing, or did, the aggregating" (Openshaw 1984). That is, results can be influenced by the particular choice of spatial unit used. Therefore Environmental Research & Assessment (ERA) developed a method based on a grid-analysis which serves as a more objective approach for the identification of breeding site IBAs. Specifically, after extensive analyses undertaken to determine breeding site IBAs in the Antarctic Peninsula region (Harris *et al.* 2011), the method employed identified an IBA where:

1. The count at an individual colony meets or exceeds the population thresholds set by BirdLife International for any of the species present at a site for any of the IBA criteria;
2. The result of summing the count at an individual colony for one or more species contained within a 5 km^2 area, or breeding on a landmass ≤ 5 km^2, exceeds the numeric threshold for criterion A4iii;
3. Individual colonies have been defined in accordance with the definitions given in the source data.

[1] In 2013, BirdLife International renamed the 'Important Bird Area' programme as the 'Important Bird and Biodiversity Area' programme (while retaining the acronym IBA) in order to reflect the way in which IBAs frequently capture much other significant biodiversity. However, the original name is retained here to avoid complications arising from the change of name in the final stages of the completion of this inventory.

The analysis has now been extended to include population data available for the breeding bird species listed in Table 1 for the whole of Antarctica south of 60° S. Data are relatively complete for the penguins, although are patchy and incomplete for other species, reflecting to some degree the ease with which different species may be counted. Recent advances in remote sensing platforms and methods have, for the first time, enabled global, synoptic estimates of numbers for Emperor Penguin (*Aptenodytes forsteri*) (Fretwell *et al*. 2012) and Adélie Penguin (*Pygoscelis adeliae*) (Lynch & LaRue 2014), although similar analyses for other species (e.g. Chinstrap (*Pygoscelis antarctica*) and Gentoo (*Pygoscelis papua*) penguins) have yet to be completed, and for some species may prove elusive owing to the difficulties of detecting clear breeding site spectral signatures because of their nesting habits (e.g. burrowing or widely spaced).

It should be noted that at this stage the IBA assessment has been made for breeding sites only, and the wider marine foraging areas of birds remain to be addressed. Consideration of the marine component of IBAs is vital, although is more complex (e.g. including factors such as foraging ecology, breeding colony sizes, physical oceanography, sea ice, prey species distributions, productivity etc.) and for practical reasons this report first gives attention to breeding sites; it is intended that assessment of the marine components will follow as quickly as possible.

Objectives

The aim of this study is to compile a revised and updated list of IBAs for Antarctica south of 60° S based on best available breeding site data for the species listed in Table 1.

Methods

ERA applied the same methodology that was used in the previous study to identify IBAs on the Antarctic Peninsula, South Shetland and South Orkney Islands (Harris *et al*. 2011). In this study, sites were evaluated on the basis of whether individual colonies (as identified in source data) met the thresholds for IBA listing using the selection criteria elaborated below. In addition, to determine whether a site, or sites, met the A4iii criterion of 10 000 seabird pairs present within a specific spatial area, concentrations of seabirds were analysed using a 5 km^2 grid overlay method. The predefined regular 5 km^2 grid was overlaid onto colony centroids for each bird species and the numbers of breeding pairs within each grid cell was then summed. The results were then used to identify grid cells within which the number of breeding pairs for all species present exceeded the A4iii population threshold of 10 000 pairs. When the criteria were met, the site qualified as an IBA, and its spatial extent was then determined using the rules to define the IBA boundary as summarised below.

Definitions of IBA selection criteria

The global (Level A) IBA criteria are used to identify IBAs in this report. These criteria were standardised for global application following extensive consultation amongst experts in the BirdLife International Partnership and related fields (Fishpool & Evans 2001). In some parts of the world additional criteria based on less stringent thresholds are used to identify IBAs of regional significance, although these have not been used in Antarctica.

The following definitions of the IBA selection criteria are based on Fishpool & Evans (2001):

A1: Globally threatened species.

“The site is known or thought regularly to hold significant numbers of a globally threatened species, or other species of global conservation concern”.

The site qualifies if it is known, estimated or thought to hold a population of a species categorized by the IUCN Red List as Critically Endangered (CR), Endangered (EN) or Vulnerable (VU). In general, the regular presence of a CR or EN species, irrespective of population size, at a site may be sufficient for a site to qualify as an IBA. For VU species, the presence of more than threshold numbers at a site is necessary to trigger selection. The site may also qualify if it holds more than threshold numbers of species in the Near Threatened (NT) category. Thresholds are set regionally, often on a species by species basis.

A2: Restricted range species.

"The site is known or thought to hold a significant component of a group of species whose breeding distributions define an Endemic Bird Area (EBA) or a Secondary Area."

A3: Biome-restricted assemblages.

"The site is known or thought to hold a significant component of the group of species whose distributions are largely or wholly confined to one biome."

A4: Globally important congregations.

A4i: "The site is known or thought to hold, on a regular basis, 1% or more of a biogeographic population of a congregatory waterbird species."

A4ii: "The site is known or thought to hold, on a regular basis, 1% or more of the global population of a congregatory seabird or terrestrial species."

A4iii: "The site is known or thought to hold, on a regular basis, at least 20 000 waterbirds, or at least 10 000 pairs of seabirds, of one or more species."

A4iv: "The site is known or thought to be a bottleneck site where at least 20 000 pelicans and / or storks and / or raptors and/ or cranes pass regularly during spring and / or autumn migration."

Criteria A2, A3 and A4iv are not relevant to the avifauna of Antarctica and so have not been used in this analysis.

Numerical criteria for IBA listing

Final identification of the IBAs requires definition of two main factors:

1. The number of birds breeding at each site by species, and whether these exceed the relevant IBA selection thresholds; and
2. The spatial extent of the site, or boundary of the IBA.

Specifically, the method employed identified an IBA by following the three methodological steps used by Harris *et al*. (2011) as set out in the Introduction (see foot of p.1).

The count for each site is based on totals given in source data for individual colonies. These colonies are represented within the database as points with an associated count. In some cases individual colonies are well-known and defined within a specific location, while in others both the numbers and the spatial delineation of the colony are only poorly defined. In some cases the spatial extent of the colony is unknown. Occasionally, populations have been estimated over a number of colonies which may be widely separated (e.g. by up to tens of kilometres), although only a total for the area is given in the source data.

Thus, in many cases data on numbers have been pre-aggregated at source, and there is no means to disaggregate according to specific colonies without access to original source data. Where possible, the presence, location and extent of colonies were verified against publicly available satellite imagery, for example using online tools such as Google Earth and Wikimapia (http://wikimapia.org). However, the quality of available imagery is highly variable, and it was not feasible to make an independent evaluation of every site within this study and in most cases the data used are those available from the published source.

Where specific colony boundaries are unknown, it has been assumed that the colony may be breeding on any part of the ice-free land available at the locality where they have been reported (with the exception of Emperor Penguins, all Antarctic birds require ice-free land on which to breed). In addition, in many cases the mapping of sites is poor and the specific location of an outcrop or small island on which birds are breeding is poorly described or uncharted. In these cases the location has to be estimated from available evidence, such as from reports, descriptions, maps and satellite images.

In view of these difficulties, there was a need to define criteria for estimating the breeding area of colonies, and hence the boundary of the IBA.

Table 1: Bird species of Antarctica included in this assessment and associated population thresholds required for IBA designation[2]

Name	Latin Name	Red List Status	IBA Criteria	Pop Threshold (pairs)[3]	Global Population (individuals)	Global Population (pairs)	Source
Emperor Penguin	*Aptenodytes forsteri*	NT	A1, A4ii	2380		238 000	Fretwell *et al*. 2012
Gentoo Penguin	*Pygoscelis papua*	NT	A1, A4ii	3900		387 000	Lynch 2012
Adélie Penguin	*Pygoscelis adeliae*	NT	A1, A4ii	37 900		3 790 000	Lynch & La Rue 2014
Chinstrap Penguin	*Pygoscelis antarctica*	LC	A4ii	27 000	8,000,000	~2 666 667	World Bird Database, BirdLife Int.
Macaroni Penguin	*Eudyptes chrysolophus*	VU	A1, A4ii	1500 (A1) 63 000 (A4ii)		6 300 000	Crossin *et al.* 2013
Wilson's Storm-petrel	*Oceanites oceanicus*	LC	A4ii	70 000	12-30 000 000	~4-10 000 000	Brooke 2004
Black-bellied Storm-petrel	*Fregetta tropica*	LC	A4ii	1600	500 000	~160 000	Brooke 2004
Light-mantled Albatross	*Phoebetria palpebrata*	NT	A1, A4ii	10 (A1), 200 (A4ii)	87 000	~20 000	ACAP 2010a
Southern Giant Petrel	*Macronectes giganteus*	LC	A4ii	500		~50 000	ACAP 2010b
Southern Fulmar	*Fulmarus glacialoides*	LC	A4ii	10 000	1 000 000	1 000 000	Creuwels *el al*. 2007
Antarctic Petrel	*Thalassoica antarctica*	LC	A4ii	30 000	10-20 000 000	~ 3 – 7 000 000	Brooke 2004
Cape Petrel	*Daption capense*	LC	A4ii	6700	2 000 000	~670 000	Brooke 2004
Snow Petrel	*Pagodroma nivea*	LC	A4ii	13 000	4,000,000	~1 300 000	Brooke 2004

[2] Table 1 has been updated to reflect data published since the IBA assessment was completed for the Antarctic Peninsula (Harris *et al*. 2011). Where available data were based on estimated number of individuals, in order to take into account juveniles in the population, this has been divided by three to give mature pairs.

[3] In some cases the same species may trigger more than one IBA criterion, for which the appropriate population thresholds may differ. Thus, the threshold for triggering IBA selection for a globally threatened species under criterion A1 may be lower than the threshold for the same species under category A4. Where A1 and A4 thresholds are identical the number given applies to both. The threshold of 10 000 pairs for category A4iii may be made up of one or more species.

Name	Latin Name	Red List Status	IBA Criteria	Pop Threshold (pairs)[3]	Global Population (individuals)	Global Population (pairs)	Source
Antarctic Prion	*Pachyptila desolata*	LC	A4ii	166 000	50 000 000	~16 600 000	Brooke 2004
Imperial (Antarctic) Shag	*Phalacrocorax* [*atriceps*] *bransfieldensis*	LC	A4i	133	40 000	~13333	Waterbirds Population Estimates IV - *bransfieldensis* treated as a subsp of *atriceps*
Snowy (Greater) Sheathbill	*Chionis albus*	LC	A4ii	100	10 000	10 000	Handbook of the Birds of the World
Kelp Gull	*Larus dominicanus*	LC	A4i	140	30 – 60 000	~10-20 000	Waterbirds Population Estimates V [Antarctic Peninsula & Atlantic sub-Antarctic Islands]
Antarctic Tern	*Sterna vittata*	LC	A4i	366	110 000	~36 666	Waterbirds Population Estimates III [S. *v. gaini* Antarctic Peninsula and S Shetland Islands?]
South Polar Skua	*Catharacta maccormicki*	LC	A4ii	50	10 000-19 999	~3000-7500	World Bird Database, BirdLife Int.
Brown Skua	*Catharacta antarctica*	LC	A4ii	75	10 000-19 999	~3000-7500	World Bird Database, BirdLife Int.
Seabirds (including all species of penguin, procellariiform, sheathbill and skua)			A4iii	10 000	N/A	N/A	
Waterbirds (including all species of shag, gull and tern)			A4iii	10 000	N/A	N/A	

Criteria for defining the IBA boundary

Having identified IBAs based on population criteria, further criteria are needed to define the spatial extent of the IBA boundary. Particular rules were defined for IBAs that coincide with existing protected areas because these are distinct, legally agreed areas that have management plans to regulate activities within their boundaries. In the case of Antarctic Specially Protected Areas (ASPAs), permits are required for entry. In most cases where an IBA has been identified within an ASPA, the site has been designated at least in part because of its ornithological values.

If the IBA occurs within an Antarctic Specially Protected Area (ASPA):

1. The boundary of the ASPA is used to define the IBA boundary.

If the IBA occurs within an Antarctic Specially Managed Area (ASMA):

1. Where the IBA occurs within a management zone designated by the ASMA, the boundary of the management zone is used to define the IBA boundary. For example, a number of Restricted Zones within ASMA No. 7 Palmer Basin and SW Anvers Island are identified as IBAs and the zone boundaries are used to define the IBA boundary.
2. Where the IBA occurs on distinct islands and one or more islands are contained within designated management zones, the IBA boundary is defined by the boundary of the management zones joined using the shortest practical perimeter.

If the IBA occurs outside of an ASPA or management zone within an ASMA:

1. Where data for birds triggering an IBA have been pre-aggregated over distinct islands, ice-free areas or a combination of ice-free areas and offshore islands and rocks, covering a total land area of >5 km^2, the IBA boundary is drawn using the shortest perimeter such that all land areas over which data are aggregated are incorporated into the IBA, adjusting the perimeter where appropriate so that it is follows the land coastline and/or limit of the ice-free areas where these features fall inside the area bounded by the shortest perimeter.
2. Where a breeding site triggering an IBA is located on a feature not present in the SCAR Antarctic Digital Database (v 6.0) base map, where practical an approximation of that feature was digitised onto the map from satellite imagery, and where this was not possible a circular limit with a 1.26 km radius around the point marking the breeding site centroid is used to define the IBA boundary (i.e. 5 km^2);
3. Where birds triggering an IBA are known or thought to breed on an island of ≤5 km^2, the island coastline is used to define the IBA boundary;
4. Where birds triggering an IBA are known or thought to breed on distinct islands within an island group and the island group covers a land area of ≤5 km^2, the IBA boundary is drawn using the shortest perimeter such that all islands within the group are incorporated into the IBA, adjusting the perimeter where appropriate so that it follows the island coastline. Note: where birds triggering an IBA breed both within an island group and on land outside of the island group, and the total land area for the island group + outside islands containing breeding birds covers ≤5 km^2, the island group and the islands containing breeding birds outside the island group will be included in the IBA;
5. Where birds triggering an IBA are known or thought to breed on distinct ice-free areas with a contained geographic area and the ice-free areas covers a land area of ≤5 km^2, the IBA boundary is drawn using the shortest perimeter such that all ice-free areas on which birds breed are incorporated into the IBA, adjusting the perimeter where appropriate so that it follows the coastline or limit of an ice-free area;
6. Where an IBA centroid is located on an ice-covered area on an island or other landmass that is >5 km^2, the limit of a 1.26 km radius around the IBA centroid, clipped to both the land coastline and the limit of the ice-free area, is used to define the IBA boundary.
7. Where two or more IBAs identified by the source data were less than 500 m in distance apart, these sites were assigned to belong within a single IBA comprising all sites.

It is recognised that the criteria used can result in clusters of IBAs within 'close' proximity. It would be entirely possible to vary the minimum separation distance between IBAs to obtain an alternative result, for example by merging those sites that are less than 1 km, or perhaps 10 or 20 km apart. Clearly, this would result in fewer, although larger IBAs. It is acknowledged that the 500 m threshold used for merging sites is arbitrary. The approach taken seeks to preserve, as far as practicable, the results offered given the resolution of the source data, and to minimise merging. However, where two or more IBAs had been identified less than 500 m apart, there seemed little practical benefit to defining

the sites separately. Practical management of the sites, should it be required, would most likely need to consider such adjacent sites as a unit. We have attempted to represent the source data as faithfully as possible, while being pragmatic, although it is recognised that other minimum separation distances could be used.

If evidence emerges that supports the case to group identified IBAs into larger units based on alternative criteria, then the analysis could be re-run to reflect the best scientific case for appropriate spatial units. For example, evidence for merging IBAs may appear from new studies being conducted on the genetic similarities of spatially distributed populations of the same species (T. Hart pers. comm. 2011), and further studies on foraging ranges and identified feeding grounds out to sea, as opposed to concentrating on breeding localities, may inform alternative spatial configurations for Antarctic IBAs in the future. For the moment, however, there remains insufficient data on which to base such alternative configurations across the whole of the Antarctic, and there further research is needed before a practical set of IBAs boundaries could be defined that take such factors into account.

It should be noted that Emperor Penguins are less philopatric than land-breeding Antarctic birds, as their breeding areas are dependent on sea-ice conditions in a given season, and may also be affected by major events such as glacier calving, ice shelf cracking, or the movement of large icebergs, which can substantially alter customary breeding sites. Thus, while the birds return to the same general areas to breed, these may vary by several to dozens of km over time. Moreover, the size and position of breeding areas often vary throughout the season, and these may sub-divide into a number of sub-colonies. However, available data show that colonies tend to re-occupy the same general locations on a regular basis, and as such their presence at the sites identified is reasonably predictable. The spatial representation of IBAs for Emperor Penguin breeding sites is intended as an approximation based on available data, and it is recognised that actual breeding sites will vary in both size and position from year to year and within any given season.

Limitations in data sources

Recent assessments for several species using remote sensing (e.g. Barber-Meyer *et al*. 2007; Fretwell *et al*. 2012; Schwaller *et al*. 2013; Lynch & LaRue 2014; Lynch & Schwaller 2014) offer a more complete, recent and synoptic view of the status of Antarctic bird populations, in particular for penguins. Numerous colonies previously unknown have been identified, some of which appear to comprise tens of thousands of breeding pairs. These studies have significantly expanded our knowledge of the abundance and distribution of penguins, and this helps inform our view of their conservation status. However, it should be noted that these techniques are relatively new, and results remain subject to considerable margins of error compared to traditional nest counts made on the ground. Despite the weaknesses apparent in the techniques, remote sensing remains the only practical means to gather data on a synoptic scale for so many remote colonies, many of which are rarely, if ever, visited. In addition, remote sensing resolution, image quality and processing techniques are improving rapidly, and it is anticipated that results will continue to become more reliable. The technique offers great promise to become an increasingly important monitoring tool for several penguin species. For these reasons, recent remote sensing studies have been utilised extensively in the IBA assessment, and in some cases these are the only data available. However, the potential for considerable error to be present in results from remote sensing is acknowledged. Therefore, where specific Confidence Intervals (CIs) are available in the published sources, these have been presented along with the mean population count.

In general, counts presented in this report have been drawn direct from original sources. In some cases numbers in these sources are given to a precision down to an individual bird (e.g. 5001, as opposed to ~5000), giving a false impression of the degree of accuracy that actually exists in the source data. In this report, numbers have been quoted as they appear without rounding, although it is acknowledged that these source data generally do not possess accuracies to the individual bird. This practice has been adopted to provide an 'audit trail' so that readers can return to original sources and make comparisons should they wish. We have found in compiling this report that this is often helpful to trace the origin of a particular observation, and to identify errors.

Counts presented in this report are generally given as the number of breeding pairs. One exception to this rule has been made for Emperor Penguin counts given in the study by Fretwell *et al*. (2012), who reported estimates of the number of birds present at the time of image acquisition. Imagery used in this study was mostly acquired late in the breeding season (Oct / Nov), at a time when many adults have departed and chicks remaining have light grey plumage that is difficult to detect against the ice background. As a result, chicks at this time are almost invisible on satellite

images at current resolutions, and adults in evidence (which are likely to comprise both males and females) are not a particularly reliable indicator of the size of the breeding population that was present earlier in the season (B. Wienecke pers. comm. 2015). Thus, we have reported the number of birds in accordance with the data presented in Fretwell *et al*. (2012), but have not presented these as 'breeding pairs'. However, in order to determine whether a site met the threshold of 2380 pairs (Table 1) to qualify as an IBA, the total number of birds given in Fretwell *et al*. (2012) was assumed to provide a rough estimate of a minimum number of breeding pairs. In practice, it is highly likely these are underestimates of the breeding populations at these sites for reasons given above, although for the purposes of identifying whether or not the site qualifies as an IBA, this is currently the best estimate possible when using the Fretwell *et al*. (2012) results. Because this is likely to be an underestimate, improved data would be likely to reaffirm rather than refute IBA status, although it is recognised that considerable uncertainty remains over these results.

In this report the most reliable and recent counts available have been used for the purposes of determining whether a site meets IBA criteria. Where several recent counts were available, for example from a ground count and from satellite image analysis, both are presented. Where practicable, example historical data are also presented to provide a better context against which to interpret the recent census results. In many cases, the only counts available are those for a single year, and it is recognised that samples of this nature are subject to error because of the inter-annual fluctuations in Antarctic bird breeding populations. In some studies, a mean colony count over a number of years has been made, although this is the exception rather than the rule. For example, Lyver *et al.* (2014) calculated mean counts for Adélie Penguin colonies in the Ross Sea over the periods for which census data were available, which varies by colony. In other publications (e.g. Woehler 1993), census data originate from particular breeding seasons, reflecting the size of colonies at particular points in time. Averaging census data offers the benefit of taking into account the natural population fluctuations between years, and these results have been used where available in the current assessment. However, where numbers are following a trend of increase or decline, the mean population may mask the current status of a site. Some examples of where this is apparent have been noted in the report.

Review and comment on initial results

The initial draft list of IBAs prepared by SCAR in 2002 was compiled from data available at the time and through expert judgement and a consultation process that involved several international workshops. The present analysis extended this initial assessment by including more recent data and by undertaking a formal spatial analysis of the data to identify IBA boundaries. In some cases, where time allowed, queries were raised with individual authors and / or data contributors to resolve ambiguities in published data, for example over the existence, location or size of many colonies. In addition, over the course of the present assessment drafts were distributed to a wide range of Antarctic bird experts for review and comment with a view to identifying errors and omissions. Numerous helpful comments were received and these have resulted in corrections and adjustments to both published and unpublished data, sometimes allowing for finer analysis than would otherwise be possible using the published sources, especially where source data had been spatially aggregated. Instances where this occurs have been identified in the report as 'unpublished data' and / or by 'Contributor, pers. comm., Year'. While perhaps ideally more of this should be done, there were limits to the time and budget available for the current study, and this constrained the extent to which the authors could further investigate and verify data in original sources for every site. Several sites identified in Harris *et al*. (2011) were found no longer to qualify and are shown as 'de-listed'.

Results

The results of the analysis confirmed 204 sites in the region meet the IBA designation criteria, as listed in Table 2. Site locations are illustrated in Maps 1 - 8. Map 1 provides an overview of the distribution of IBAs across Antarctica, while Maps 2-8 provide more detailed regional overviews. Site descriptions, summaries of the bird data on which the assessment was made, and site maps showing colony locations are provided in the IBA Site Accounts.

Of the IBAs that coincide with ASPAs (Table 2), 27 lie within those ASPAs that have been designated for values mainly or at least in part related to avifauna, three encompass or coincide with ASPAs protected for reasons other than avifauna, such as historic or terrestrial values, while a further three lie on the boundary of a marine ASPA. Two sites that no longer qualify as IBAs are designated ASPAs. Nine IBAs lie within three ASMAs (Table 2).

Table 2: List of breeding site IBAs in Antarctica.

IBA No.	Location	Trigger species (IBA criteria)	Former IBA No. (2011)	ASPA No.	ASMA No.	Comment
001	Larsen Islands / Moreton Point	Chinstrap Penguin (A4ii), Seabirds – Chinstrap Penguin (A4iii)	100			
002	Gibbon Bay, Coronation Island	Seabirds – Chinstrap Penguin (A4iii)	096			
003	Eillium Island	Seabirds – Chinstrap Penguin (A4iii)	083			
004	Weddell Islands	Seabirds – Adélie Penguin (A4iii)				
005	Pirie Peninsula, Laurie Island	Imperial Shag (A4i) Seabirds – Chinstrap Penguin (A4iii)	085			
006	Ferguslie Peninsula, Laurie Island	Seabirds – Chinstrap Penguin (A4iii)	086			
007	Watson Peninsula, Laurie Island	Seabirds – Chinstrap Penguin (A4iii)	087			
008	Fraser Point, Laurie Island	Seabirds – Chinstrap Penguin (A4iii)	088			
009	Buchanan Point, Laurie Island	Seabirds – Chinstrap Penguin (A4iii)	089			
010	Ferrier Peninsula / Graptolite Island, Laurie Island	Adélie Penguin (A1, A4ii) Seabirds – Adélie Penguin (A4iii)	090			
011	Cape Whitson, Laurie Island	Seabirds – Chinstrap Penguin (A4iii)	080			
012	Point Martin, Laurie Island	Seabirds – Adélie Penguin, Chinstrap Penguin (A4iii)	081			
013	Islet SW of Cape Davidson, Laurie Island	Imperial Shag (A4i)	082			
014	Cape Robertson, Laurie Island	Seabirds – Chinstrap Penguin (A4iii)	084			
015	Southern Powell Island and adjacent islands	Gentoo Penguin (A1, A4ii) Chinstrap Penguin (A4ii) Imperial Shag (A4i) Southern Giant Petrel (A4ii) Seabirds – Chinstrap Penguin (A4iii)	093	111		
016	Atriceps Island, Robertson Islands	Imperial Shag (A4i)	091			
017	Robertson Islands	Chinstrap Penguin (A4ii) Seabirds – Chinstrap Penguin (A4iii)	092			
018	Shingle Cove, Coronation Island	Seabirds – Adélie Penguin (A4iii)	097			
019	Signy Island	Imperial Shag (A4i) Southern Giant Petrel (A4ii) Wilson's Storm-petrel (A4ii) Brown Skua (A4ii)	095			

IBA No.	Location	Trigger species (IBA criteria)	Former IBA No. (2011)	ASPA No.	ASMA No.	Comment
		Seabirds – Adélie, Chinstrap Penguin, Wilson's Storm-petrel, Southern Fulmar (A4iii)				
020	Moe Island	Seabirds – Chinstrap Penguin (A4iii)	094	109		
021	Gosling Islands	Seabirds – Chinstrap Penguin (A4iii)	098			
022	Return Point / Cheal Point, Coronation Island	Chinstrap Penguin (A4ii) Seabirds – Chinstrap Penguin (A4iii)	099			
023	Inaccessible Islands	Southern Fulmar (A4ii) Seabirds – Southern Fulmar (A4iii)	101			
024	Sugarloaf Island, Clarence Island	Chinstrap Penguin (A4ii) Seabirds – Chinstrap Penguin (A4iii)	079			
025	Cape Bowles, Clarence Island	Chinstrap Penguin (A4ii) Seabirds – Chinstrap Penguin (A4iii)	076			
026	Craggy Point, Clarence Island	Macaroni Penguin (A1) Southern Fulmar (A4ii) Seabirds – Chinstrap Penguin, Southern Fulmar (A4iii)	077			
027	Chinstrap Cove, Clarence Island	Seabirds – Chinstrap Penguin (A4iii)	078			
028	Seal Islands	Seabirds – Chinstrap Penguin (A4iii)	075			
029	Saddleback Point, Elephant Island	Seabirds – Chinstrap Penguin (A4iii)	072			
030	Point W of Walker Point, Elephant Island	Seabirds – Chinstrap Penguin (A4iii)	073			
031	Mount Elder, Elephant Island	Seabirds – Chinstrap Penguin (A4iii)	074			
032	Point W of Cape Lookout, Elephant Island	Seabirds – Chinstrap Penguin (A4iii)	070			
033	Stinker Point, Elephant Island	Seabirds – Chinstrap Penguin (A4iii)	071			
034	Gibbs Island	Macaroni Penguin (A1) Chinstrap Penguin (A4ii) Southern Fulmar (A4ii) Seabirds – Chinstrap Penguin (A4iii)	069			
035	Aspland Island / Eadie Island	Southern Fulmar (A4ii) Seabirds – Southern Fulmar, Chinstrap Penguin (A4iii)	067			
036	O'Brien Island	Seabirds – Chinstrap Penguin (A4iii)	068			
	Stigant Point, King George Island	Seabirds – Chinstrap Penguin (A4iii)	054			delisted

IBA No.	Location	Trigger species (IBA criteria)	Former IBA No. (2011)	ASPA No.	ASMA No.	Comment
037	Eastern Litwin Bay, King George Island	Seabirds – Chinstrap Penguin (A4iii)	055			
038	Tartar Island, King George Island	Seabirds – Chinstrap Penguin (A4iii)	056			
039	Kellick Island, King George Island	Seabirds – Chinstrap Penguin (A4iii)	057			
040	Owen Island, King George Island	Seabirds – Chinstrap Penguin (A4iii)	058			
041	Pottinger Point, King George Island	Chinstrap Penguin (A4ii) Seabirds – Chinstrap Penguin (A4iii)	059			
042	False Round Point, King George Island	Chinstrap Penguin (A4ii) Seabirds – Chinstrap Penguin (A4iii)	060			
043	Milosz Point / Czeslaw Point, King George Island	Seabirds – Chinstrap Penguin (A4iii)	061			
044	North Foreland, King George Island	Seabirds – Chinstrap Penguin (A4iii)	062			
	Cape Melville, King George Island	Seabirds – Chinstrap Penguin (A4iii)	063			delisted
	Penguin Island, King George Island	Southern Giant Petrel (A4ii) Seabirds – Adélie & Chinstrap Penguin (A4iii)	064			delisted
	Lions Rump, King George Island	Seabirds – Adélie Penguin (A4iii)	065	151		delisted
045	Point Hennequin, King George Island	South Polar Skua (A4ii)			001	
046	West Admiralty Bay, King George Island	Gentoo Penguin (A1, A4ii) Seabirds – Adélie, Chinstrap & Gentoo Penguin (A4iii)	066	128	001	
047	Potter Peninsula, King George Island	South Polar Skua (A4ii)	052	132		
048	Ardley Island, King George Island	Gentoo Penguin (A1, A4ii)	053	150		
049	Harmony Point, Nelson Island	Chinstrap Penguin (A4ii) Snowy Sheathbill (A4ii) Seabirds – Chinstrap Penguin (A4iii)	051	133		
050	Heywood Island	Chinstrap Penguin (A4ii) Seabirds – Chinstrap Penguin (A4iii)	050			
051	Yankee Harbour, Greenwich Island	Gentoo Penguin (A1, A4ii)	049			
052	Half Moon Island	South Polar Skua (A4ii)	048			
053	Barnard Point, Livingston Island	Seabirds – Chinstrap Penguin (A4iii)	047			
054	Byers Peninsula, Livingston Island	Antarctic tern (A4i) Kelp Gull (A4i)	045	126		

IBA No.	Location	Trigger species (IBA criteria)	Former IBA No. (2011)	ASPA No.	ASMA No.	Comment
	Cape Shirreff, Livingston Island	Seabirds – Chinstrap Penguin (A4iii)	046	149		delisted
055	Baily Head, Deception Island	Chinstrap Penguin (A4ii) Seabirds – Chinstrap Penguin (A4iii)	044		004	
056	Vapour Col, Deception Island	Seabirds – Chinstrap Penguin (A4iii)	043		004	
057	Cape Wallace, Low Island	Chinstrap Penguin (A4ii) Seabirds – Chinstrap Penguin (A4iii)	041			ASPA 152 protects adjacent marine area
058	Cape Hooker, Low Island	Seabirds – Chinstrap Penguin (A4iii)	042			
059	Cape Garry, Low Island	Chinstrap Penguin (A4ii) Seabirds – Chinstrap Penguin (A4iii)	039			ASPA 152 protects adjacent marine area
060	Jameson Point, Low Island	Seabirds – Chinstrap Penguin (A4iii)	040			ASPA 152 protects adjacent marine area
061	Ambush Bay, Joinville Island	Seabirds – Adélie Penguin (A4iii)				
062	Danger Islands	Adélie Penguin (A1, A4ii) Seabirds – Adélie Penguin (A4iii)	036			
063	Brash Island, Danger Islands	*Pygoscelis* Penguin (A1(?), A4ii) Seabirds – *Pygoscelis* Penguin (A4iii)				
064	Earle Island, Danger Islands	Seabirds – *Pygoscelis* Penguin (A4iii)				
065	Eden Rocks	Adélie Penguin (A1, A4ii) Seabirds – Adélie Penguin (A4iii)	035			
066	Paulet Island	Adélie Penguin (A1, A4ii) Imperial Shag (A4i) Seabirds - Adélie Penguin (A4iii)	034			
067	D'Urville Monument, Joinville Island	Seabirds – Adélie Penguin (A4iii)	037			
068	Madder Cliffs, Joinville Island	Seabirds – Adélie Penguin (A4iii)	038			
069	Snow Hill Island	Emperor Penguin (A1, A4ii)	030			
070	Penguin Point, Seymour Island	Seabirds – Adélie Penguin (A4iii)	031			
071	Cockburn Island	Imperial Shag (A4i) Seabirds – Adélie Penguin (A4iii)	032			
072	Devil Island	Seabirds – Adélie Penguin (A4iii)	033			
073	Brown Bluff	Seabirds – Adélie Penguin (A4iii)	029			
074	Hope Bay	Adélie Penguin (A1, A4ii) Seabirds – Adélie Penguin (A4iii)	028			
075	Gourdin Island	Seabirds – Adélie Penguin (A4iii)	027			

IBA No.	Location	Trigger species (IBA criteria)	Former IBA No. (2011)	ASPA No.	ASMA No.	Comment
076	Duroch Islands	Seabirds – Adélie, Chinstrap & Gentoo Penguin (A4iii)	026			
077	Tupinier Islands	Seabirds – Chinstrap Penguin (A4iii)	025			
078	Pearl Rocks	Imperial Shag (A4i)	024			
079	Cape Wollaston, Trinity Island	Southern Fulmar (A4ii) Seabirds – Southern Fulmar (A4iii)	023			
080	SW Trinity Island	Imperial Shag (A4i)	022			
081	Cierva Point & offshore islands	South Polar Skua (A4ii)	021	134		
082	Bluff Island	Imperial Shag (A4i)	020			
083	Cuverville Island	Gentoo Penguin (A1, A4ii)	018			
084	Islet E of Guépratte Island	Imperial Shag (A4i)	019			
	Pursuit Point	Imperial Shag (A4i)	011			delisted
085	Cormorant Island	Imperial Shag (A4i)	012		007	
	Arthur Harbor North	Seabirds – Adélie Penguin (A4iii)	013		007	delisted
086	Litchfield Island	South Polar Skua (A4ii)	014	113	007	
087	Joubin Islands	Imperial Shag (A4i)	015		007	
	Dream Island	Seabirds – Adélie Penguin (A4iii)	016		007	delisted
088	Islet S of Gerlache Island	Gentoo Penguin (A1, A4ii)	017		007	
089	Petermann Island	Gentoo Penguin (A1, A4ii)	010			
090	Uruguay Island	Imperial Shag (A4i)	009			
091	Islet S of Bates Island	Imperial Shag (A4i)	008			
092	Island N of Dodman Island	Imperial Shag (A4i)	006			
093	Armstrong Reef	Imperial Shag (A4i)	007			
094	Cape Evensen	Imperial Shag (A4i)	005			
095	Avian Island	Adélie Penguin (A1, A4ii) Imperial Shag (A4i) South Polar Skua (A4ii) Seabirds – Adélie Penguin (A4iii)	003	117		
096	Ginger Islands	Imperial Shag (A4i)	004			
097	Emperor Island, Dion Islands	Imperial Shag (A4i)	002	107		
098	Lagotellerie Island	Imperial Shag (A4i)		115		
099	Stonington Island	Imperial Shag (A4i)	001			

IBA No.	Location	Trigger species (IBA criteria)	Former IBA No. (2011)	ASPA No.	ASMA No.	Comment
100	Smith Peninsula	Emperor Penguin (A1, A4ii)				
101	NW Berkner Island (Gould Bay)	Emperor Penguin (A1, A4ii)				
102	Coalseam Cliffs / Mount Faraway	Seabirds – Antarctic Petrel (A4iii)				
103	Luitpold Coast	Emperor Penguin (A1, A4ii)				
104	Dawson-Lambton Glacier	Emperor Penguin (A1, A4ii)				
105	Brunt Ice Shelf ('Halley Bay')	Emperor Penguin (A1, A4ii) Seabirds – Emperor Penguin (A4iii)				
106	Stancomb-Wills Glacier	Emperor Penguin (A1, A4ii)				
107	'Drescher Inlet' (Dreschereisfrontkerbe)	Emperor Penguin (A1, A4ii)				
108	Riiser-Larsen Ice Shelf	Emperor Penguin (A1, A4ii)				
109	Atka Iceport	Emperor Penguin (A1, A4ii)				
110	Muskegbukta	Emperor Penguin (A1, A4ii)				
111	Jutulsessen Mountain	Antarctic Petrel (A4ii) Seabirds – Antarctic Petrel (A4iii)				
112	Svarthamaren	Antarctic Petrel (A4ii) South Polar Skua (A4ii) Seabirds – Antarctic Petrel (A4iii)		142		
113	Gruber Mountains	Seabirds – Snow Petrel (A4iii)				
114	Princess Ragnhild Coast	Emperor Penguin (A1, A4ii)				
115	Riiser-Larsen Peninsula	Emperor Penguin (A1, A4ii)				
116	Mount Biscoe	Seabirds – Adélie Penguin (A4iii)				
117	Cape Batterbee	Seabirds – Adélie Penguin (A4iii)				
118	Kloa Point	Emperor Penguin (A1, A4ii)				
119	Taylor Rookery	Emperor Penguin (A1, A4ii)		101		
120	Gibbney Island	Seabirds – Adélie Penguin (A4iii)				
121	Rookery Islands	Adélie Penguin (A1, A4ii) Seabirds – Adélie Penguin (A4iii)		102		
122	Klung Island / Welch Island	Seabirds – Adélie Penguin (A4iii)				
123	Andersen Island	Seabirds – Adélie Penguin (A4iii)				
124	Kirton Island / Macklin Island	Seabirds – Adélie Penguin (A4iii)				
125	Auster Rookery	Emperor Penguin (A1, A4ii)				
126	Scullin Monolith / Murray Monolith	Adélie Penguin (A1, A4ii)		164		

IBA No.	Location	Trigger species (IBA criteria)	Former IBA No. (2011)	ASPA No.	ASMA No.	Comment
		Antarctic Petrel (A4ii) Seabirds – Antarctic Petrel (A4iii)				
127	Cape Darnley	Emperor Penguin (A1, A4ii)				
128	Amanda Bay	Emperor Penguin (A1, A4ii)		169		
129	Caro Island, Rauer Islands	Seabirds – Adélie Penguin (A4iii)				
130	Hop Island, Rauer Islands	Adélie Penguin (A1, A4ii) Seabirds – Adélie Penguin (A4iii)				
131	Filla Island, Rauer Islands	Seabirds – Adélie Penguin (A4iii)				
132	Kazak Island / Zolotov Island	Seabirds – Adélie Penguin (A4iii)				
133	Unnamed island at Donskiye Islands	Seabirds – Adélie Penguin (A4iii)				
134	Warriner Island, Donskiye Islands	Seabirds – Adélie Penguin (A4iii)				
135	Gardner Island	Seabirds – Adélie Penguin (A4iii)				
136	Magnetic Island and nearby islands	Seabirds – Adélie Penguin (A4iii)				
137	Lucas Island	Seabirds – Adélie Penguin (A4iii)				
138	Rookery Lake / W Long Peninsula	Adélie Penguin (A1, A4ii) Seabirds – Adélie Penguin (A4iii)				
139	Tryne Islands	Seabirds – Adélie Penguin (A4iii)				
140	West Ice Shelf	Emperor Penguin (A1, A4ii)				
141	Haswell Island	Emperor Penguin (A1, A4ii) South Polar Skua (A4ii) Seabirds – Adélie Penguin (A4iii)		127		
142	Shackleton Ice Shelf	Emperor Penguin (A1, A4ii)				
143	Peterson Island	Seabirds – Adélie Penguin (A4iii)				
144	Holl Island / O'Connor Island	Seabirds – Adélie Penguin (A4iii)				
145	Ardery Island / Odbert Island	Seabirds – Adélie Penguin, Southern Fulmar (A4iii)		103		
146	Shirley Island / Beall Island	Seabirds – Adélie Penguin (A4iii)				
147	Clark Peninsula	Seabirds – Adélie Penguin (A4iii)		136		
148	Berkley Island / Cameron Island	Seabirds – Adélie Penguin (A4iii)				
149	Dibble Glacier	Emperor Penguin (A1, A4ii) Seabirds – Emperor Penguin (A4iii)				
150	Pointe Géologie	Emperor Penguin (A1, A4ii)		120		

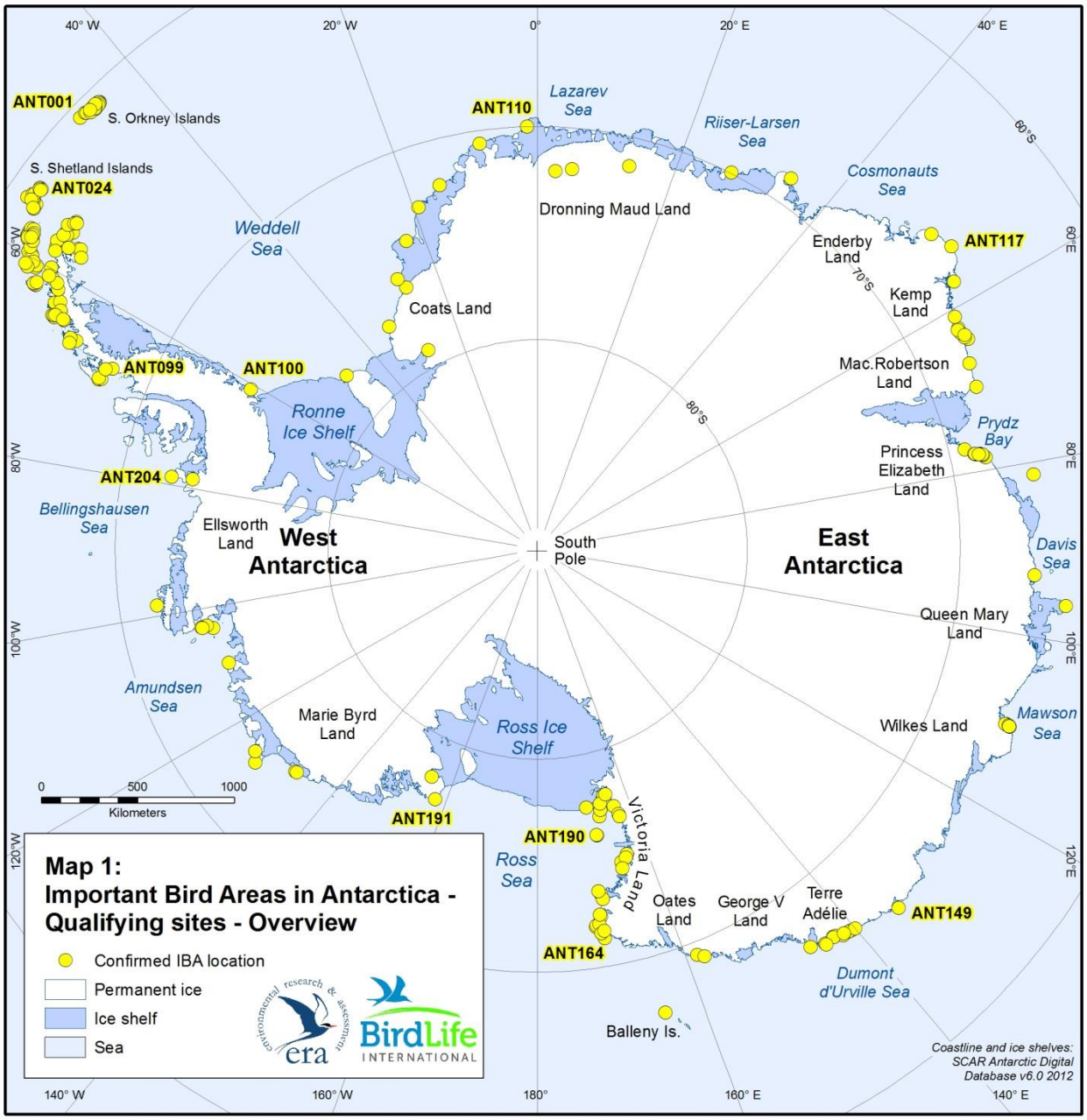
IBA No.	Location	Trigger species (IBA criteria)	Former IBA No. (2011)	ASPA No.	ASMA No.	Comment
		Adélie Penguin (A1, A4ii) Seabirds – Adélie Penguin (A4iii)				
151	Cape Bienvenue	Seabirds – Adélie Penguin (A4iii)				
152	Cape Jules	Adélie Penguin (A1, A4ii) Seabirds – Adélie Penguin (A4iii)				
153	Île des Manchots / Empereur Island	Seabirds – Adélie Penguin (A4iii)		166		ASPA protects historic features
154	Curzon Islands	Seabirds – Adélie Penguin (A4iii)				
155	Cape Hunter	Seabirds – Adélie Penguin, Antarctic Petrel (A4iii)				
156	MacKellar Islands	Adélie Penguin (A1, A4ii) Seabirds – Adélie Penguin (A4iii)				
157	Cape Denison	Seabirds – Adélie Penguin (A4iii)		162		ASPA protects historic features, avifauna and other environmental values
158	Way Archipelago	Adélie Penguin (A1, A4ii) Seabirds – Adélie Penguin (A4iii)				
159	Cape Pigeon Rocks	Seabirds – Adélie Penguin (A4iii)				
160	Mertz Glacier	Emperor Penguin (A1, A4ii)				
161	Kartografov Island / Mount Archer	Seabirds – Adélie Penguin (A4iii)				
162	Arthurson Ridge	Seabirds – Adélie Penguin (A4iii)				
163	Sturge Island	Southern Fulmar (A4ii) Seabirds – Southern Fulmar (A4iii)				
164	Duke of York Island	Seabirds – Adélie Penguin (A4iii)				
165	Cape Adare	Adélie Penguin (A1, A4ii) South Polar Skua (A4ii) Seabirds – Adélie Penguin (A4iii)		159		ASPA protects historic features
166	Downshire Cliffs	Seabirds – Adélie Penguin (A4iii)				
167	Possession Island	Adélie Penguin (A1, A4ii) South Polar Skua (A4ii) Seabirds – Adélie Penguin (A4iii)				
168	Foyn Island	Seabirds – Adélie Penguin (A4iii)				
169	Cape Roget	Emperor Penguin (A1, A4ii)				
170	Seabee Hook, Cape Hallett	Adélie Penguin (A1, A4ii)		106		

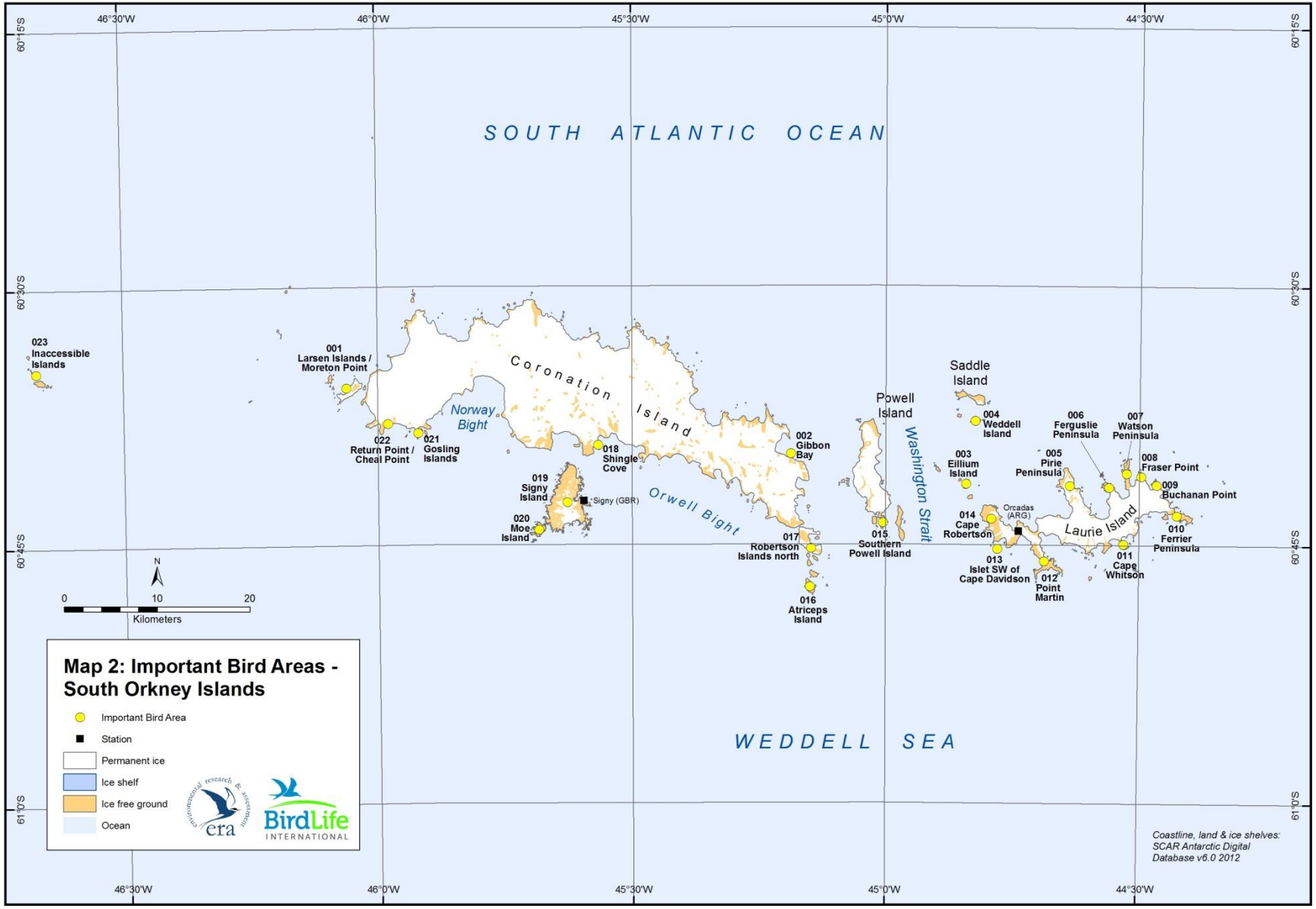
IBA No.	Location	Trigger species (IBA criteria)	Former IBA No. (2011)	ASPA No.	ASMA No.	Comment
		Seabirds – Adélie Penguin (A4iii)				
171	Cotter Cliffs	Adélie Penguin (A1, A4ii) Seabirds – Adélie Penguin (A4iii)				
172	Mandible Cirque	Seabirds – Adélie Penguin (A4iii)				
173	Cape Wadworth, Coulman Island	Emperor Penguin (A1, A4ii) Seabirds – Emperor Penguin (A4iii)				
174	Cape Main, Coulman Island	Seabirds – Adélie Penguin (A4iii)				
175	Edmonson Point	South Polar Skua (A4ii)		165		
176	Cape Washington	Emperor Penguin (A1, A4ii) South Polar Skua (A4ii) Seabirds – Emperor Penguin (A4iii)		173		
177	Adélie Cove	Seabirds – Adélie Penguin (A4iii)				
178	Inexpressible Island	South Polar Skua (A4ii) Seabirds – Adélie Penguin (A4iii)				
179	Depot Island	South Polar Skua (A4ii)				
180	Gregory Island	South Polar Skua (A4ii)				
181	Dunlop Island	South Polar Skua (A4ii)				
182	Blue Glacier to Cape Chocolate	South Polar Skua (A4ii)			002	
183	Dailey Islands	South Polar Skua (A4ii)				
184	Rocky Point, Ross Island	South Polar Skua (A4ii)				
185	Macdonald Beach, Cape Bird	South Polar Skua (A4ii), Seabirds – Adélie Penguin (A4iii)				
186	Caughley Beach, Cape Bird	Adélie Penguin (A1, A4ii) South Polar Skua (A4ii) Seabirds – Adélie Penguin (A4iii)		116		ASPA protects terrestrial ecology
187	Cape Crozier, Ross Island	Adélie Penguin (A1, A4ii) South Polar Skua (A4ii) Seabirds – Adélie Penguin (A4iii)		124		
188	Beaufort Island	Adélie Penguin (A1,A4ii) South Polar Skua (A4ii) Seabirds – Adélie Penguin (A4iii)		105		
189	Bernacchi Head, Franklin Island	Emperor Penguin (A1, A4ii)				
190	SW Franklin Island	Adélie Penguin (A1, A4ii)				

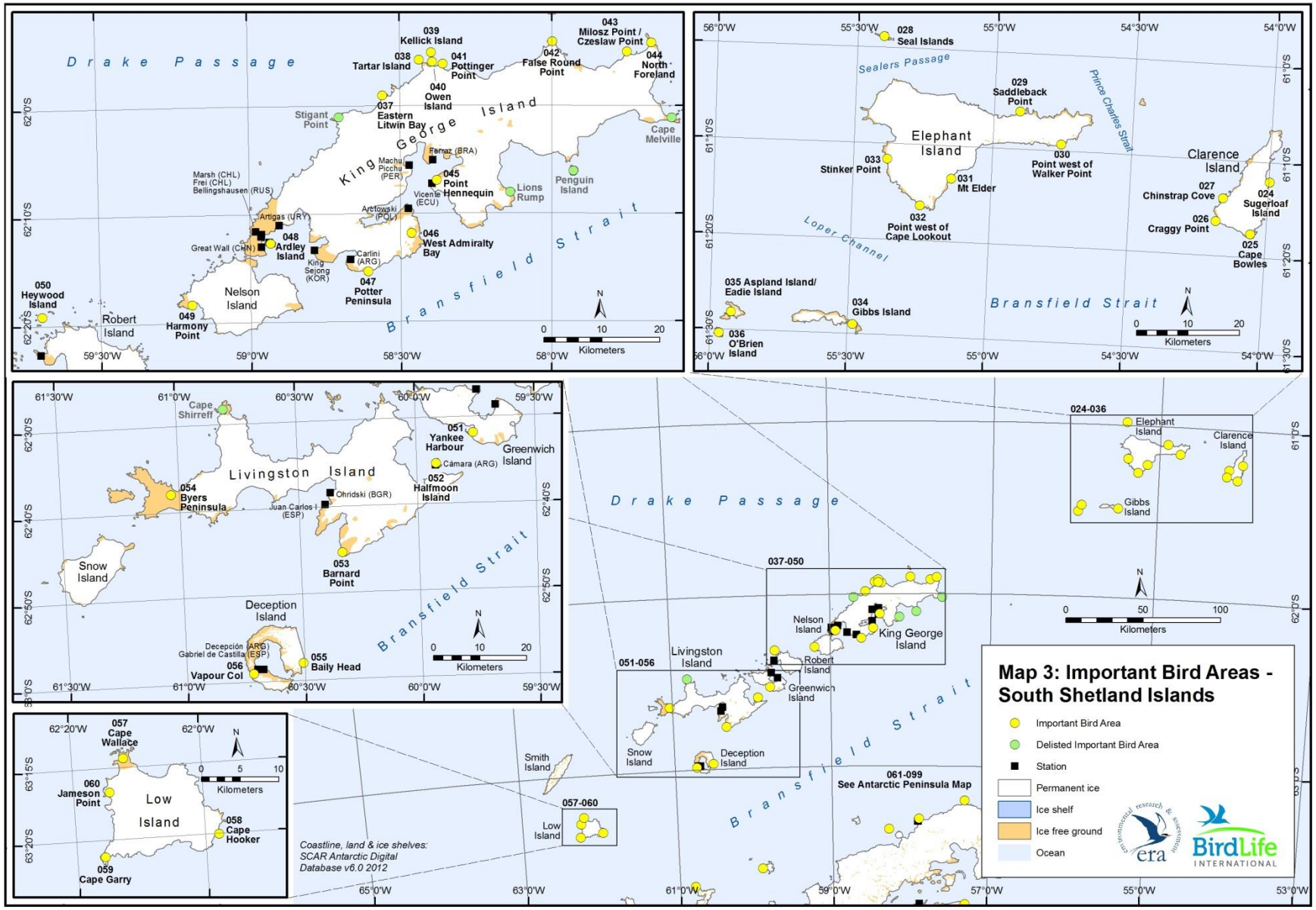
IBA No.	Location	Trigger species (IBA criteria)	Former IBA No. (2011)	ASPA No.	ASMA No.	Comment
		South Polar Skua (A4ii) Seabirds – Adélie Penguin (A4iii)				
191	Cape Colbeck	Emperor Penguin (A1, A4ii) Seabirds – Emperor Penguin (A4iii)				
192	Mount Paterson	Seabirds – Antarctic Petrel (A4iii)				
193	Worley Point, Shepard Island	Seabirds – Adélie Penguin (A4iii)				
194	Mathewson Point, Shepard Island	Seabirds – Adélie Penguin (A4iii)				
195	Maher Island	Seabirds – Adélie Penguin (A4iii)				
196	Thurston Glacier	Emperor Penguin (A1, A4ii)				
197	Hummer Point, Bear Peninsula	Emperor Penguin (A1, A4ii)				
198	Brownson Islands	Emperor Penguin (A1, A4ii) Seabirds – Adélie Penguin (A4iii)				
199	Edwards Islands	Adélie Penguin (A1, A4ii) Seabirds – Adélie Penguin (A4iii)				
200	Schaefer Islands	Seabirds – Adélie Penguin (A4iii)				
201	Lindsey Islands	Adélie Penguin (A1, A4ii) Seabirds – Adélie Penguin (A4iii)				
202	Sikorski Glacier, Noville Peninsula	Emperor Penguin (A1, A4ii)				
203	Sims Island	Seabirds – Adélie Penguin (A4iii)				
204	Scorseby Head, Smyley Island	Emperor Penguin (A1, A4ii)				

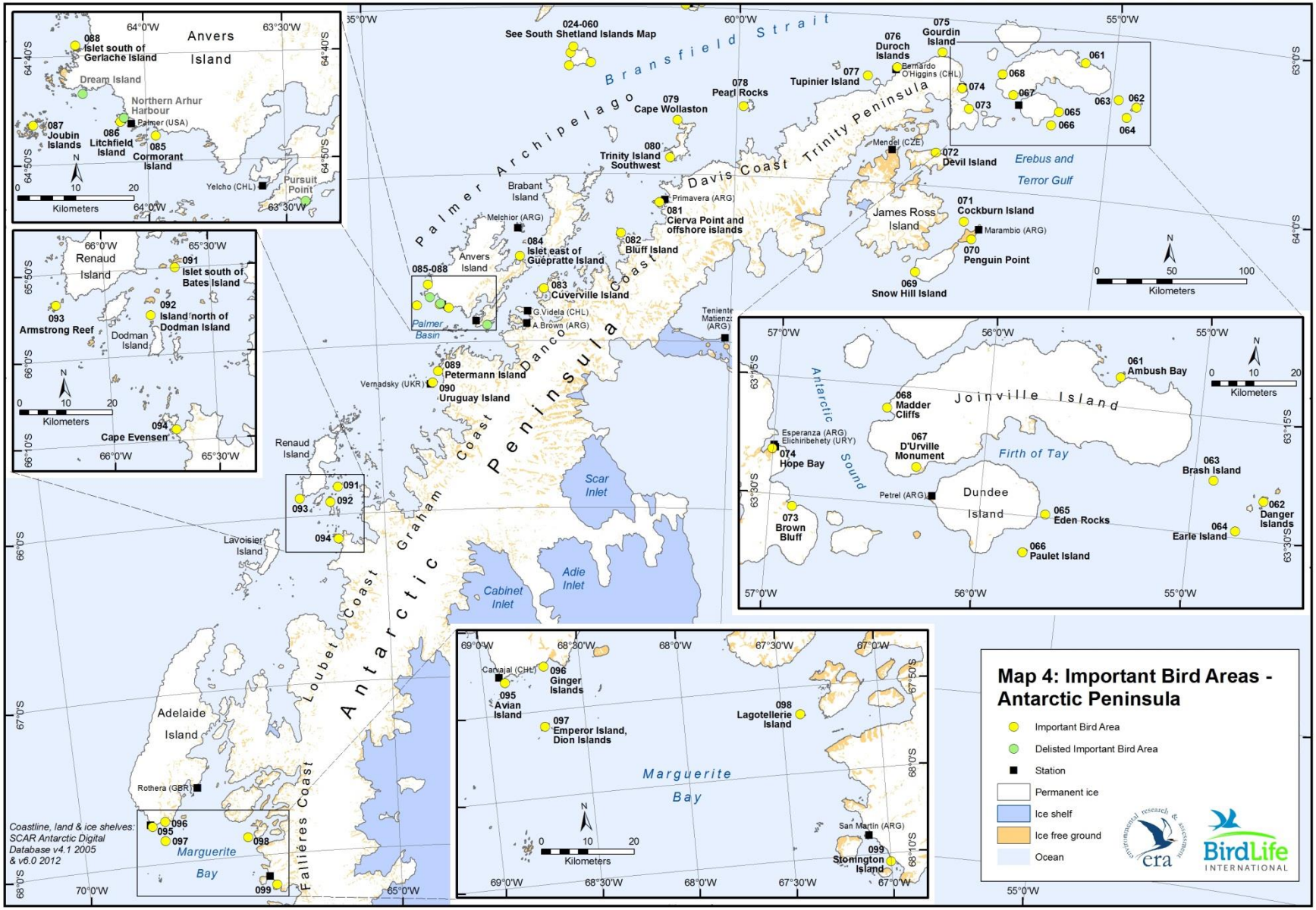
Overview and regional maps

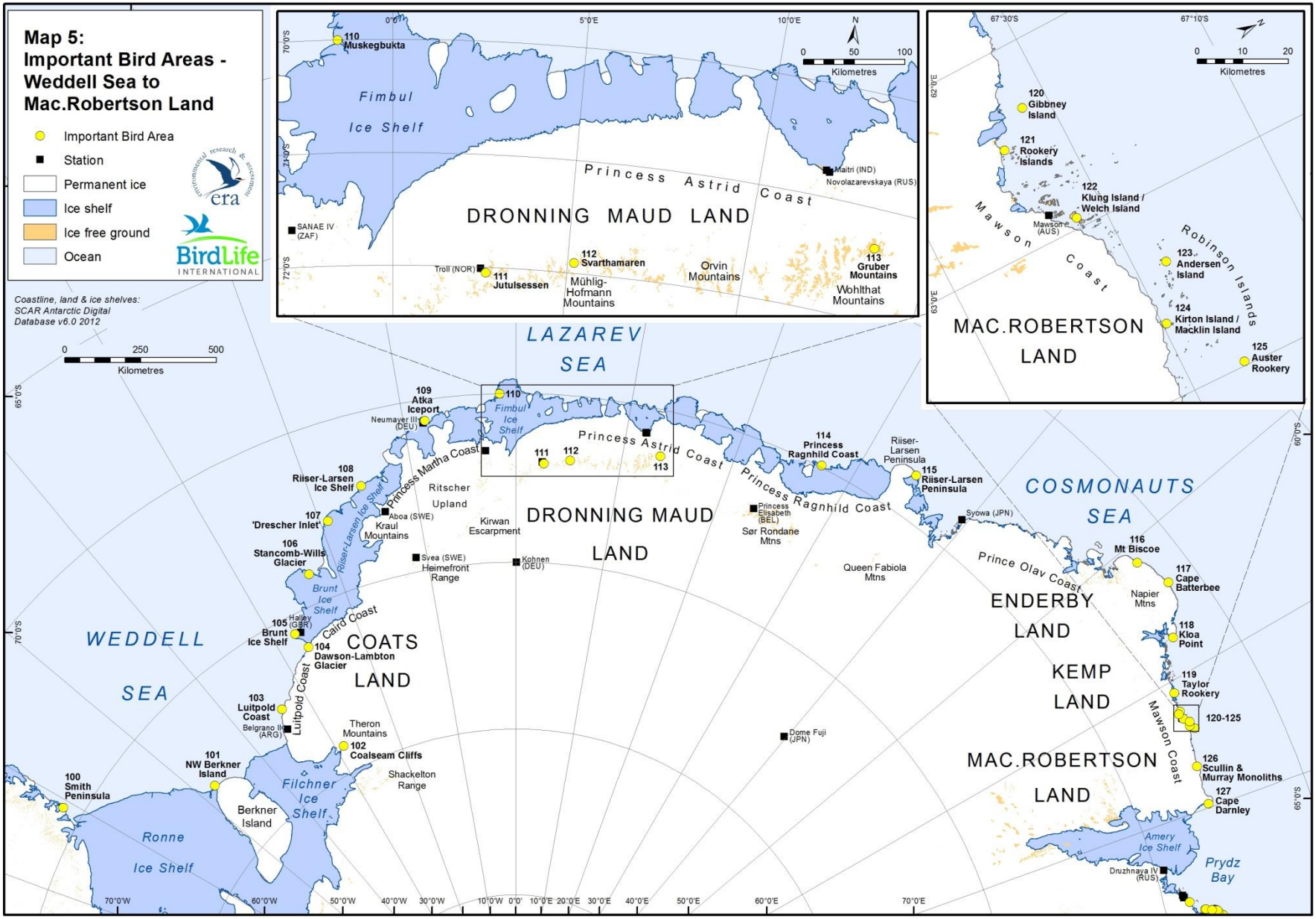
Map 1 provides an overview of Important Bird Areas (IBAs) in Antarctica identified on the basis of breeding site data against the BirdLife International / SCAR agreed criteria. The numbering system commences in the South Orkney Islands (at ANT001), proceeds southward through the South Shetland Islands and further south along the Antarctic Peninsula to Marguerite Bay, and thence from the Weddell Sea (at ANT100) in a clockwise direction around to the Bellingshausen Sea (at ANT204), with the indicative numbering shown. Following maps (Maps 2 – 8) provide more detail, illustrating the distribution of IBAs across Antarctica on a regional basis with a series of more local insets. Local maps showing the IBA boundaries are presented in the Site Accounts.

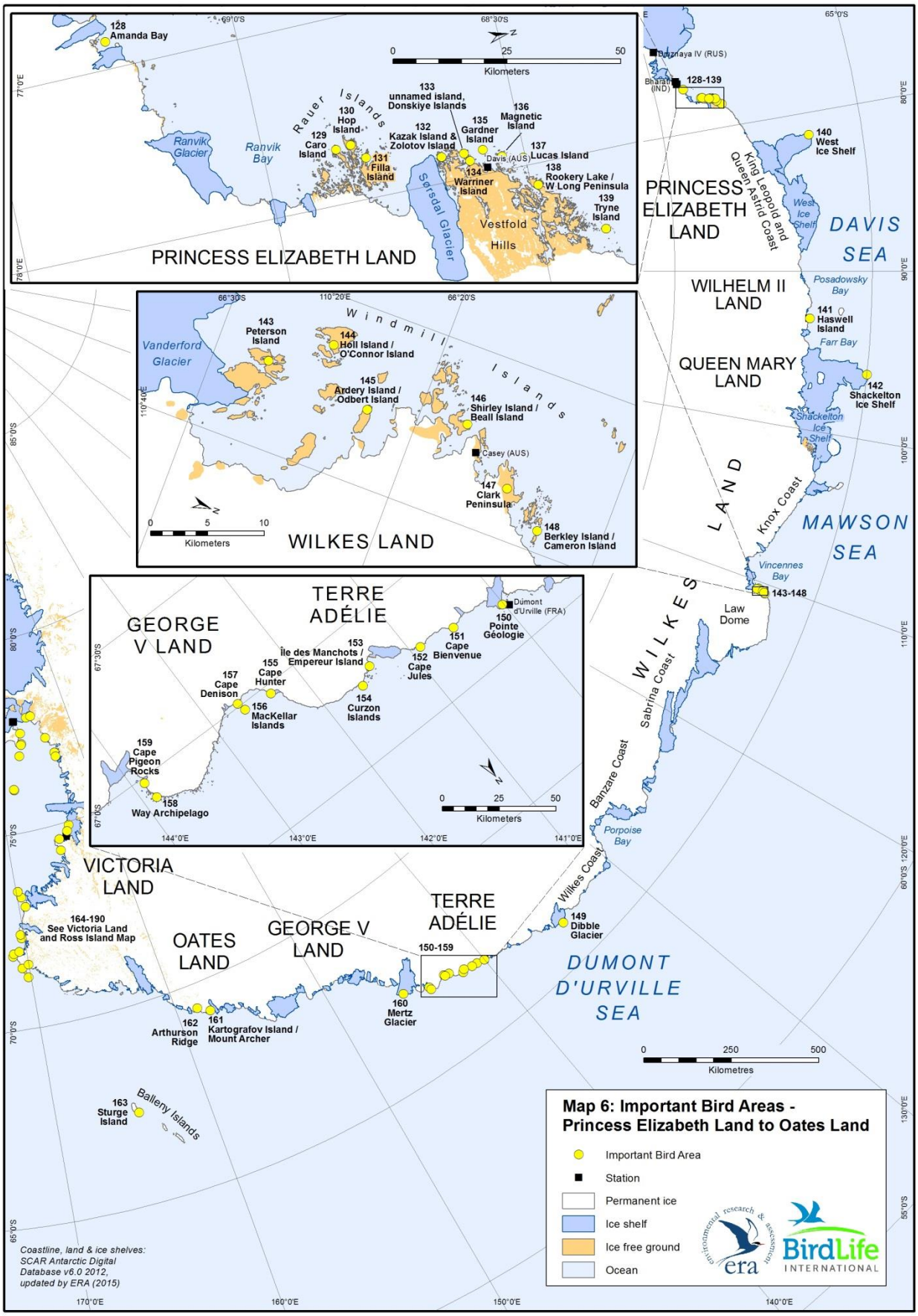


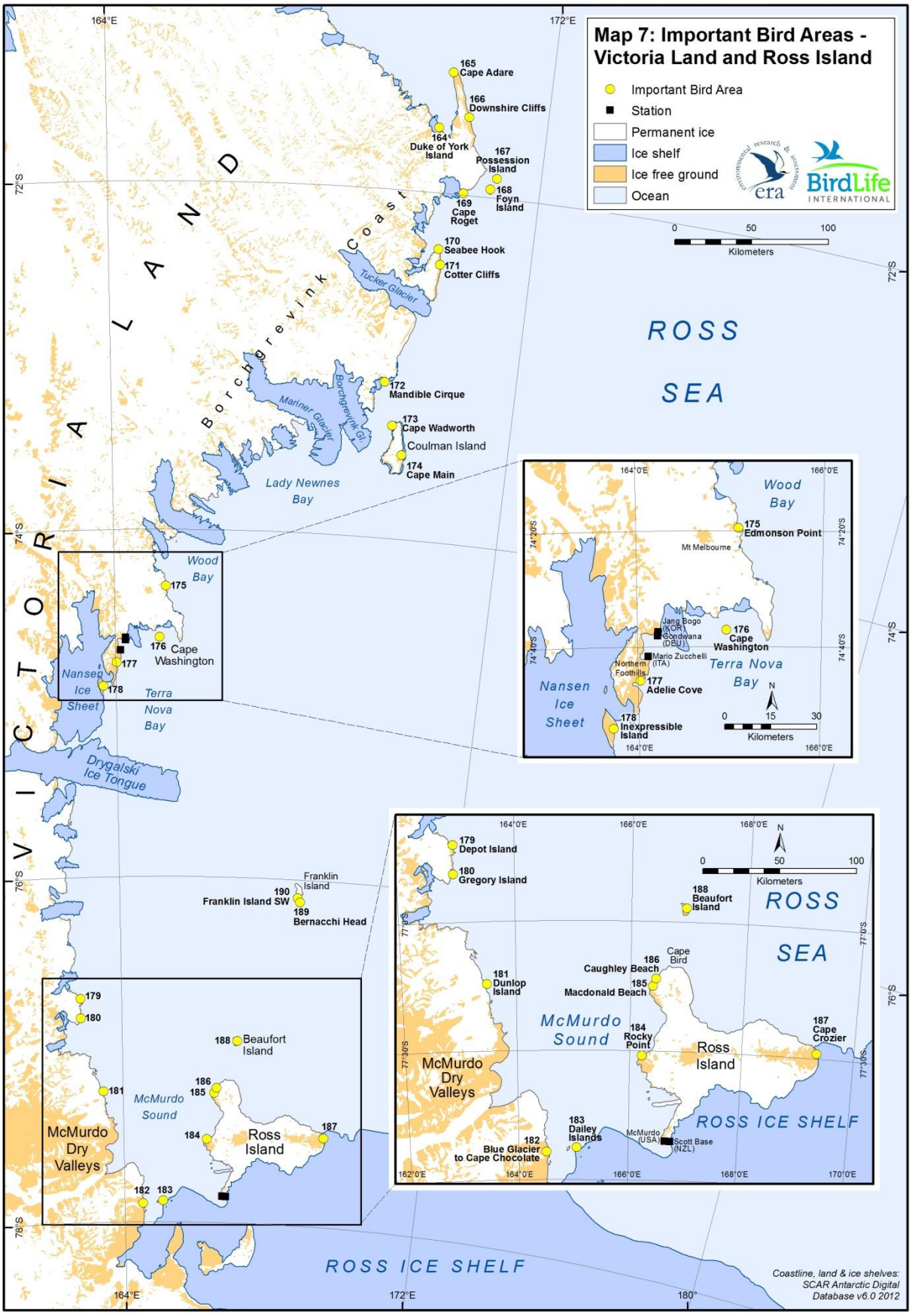

Map 2: Important Bird Areas - South Orkney Islands
Important Bird Area
Station
Permanent ice
Ice shelf
Ice free ground
Ocean
SOUTH ATLANTIC OCEAN
WEDDELL SEA
Coronation Island
Norway Bight
Orwell Bight
Washington Strait
Laurie Island
Powell Island
Saddle Island
Signy (GBR)
Orcadas (ARG)
023 Inaccessible Islands
001 Larsen Islands / Moreton Point
022 Return Point / Cheal Point
021 Gosling Islands
018 Shingle Cove
019 Signy Island
020 Moe Island
002 Gibbon Bay
017 Robertson Islands north
016 Atriceps Island
015 Southern Powell Island
004 Weddell Island
003 Eillium Island
014 Cape Robertson
013 Islet SW of Cape Davidson
012 Point Martin
006 Ferguslie Peninsula
005 Pirie Peninsula
007 Watson Peninsula
008 Fraser Point
009 Buchanan Point
010 Ferrier Peninsula
011 Cape Whitson
0 10 20
Kilometers
N
46°30'W
46°0'W
45°30'W
45°0'W
44°30'W
60°15'S
60°30'S
60°45'S
61°0'S
Coastline, land & ice shelves: SCAR Antarctic Digital Database v6.0 2012

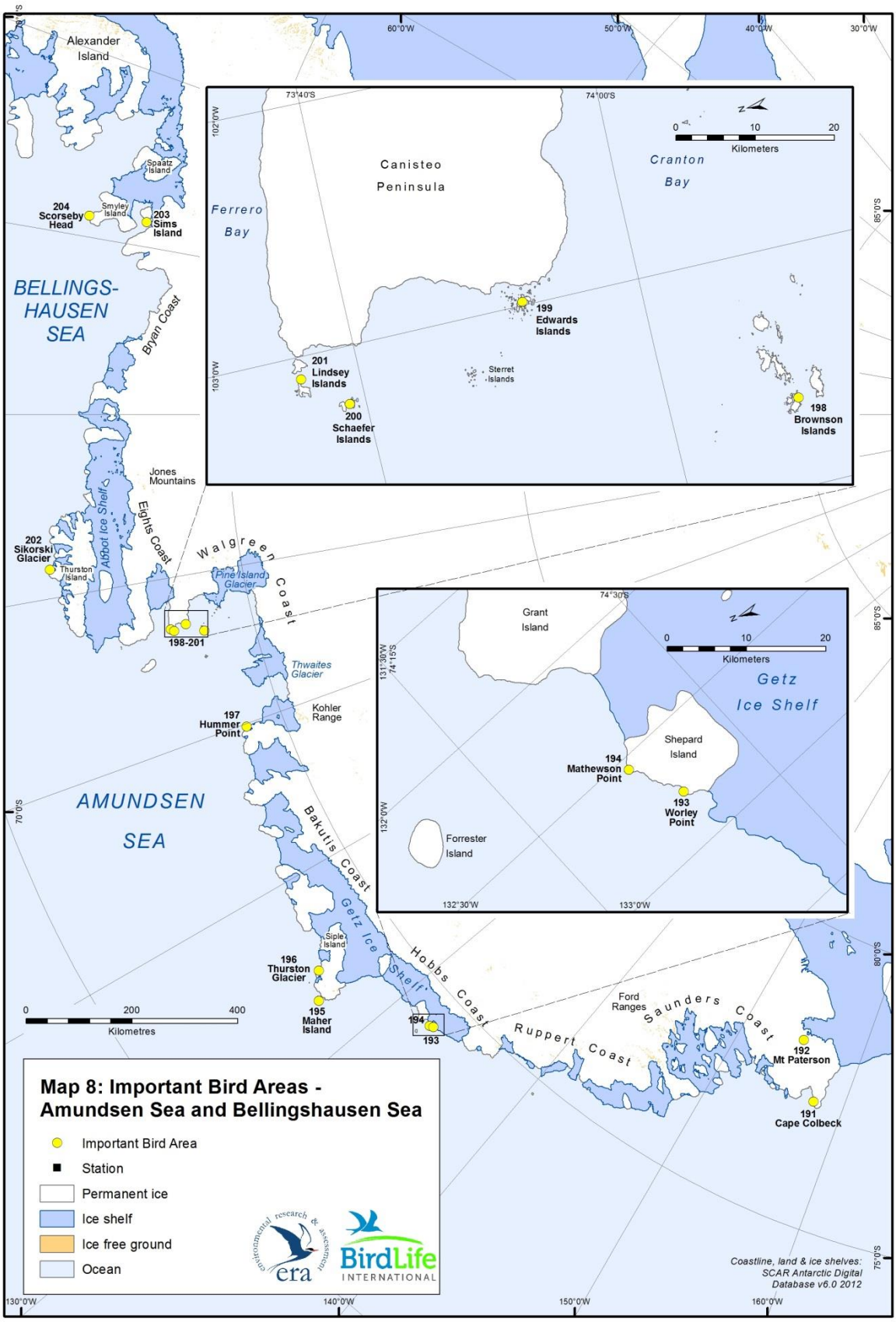

Map 3: Important Bird Areas - South Shetland Islands
Important Bird Area
Delisted Important Bird Area
Station
Permanent ice
Ice shelf
Ice free ground
Ocean
Drake Passage
Bransfield Strait
King George Island
Nelson Island
Robert Island
Livingston Island
Deception Island
Snow Island
Greenwich Island
Smith Island
Low Island
Elephant Island
Clarence Island
Gibbs Island
Coastline, land & ice shelves: SCAR Antarctic Digital Database v6.0 2012
BirdLife INTERNATIONAL
era


Map 4: Important Bird Areas - Antarctic Peninsula
Important Bird Area
Delisted Important Bird Area
Station
Permanent ice
Ice shelf
Ice free ground
Ocean
Coastline, land & ice shelves: SCAR Antarctic Digital Database v4.1 2005 & v6.0 2012
Bransfield Strait
Palmer Archipelago
Trinity Peninsula
Davis Coast
Danco Coast
Graham Coast
Loubet Coast
Fallières Coast
Antarctic Peninsula
Anvers Island
Dream Island
Northern Arhur Harbour
Palmer (USA)
087 Joubin Islands
086 Litchfield Island
085 Cormorant Island
088 Islet south of Gerlache Island
Yelcho (CHL)
Pursuit Point
Renaud Island
091 Islet south of Bates Island
092 Island north of Dodman Island
093 Armstrong Reef
Dodman Island
094 Cape Evensen
Lavoisier Island
Adelaide Island
Rothera (GBR)
096 095 097 098 099
Marguerite Bay
Brabant Island
Melchior (ARG)
084 Islet east of Guépratte Island
083 Cuverville Island
085-088
Palmer Basin
G.Videla (CHL)
A.Brown (ARG)
Vernadsky (UKR)
089 Petermann Island
090 Uruguay Island
Scar Inlet
Adie Inlet
Cabinet Inlet
024-060 See South Shetland Islands Map
079 Cape Wollaston
078 Pearl Rocks
080 Trinity Island Southwest
Primavera (ARG)
081 Cierva Point and offshore islands
082 Bluff Island
Teniente Matienzo (ARG)
076 Duroch Islands
Bernardo O'Higgins (CHL)
075 Gourdin Island
077 Tupinier Island
Mendel (CZE)
072 Devil Island
Erebus and Terror Gulf
James Ross Island
071 Cockburn Island
Marambio (ARG)
070 Penguin Point
069 Snow Hill Island
Joinville Island
061 Ambush Bay
068 Madder Cliffs
Esperanza (ARG)
Elichiribehety (URY)
074 Hope Bay
067 D'Urville Monument
Antarctic Sound
Firth of Tay
063 Brash Island
062 Danger Islands
Petrel (ARG)
Dundee Island
065 Eden Rocks
064 Earle Island
073 Brown Bluff
066 Paulet Island
Carvajal (CHL)
096 Ginger Islands
095 Avian Island
097 Emperor Island, Dion Islands
098 Lagotellerie Island
Marguerite Bay
San Martin (ARG)
099 Stonington Island
Kilometers
BirdLife INTERNATIONAL
era


Map 5:
Important Bird Areas - Weddell Sea to Mac.Robertson Land
Important Bird Area
Station
Permanent ice
Ice shelf
Ice free ground
Ocean
Coastline, land & ice shelves: SCAR Antarctic Digital Database v6.0 2012
Kilometres
110 Muskegbukta
Fimbul Ice Shelf
Princess Astrid Coast
DRONNING MAUD LAND
Maitri (IND)
Novolazarevskaya (RUS)
SANAE IV (ZAF)
Troll (NOR)
111 Jutulsessen
112 Svarthamaren
Mühlig-Hofmann Mountains
Orvin Mountains
113 Gruber Mountains
Wohlthat Mountains
120 Gibbney Island
121 Rookery Islands
122 Klung Island / Welch Island
Mawson (AUS)
Mawson Coast
Robinson Islands
123 Andersen Island
124 Kirton Island / Macklin Island
125 Auster Rookery
MAC.ROBERTSON LAND
LAZAREV SEA
109 Atka Iceport
Neumayer III (DEU)
Princess Martha Coast
108 Riiser-Larsen Ice Shelf
Riiser-Larsen Ice Shelf
107 'Drescher Inlet'
106 Stancomb-Wills Glacier
Brunt Ice Shelf
Ritscher Upland
Aboa (SWE)
Kraul Mountains
Kirwan Escarpment
Svea (SWE)
Heimefront Range
Kohnen (DEU)
Princess Ragnhild Coast
114 Princess Ragnhild Coast
Riiser-Larsen Peninsula
115 Riiser-Larsen Peninsula
Princess Elisabeth (BEL)
Sør Rondane Mtns
Syowa (JPN)
Queen Fabiola Mtns
COSMONAUTS SEA
116 Mt Biscoe
117 Cape Batterbee
Napier Mtns
118 Kloa Point
Prince Olav Coast
ENDERBY LAND
KEMP LAND
119 Taylor Rookery
120-125
Mawson Coast
MAC.ROBERTSON LAND
126 Scullin & Murray Monoliths
127 Cape Darnley
Amery Ice Shelf
Druzhnaya IV (RUS)
Prydz Bay
Dome Fuji (JPN)
WEDDELL SEA
Hallley (GBR)
105 Brunt Ice Shelf
Caird Coast
104 Dawson-Lambton Glacier
COATS LAND
Luitpold Coast
103 Luitpold Coast
Belgrano II (ARG)
Theron Mountains
102 Coalseam Cliffs
Shackelton Range
101 NW Berkner Island
Berkner Island
Filchner Ice Shelf
100 Smith Peninsula
Ronne Ice Shelf


128 Amanda Bay
Ranvik Glacier
Ranvik Bay
Rauer Islands
129 Caro Island
130 Hop Island
131 Filla Island
132 Kazak Island & Zolotov Island
133 unnamed island, Donskiye Islands
134 Warriner Island
135 Gardner Island
136 Magnetic Island
137 Lucas Island
138 Rookery Lake / W Long Peninsula
139 Tryne Island
Davis (AUS)
Sørsdal Glacier
Vestfold Hills
PRINCESS ELIZABETH LAND
Kilometers
Bharati (IND)
Druzhnaya IV (RUS)
128-139
140 West Ice Shelf
King Leopold and Queen Astrid Coast
West Ice Shelf
DAVIS SEA
WILHELM II LAND
Posadowsky Bay
141 Haswell Island
Farr Bay
QUEEN MARY LAND
142 Shackelton Ice Shelf
Shackelton Ice Shelf
Vanderford Glacier
143 Peterson Island
144 Holl Island / O'Connor Island
145 Ardery Island / Odbert Island
146 Shirley Island / Beall Island
Windmill Islands
Casey (AUS)
147 Clark Peninsula
148 Berkley Island / Cameron Island
WILKES LAND
Knox Coast
MAWSON SEA
Vincennes Bay
143-148
Law Dome
WILKES LAND
Sabrina Coast
Banzare Coast
Porpoise Bay
Wilkes Coast
149 Dibble Glacier
DUMONT D'URVILLE SEA
TERRE ADÉLIE
GEORGE V LAND
Dumont d'Urville (FRA)
150 Pointe Géologie
151 Cape Bienvenue
152 Cape Jules
153 Île des Manchots / Empereur Island
154 Curzon Islands
155 Cape Hunter
156 MacKellar Islands
157 Cape Denison
158 Way Archipelago
159 Cape Pigeon Rocks
VICTORIA LAND
164-190 See Victoria Land and Ross Island Map
OATES LAND
GEORGE V LAND
TERRE ADÉLIE
150-159
160 Mertz Glacier
161 Kartografov Island / Mount Archer
162 Arthurson Ridge
Balleny Islands
163 Sturge Island
Kilometres
Map 6: Important Bird Areas - Princess Elizabeth Land to Oates Land
Important Bird Area
Station
Permanent ice
Ice shelf
Ice free ground
Ocean
Coastline, land & ice shelves: SCAR Antarctic Digital Database v6.0 2012, updated by ERA (2015)
era
BirdLife INTERNATIONAL


Map 7: Important Bird Areas - Victoria Land and Ross Island
Important Bird Area
Station
Permanent ice
Ice shelf
Ice free ground
Ocean
Kilometers
ROSS SEA
ROSS ICE SHELF
VICTORIA LAND
Borchgrevink Coast
Tucker Glacier
Mariner Glacier
Borchgrevink Gl.
Lady Newnes Bay
Coulman Island
Wood Bay
Nansen Ice Sheet
Terra Nova Bay
Drygalski Ice Tongue
Franklin Island
McMurdo Sound
McMurdo Dry Valleys
Ross Island
Cape Bird
Coastline, land & ice shelves: SCAR Antarctic Digital Database v6.0 2012


Map 8: Important Bird Areas - Amundsen Sea and Bellingshausen Sea
Important Bird Area
Station
Permanent ice
Ice shelf
Ice free ground
Ocean
Alexander Island
Spaatz Island
Smyley Island
204 Scorseby Head
203 Sims Island
BELLINGS-HAUSEN SEA
Bryan Coast
Jones Mountains
Abbot Ice Shelf
Eights Coast
202 Sikorski Glacier
Thurston Island
Walgreen Coast
Pine Island Glacier
198-201
Thwaites Glacier
Kohler Range
197 Hummer Point
AMUNDSEN SEA
Bakutis Coast
Getz Ice Shelf
Siple Island
196 Thurston Glacier
195 Maher Island
194
193
Hobbs Coast
Ruppert Coast
Ford Ranges
Saunders Coast
192 Mt Paterson
191 Cape Colbeck
Canisteo Peninsula
Ferrero Bay
Cranton Bay
199 Edwards Islands
201 Lindsey Islands
200 Schaefer Islands
Sterret Islands
198 Brownson Islands
Grant Island
Shepard Island
194 Mathewson Point
193 Worley Point
Forrester Island
Getz Ice Shelf
Kilometers
Coastline, land & ice shelves: SCAR Antarctic Digital Database v6.0 2012

Conclusion

The list of IBAs presented in this report identifies 204 breeding sites that meet the global IBA criteria in Antarctica. The following Site Accounts describe for each IBA the bird species present and their numbers, key features of the local environment, other wildlife present, potential conservation issues, and provides references to further data and descriptions. The Site Accounts include maps showing the IBA boundaries in their local context, including prominent physical features, nearby research stations, and protected areas in the vicinity.

Birds in Antarctica are subjected to a range of local and global threats to their health and survival, including direct disturbance to breeding by visitors, disturbance by aircraft or vehicles, accumulation of pollutants, exposure to hydrocarbon pollution as a result of both minor and major spills (Penhale *et al*. 1997), ingestion of or fouling by marine debris discarded in the Southern Ocean or further afield, competition for prey from fisheries, accidental by-catch on fishing lines or in nets, introduction of disease from other parts of the world (e.g. fowl cholera), and from large-scale changes to ecosystems as a result of global environmental change.

Climate change may constitute the greatest threat to avifauna in the region, and has potential to pervade the entire region. The western Antarctic Peninsula has experienced a rapid increase in temperatures since the 1940s (Smith *et al.* 1996), resulting in a loss of sea ice in this region and changes in ecosystem structure, affecting Adélie Penguins and other species that depend on the presence of sea ice (Ducklow *et al.* 2007). For example, Adélie colony sizes on the western Antarctic Peninsula have reduced significantly over the last 30 years, possibly linked to a warming climate causing sea ice loss, as well as reduced prey availability and changes in snow accumulation rates (Emslie *et al.* 1998; McClintock *et al.* 2008; Trivelpiece & Fraser 1996). However, there is some evidence that changes in climate may be having a positive effect on other species, e.g. a southward expansion of the Gentoo Penguin breeding range in the Anvers Island area (Emslie *et al.* 1998), while elsewhere in parts of East Antarctica and the Ross Sea the extent of sea ice and Adélie Penguin numbers seem to be increasing (Lynch & LaRue 2014; Lyver *et al*. 2014), while Emperor Penguins may be stable in some regions (Barber-Mayer *et al*. 2008) and declining in others (Barbraud *et al*. 2011).

The purpose of this IBA assessment has not, however, been to investigate – much less to explain – the pressures and changes to which Antarctic birds are subject. Suffice to say that these cumulative pressures pose a significant challenge to Antarctic birds. Rather, the intention is to draw attention to those sites in Antarctica that, according to best available data, possess breeding colonies of birds in such numbers that they qualify as IBAs according to the standard methodology developed and customised by BirdLife International in collaboration with SCAR.

The Important Bird Area programme was originally established by BirdLife International more than 35 years ago to provide a means of identifying sites of international conservation significance for the world's birds. To date more than 12 000 IBAs covering over 200 countries have been documented and delineated globally. To achieve this, BirdLife International worked closely with organisations and individuals in the countries concerned, resulting in publication of seven continental or regional IBA inventories and over 130 national or sub-national directories. Collectively, IBAs now cover ~5.2% of the world's land surface. All data are held in BirdLife's dedicated World Bird Database and further information is available through the Data Zone of the BirdLife website (http://www.birdlife.org/datazone/site).

All sites documented in these works were identified using a standardized set of data-driven criteria and thresholds. These ensure a consistent approach worldwide. The four criteria are based upon the confirmed regular presence at sites of more than threshold numbers of globally threatened species, groups of species of restricted range, species assemblages confined to a single biome and congregations of one or more species. These criteria have been used successfully over the past three decades and have proved remarkably effective and versatile in all environments where they have been applied.

Continental Antarctica, together with offshore island groups such as the South Shetland, South Orkney and Balleny islands, represented a significant gap in the global coverage of IBAs in the terrestrial environment. The current study has, for the first time, assembled and analysed available data on the avifauna of Antarctica according to the standard IBA criteria to identify and describe those sites that possess characteristics that indicate they are of particular importance to species conservation.

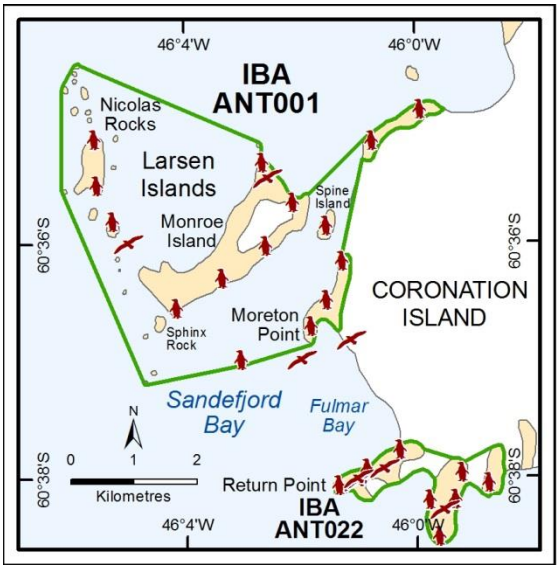
Important Bird Areas in Antarctica

Site accounts

South Orkney Islands

ANT001: Larsen Islands / Moreton Point

IBA criteria	A4ii, A4iii
Coordinates	46°03' W, 60°36' S
Area	1580 ha
Altitude	0 to < 500 m
Protection	None



Site description

The Larsen Islands and Moreton Point lie along the western coast of Coronation Island. The Larsen Islands comprise Spine Island, Nicolas Rocks and Monroe Island, the latter being the largest in the group. The IBA qualifies on the basis of the Chinstrap Penguin (*Pygoscelis antarctica*) colonies present and the high concentration of seabirds (in particular Chinstrap Penguin and Southern Fulmar (*Fulmarus glacialoides*)). The IBA includes the ice-free area at Moreton Point, all of the Larsen Islands, an adjacent ice-free area on the northwestern coast of Coronation island, and the intervening marine area.

The nearest research station is Signy (GBR), located 27 km southeast of the IBA. See ANT019 for information on the environment and facilities at this station.

Birds

Data on some bird species breeding within the IBA are available only in aggregate. Approximately 23 000 pairs of Chinstrap Penguin were recorded breeding on Moreton Point and a further 1200 pairs in small colonies north of Moreton Point in 1984 (Poncet & Poncet 1985). Approximately 28 000 pairs of Chinstrap Penguin were recorded breeding on the eastern and northern shorelines of Monroe Island and on Spine Island in 1984 (Poncet & Poncet 1985). Approximately 10 000 breeding pairs of Chinstrap Penguin were also recorded in three colonies on Nicolas Rocks in 1984 (Poncet & Poncet 1985). [Nicolas Rocks were referred to erroneously as Larsen Islands in Poncet & Poncet 1985]. The total Chinstrap Penguin population reported by Poncet & Poncet (1985) in this area was ~62 200 pairs. More recently, approximately 125 000 pairs of Chinstrap Penguin were estimated breeding on Moreton Point and Monroe Island based on a survey from a ship anchored in Sandefjord Bay, with birds nesting on "every available surface" (H. Lynch pers. comm. 2010).

An estimated 5000 – 10 000 Southern Fulmars breed on the northern and eastern coasts of Monroe Island, and a further 10 000 – 20 000 on the western coast of Coronation Island and coastal cliffs above Sandefjord Bay generally (Creuwels *et al*. 2007). Snow Petrels (*Pagodroma nivea*) are confirmed breeders in Sandlefjord Bay (Croxall *et al*. 1995). More than 5000 pairs of Cape Petrels (*Daption capense*) were estimated to breed in this area by Ardley (1936) in 1933.

Other threatened / endemic wildlife

Antarctic Fur Seals (*Arctocephalus gazella*) occupy beaches in the vicinity in summer.

Conservation issues

None known.

Further reading

Ardley, R.A.B. 1936. The birds of the South Orkney Islands. *Discovery Reports* **12**: 349-76.

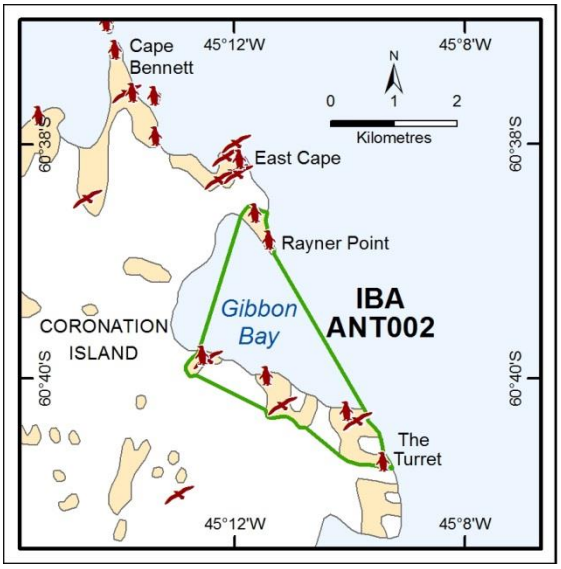
Creuwels, J.C.S., Poncet, S., Hodum, P.J. & van Franeker, J.A. 2007. Distribution and abundance of the Southern Fulmar *Fulmarus glacialoides*. *Polar Biology* **30:** 1083–97.

Croxall, J.P., Steele, W.K, McInnes, S.J. & Prince, P.A. 1995. Breeding distribution of the Snow Petrel *Pagodroma nivea. Marine Ornithology* **23**: 69-99.

Poncet, S. & Poncet, J. 1985. A survey of penguin breeding populations at the South Orkney Islands, Antarctica. *British Antarctic Survey Bulletin* **68**: 71-81.

ANT002: Gibbon Bay, Coronation Island

IBA criteria	A4iii
Coordinates	45°11' W, 60°40' S
Area	539 ha
Altitude	0 to < 500 m
Protection	None



Site description

Gibbon Bay lies between Rayner Point and The Turret on the northeastern coast of Coronation Island. The IBA qualifies on the basis of the concentration of seabirds present (in particular Chinstrap Penguin (*Pygoscelis antarctica*)) and comprises ice-free areas along the shoreline of Gibbon Bay, including the intervening marine and ice-covered areas.

Information on the environment at Gibbon Bay is not available. In contrast to Signy Island, northern Coronation Island is more susceptible to fog as a result of moisture-heavy prevailing north-westerly winds rising over the permanently ice-covered mountains on Coronation Island.

The nearest research station to the site is Signy (GBR), located on the eastern coast of Signy Island. See ANT019 for more information on this station.

Birds

Approximately 13 210 pairs of Chinstrap Penguin were recorded breeding along the shoreline of Gibbon Bay in 1983 (Poncet & Poncet 1985), located on ice-free areas at Rayner Point, The Turret and along the shoreline between these two headlands. Snow Petrels (*Pagodroma nivea*) are reported to breed in at least three locations along the shore of Gibbon Bay (Croxall *et al*. 1995).

Other threatened / endemic wildlife

None known.

Conservation issues

None known.

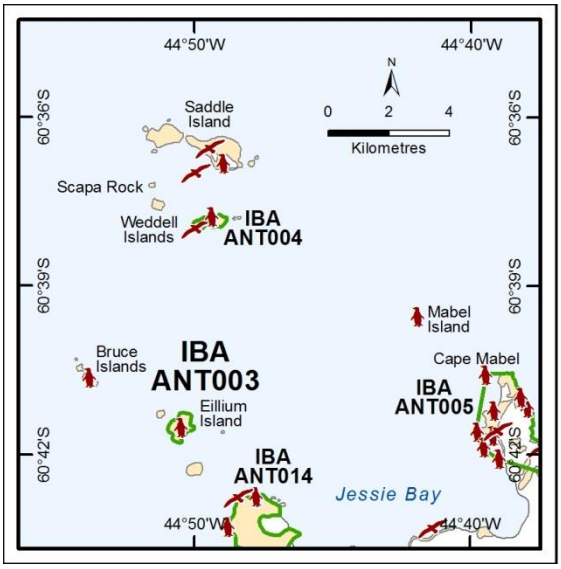
Further reading

Croxall, J.P., Steele, W.K, McInnes, S.J. & Prince, P.A. 1995. Breeding distribution of the Snow Petrel *Pagodroma nivea. Marine Ornithology* **23**: 69-99.

Poncet, S. & Poncet, J. 1985. A survey of penguin breeding populations at the South Orkney Islands. *British Antarctic Survey Bulletin* **68**: 71-81.

ANT003: Eillium Island

IBA criteria	A4iii
Coordinates	44°51' W, 60°41' S
Area	50 ha
Altitude	0 to < 250 m
Protection	None



Site description

Eillium Island is a small island lying 3 km northwest of Mackenzie Peninsula, the westernmost peninsula on Laurie Island, South Orkney Islands. The IBA qualifies on the basis of the concentration of seabirds present (in particular Chinstrap Penguin (*Pygoscelis antarctica*)).

The nearest research station is Orcadas (ARG) which is located less than 10 km to the southeast of the IBA. Orcadas operates year-round with around 45 personnel present in summer and 14 in winter (COMNAP, Antarctic Facilities, accessed 01/09/2010).

Birds

Approximately 21 400 pairs of Chinstrap Penguin were breeding on Eillium Island in 1983 (Poncet & Poncet 1985).

Other threatened / endemic wildlife

None known.

Conservation issues

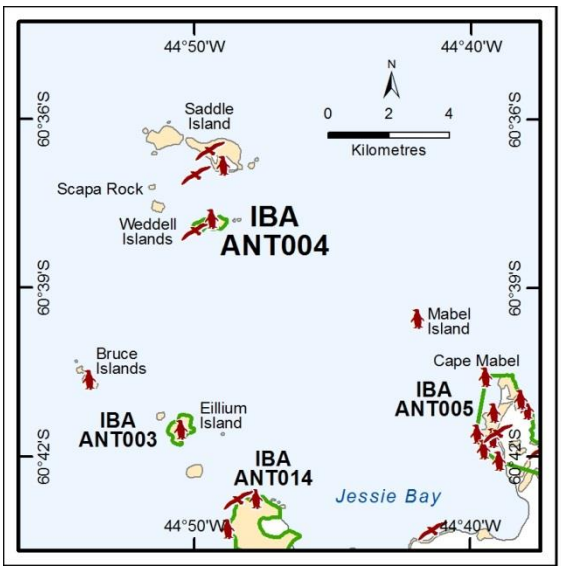
None known.

Further reading

Poncet, S. & Poncet, J. 1985. A survey of penguin breeding populations at the South Orkney Islands, Antarctica. *British Antarctic Survey Bulletin* **68**: 71-81.

ANT004: Weddell Islands

IBA criteria	A4iii
Coordinates	44°49'24" W, 60°37'52" S
Area	30 ha
Altitude	Not known
Protection	None



Site description

Weddell Islands are situated south of Saddle Island, northwest of Cape Mabel, Laurie Island and east of Cape Faraday, Powell Island, South Orkney Islands.

The IBA qualifies on the basis of the seabirds present at the site, in particular penguins in the *Pygoscelis* genus. The IBA comprises the largest island and some smaller islands immediately to the west and the intervening marine area.

The nearest permanent station is Orcadas (ARG) situated ~13 km southeast on Laurie Island. Orcadas operates year-round with around 45 personnel in summer and 14 in winter (COMNAP, Antarctic Facilities, accessed 01/09/2010).

Birds

Adélie (*Pygoscelis adeliae*), Chinstrap (*P. antarctica*), and possibly Gentoo (*P. papua*) penguins are believed to breed on the islands, although the presence and proportions by species are unknown. Ardley (1936) reported that Chinstrap Penguins comprised the majority on the Weddell Islands in Jan 1933. Lynch & LaRue (2014) estimated from February 2011 satellite imagery that approximately 28 507 breeding pairs (95% CI: 17 350, 47 277) of penguins of the genus *Pygoscelis* were present at the Weddell Islands. The penguins breed along the lower slopes of the entire coastline.

Cape Petrel (*Daption capense*) and Snow Petrel (*Pagodroma nivea*) are confirmed breeders in the area (Hodum 2004; Croxall *et al*. 1995). Ardley (1936) estimated more than 5000 pairs of Cape Petrels present on Weddell Islands in Jan 1933, occupying north-facing cliffs. Ardley (1936) also reported a large number of Chinstrap Penguins on nearby Saddle Island, although recent data to confirm this are not available.

Other threatened / endemic wildlife

None known.

Conservation issues

None known.

Further reading

Ardley, R.A.B. 1936. The birds of the South Orkney Islands. *Discovery Reports* **12**: 349-76.

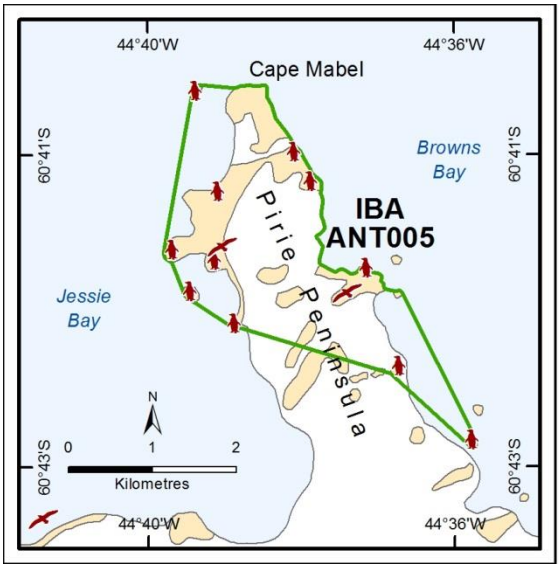
Croxall, J.P., Steele, W.K, McInnes, S.J. & Prince, P.A. 1995. Breeding distribution of the Snow Petrel *Pagodroma nivea*. *Marine Ornithology* **23**: 69-99.

Hodum, P., Croxall, J.P., Poncet, S. & Woehler, E. 2004. Breeding distribution of the Cape Petrel *Daption capense*. Unpublished draft manuscript.

Lynch, H.J. & LaRue, M.A. 2014. First global census of the Adélie Penguin. *The Auk* **131**(4): 457-66. doi:10.1642/AUK-14-31.1

ANT005: Pirie Peninsula, Laurie Island

IBA criteria	A4i, A4iii
Coordinates	44°38' W, 60°42' S
Area	605 ha
Altitude	< 500 m
Protection	None



Site description

Pirie Peninsula lies between Jessie Bay and Browns Bay on the northern coast of Laurie Island. Pirie Peninsula rises to over 250 m and contains numerous small areas free from permanent snow or ice cover. The IBA qualifies on the basis of the Imperial Shag (*Phalacrocorax* [*atriceps*] *bransfieldensis*) colony present and the high concentration of seabirds (in particular Chinstrap Penguin (*Pygoscelis antarctica*)). The IBA comprises all ice-free areas and offshore islands in the Pirie Peninsula area on which birds are known to breed, based on records collected in 1983 (Poncet & Poncet 1985).

The nearest research station is Orcadas (ARG) which is located 6 km to the southwest of the IBA. Orcadas operates year-round with around 45 personnel in summer and 14 in winter (COMNAP, Antarctic Facilities, accessed 01/09/2010).

Birds

Approximately 14 270 pairs of Chinstrap Penguin were breeding at Pirie Peninsula in 1994 (Coria *et al*. 2011; unpublished data N. Coria, in compilation by E. Woehler, 2004). Poncet & Poncet (1985) reported 16 930 breeding pairs of Chinstrap Penguin present on Pirie Peninsula in 1983. More than 170 pairs of Imperial Shag were breeding in 1983 (unpublished data S. Poncet pers. comm. 2005). Of these, 106 pairs were recorded on two islets off the western coast of Pirie Peninsula and 70 pairs were recorded at a skerry off the eastern coast. Approximately 3790 breeding pairs of Cape Petrel (*Daption capense*) were recorded at the eastern Pirie Peninsula and 565 pairs were recorded at the western Pirie Peninsula in 1994 (unpublished data N. Coria, cited in Hodum *et al*. 2004).

Other threatened / endemic wildlife

None known.

Conservation issues

None known.

Further reading

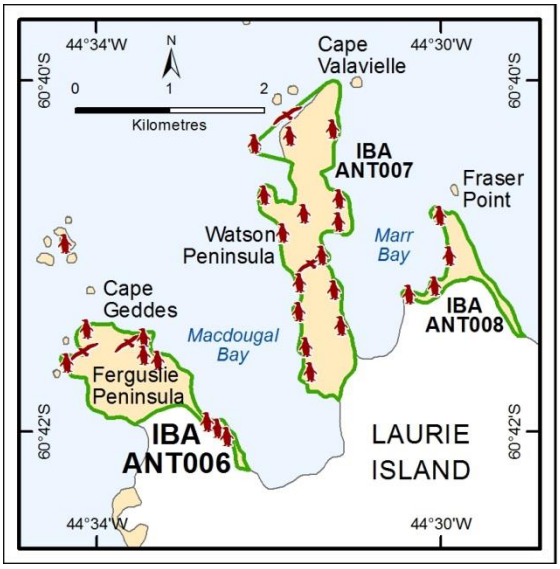
Coria, N.R., Montalti, D., Rombola, E.F., Santos, M.M., Garcia Betoño, M.I. & Juares, M.A. 2011. Birds at Laurie Island, South Orkney Islands, Antarctica: breeding species and their distribution. *Marine Ornithology* **39**: 207-13.

Hodum, P., Croxall, J.P., Poncet, S. & Woehler, E. 2004. Breeding distribution of the Cape Petrel *Daption capense*. Unpublished draft manuscript.

Poncet, S. & Poncet, J. 1985. A survey of penguin breeding populations at the South Orkney Islands, Antarctica. *British Antarctic Survey Bulletin* **68**: 71-81.

ANT006: Ferguslie Peninsula, Laurie Island

IBA criteria	A4iii
Coordinates	44°33' W, 60°42' S
Area	99 ha
Altitude	0 to < 250 m
Protection	None



Site description

Ferguslie Peninsula lies on the northern coast of Laurie Island between Browns Bay and Macdougal Bay. The IBA qualifies on the basis of the concentration of seabirds present (in particular Chinstrap Penguin (*Pygoscelis antarctica*)) and comprises all of ice-free area on Ferguslie Peninsula, extending to Cape Geddes.

The nearest research station is Orcadas (ARG) which is located 9 km to the southwest of the IBA. Orcadas operates year-round with around 45 personnel present in summer and 14 in winter (COMNAP, Antarctic Facilities, accessed 01/09/2010).

Birds

Approximately 12 420 pairs of Chinstrap Penguin were breeding at the site in 1983, with colonies at Cape Geddes and on the east side of Ferguslie Peninsula (Poncet & Poncet 1985). Approximately 228 pairs of Southern Giant Petrel (*Macronectes giganteus*) were breeding at Cape Geddes in 1993 (Coria *et al*. 1996), and 187 in 2006 (ACAP 2010b).

Other threatened / endemic wildlife

None known.

Conservation issues

None known.

Further reading

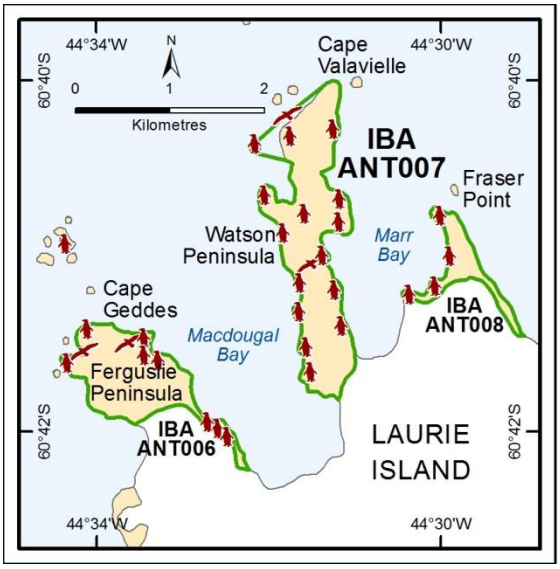
ACAP (Agreement on the Conservation of Albatrosses and Petrels) 2010b. ACAP Species assessment: Southern Giant Petrel *Macronectes giganteus*. Downloaded from http://www.acap.aq on 12/03/ 2015.

Coria, N.R., Blendinger, P.G. & Montalti, D. 1996. The breeding birds of Cape Geddes, Laurie Island, South Orkney Islands, Antarctica. *Marine Ornithology* **24**: 43-44.

Poncet, S. & Poncet, J. 1985. A survey of penguin breeding populations at the South Orkney Islands, Antarctica. *British Antarctic Survey Bulletin* **68**: 71-81.

ANT007: Watson Peninsula, Laurie Island

IBA criteria	A4iii
Coordinates	44°31' W, 60°41' S
Area	178 ha
Altitude	< 250 m
Protection	None



Site description

Watson Peninsula is a largely ice-free headland extending for ~3.6 km to Cape Valavielle on the northern coast of Laurie Island, separating Macdougal Bay and Marr Bay. The IBA qualifies on the basis of the concentration of seabirds present (in particular Chinstrap Penguin (*Pygoscelis antarctica*)) and includes all of the ice-free area of Watson Peninsula and a small island located 350 m off the northwestern shore.

The nearest research station is Orcadas (ARG), located 11 km to the southwest. Orcadas operates year-round with around 45 personnel present in summer and 14 in winter (COMNAP, Antarctic Facilities, accessed 01/09/2010).

Birds

Approximately 3500 – 4000 pairs of Chinstrap Penguin were recorded breeding on the eastern and western coasts of Watson Peninsula in 1948 (Croxall & Kirkwood 1979). Approximately 10 893 breeding pairs were recorded in 1994, suggesting a population increase at this site (unpublished data N. Coria, compiled by E. Woehler pers. comm. 2004)). Approximately 462 pairs of Adélie Penguin (*Pygoscelis adeliae*) were recorded breeding on Watson Peninsula in 1994. A small Gentoo Penguin (*Pygoscelis papua*) colony is located midway along the west coast and constituted 10 breeding pairs in 1994. Southern Giant Petrels (*Macronectes giganteus*) are also present, with 280 breeding pairs recorded in 2006 (ACAP 2010b).

Other threatened / endemic wildlife

None known.

Conservation issues

None known.

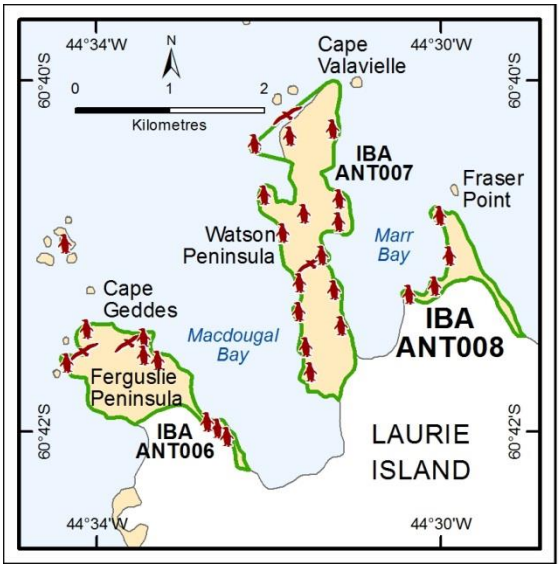
Further reading

ACAP (Agreement on the Conservation of Albatrosses and Petrels) 2010b. ACAP Species assessment: Southern Giant Petrel *Macronectes giganteus*. Downloaded from http://www.acap.aq on 12/03/ 2015.

Croxall, J.P. & Kirkwood, E.D. 1979. *The distribution of penguins on the Antarctic Peninsula and Islands of the Scotia Sea.* British Antarctic Survey, Cambridge.

ANT008: Fraser Point, Laurie Island

IBA criteria	A4iii
Coordinates	44°30' W, 60°41' S
Area	32 ha
Altitude	0 to < 250 m
Protection	None



Site description

Fraser Point lies at the eastern extremity of Laurie Island, at the eastern entrance to Marr Bay. The IBA qualifies on the basis of the concentration of seabirds present (in particular Chinstrap Penguin (*Pygoscelis antarctica*)) and comprises the ice-free area to the south of Fraser Point, including the eastern shoreline of Marr Bay and western shoreline of Mackintosh Cove.

The nearest research station is Orcadas (ARG) which is located 13 km to the west-southwest of the IBA. Orcadas operates year-round with around 45 personnel present in summer and 14 in winter (COMNAP, Antarctic Facilities, accessed 01/09/2010).

Birds

Approximately 11 200 pairs of Chinstrap Penguin were recorded breeding in 1983, located on the shoreline of the ice-free ground on the eastern side of Marr Bay, south of Fraser Point (Poncet & Poncet 1985).

Other threatened / endemic wildlife

None known.

Conservation issues

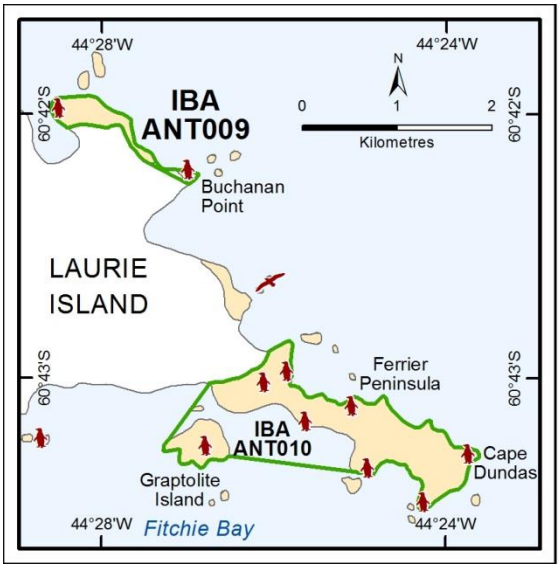
None known.

Further reading

Poncet, S. & Poncet, J. 1985. A survey of penguin breeding populations at the South Orkney Islands, Antarctica. *British Antarctic Survey Bulletin* **68**: 71-81.

ANT009: Buchanan Point, Laurie Island

IBA criteria	A4iii
Coordinates	44°28' W, 60°42' S
Area	27 ha
Altitude	0 to < 250 m
Protection	None



Site description

Buchanan Point lies on the northeastern coast of Laurie Island. The IBA qualifies on the basis of the concentration of seabirds present (in particular Chinstrap Penguin (*Pygoscelis antarctica*)) and comprises the ice-free coastal area between the eastern side of Mackintosh Cove and Buchanan Point.

The nearest research station is Orcadas (ARG) which is located 15 km to the west. Orcadas operates year-round with around 45 personnel present in summer and 14 in winter (COMNAP, Antarctic Facilities, accessed 01/09/2010).

Birds

Approximately 10 300 pairs of Chinstrap Penguin were recorded breeding on the northeastern coast of Laurie Island in 1983 (Poncet & Poncet 1985). Of these, 6500 pairs were located at Buchanan Point, at the southern extent of the site, whilst a further 3800 pairs were breeding on the coastal area of Mackintosh Cove.

Other threatened / endemic wildlife

None known.

Conservation issues

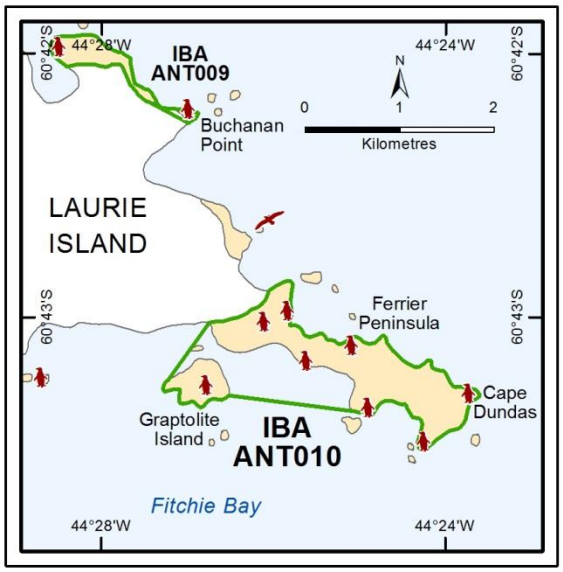
None known.

Further reading

Poncet, S. & Poncet, J. 1985. A survey of penguin breeding populations at the South Orkney Islands, Antarctica. *British Antarctic Survey Bulletin* **68**: 71-81.

ANT010: Ferrier Peninsula / Graptolite Island

IBA criteria	A1, A4ii, A4iii
Coordinates	44°25'32'' W, 60°43'18'' S
Area	236 ha
Altitude	0 to < 250 m
Protection	None



Site description

Ferrier Peninsula and Graptolite Island lie at the southeastern extremity of Laurie Island at Fitchie Bay. The IBA qualifies on the basis of the Adélie Penguin (*Pygoscelis adeliae*) colony present and the high concentration of seabirds (in particular Adélie and Chinstrap Penguins (*Pygoscelis antarctica*)). The IBA comprises the ice free area on Ferrier Peninsula extending from the permanent ice cap on Laurie Island to Cape Dundas, and includes nearby Graptolite Island and the intervening marine area.

The nearest research station is Orcadas (ARG) which is located ~15 km to the west. Orcadas operates year-round with around 45 personnel present in summer and 14 in winter (COMNAP, Antarctic Facilities, accessed 01/09/2010).

Birds

Approximately 61 000 pairs of Adélie Penguin were recorded breeding on Ferrier Peninsula in 1983, most of which were nesting on the northern coast, and approximately 30 000 pairs were breeding on Graptolite Island (Poncet & Poncet 1985). Chinstrap Penguins breed on both the northern and southern coasts of Ferrier Peninsula, comprising 14 200 pairs in 1983. Gentoo Penguins (*Pygoscelis papua*) were also recorded breeding on Ferrier Peninsula in 1947 (Poncet & Poncet 1985).

Other threatened / endemic wildlife

None known.

Conservation issues

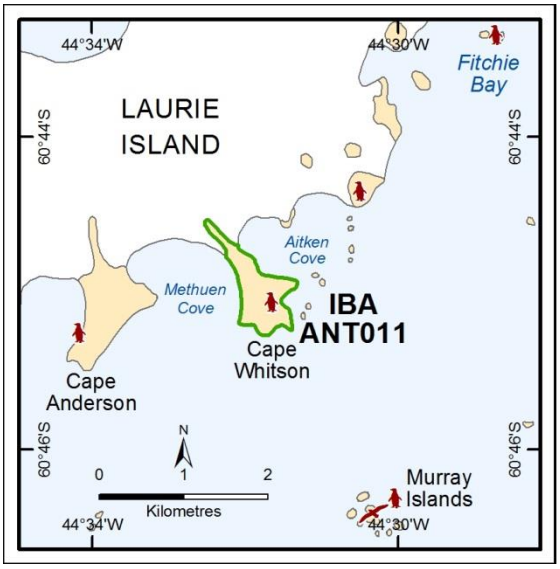
None known.

Further reading

Poncet, S. & Poncet, J. 1985. A survey of penguin breeding populations at the South Orkney Islands, Antarctica. *British Antarctic Survey Bulletin* **68**: 71-81.

ANT011: Cape Whitson, Laurie Island

IBA criteria	A4iii
Coordinates	44°32' W, 60°45' S
Area	50 ha
Altitude	0 to < 250 m
Protection	None



Site description

Cape Whitson is located on the southern coast of Laurie Island, South Orkney Islands, and lies between Aitken Cove and Methuen Cove. The peninsula extends ~1.5 km in length by ~0.5 km across and its elevation is <250 m. The IBA qualifies on the basis of the concentration of seabirds present (in particular Chinstrap Penguin (*Pygoscelis antarctica*)) and comprises the ice-free terrain of the headland at Cape Whitson.

The nearest permanent scientific station is Orcadas (ARG), located ~9 km to the northwest. Orcadas operates year-round with around 45 personnel present in summer and 14 in winter (COMNAP, Antarctic Facilities, accessed 01/09/2010).

Birds

Approximately 12 755 pairs of Chinstrap Penguin were recorded breeding at Cape Whitson in 1994 (unpublished data N. Coria, compiled by E. Woehler pers. comm. 2004)).

Other threatened / endemic wildlife

None known.

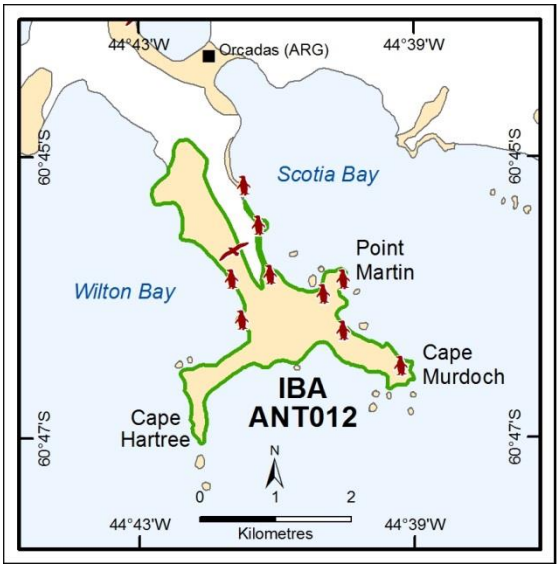
Conservation issues

None known.

Further reading

ANT012: Point Martin, Laurie Island

IBA criteria	A4iii
Coordinates	44°41' W, 60°46' S
Area	310 ha
Altitude	0 to < 250 m
Protection	None



Site description

Point Martin is located on the southern coast of Laurie Island, on a peninsula extending between Scotia Bay and Wilton Bay. The IBA qualifies on the basis the high concentration of seabirds present (in particular Adélie Penguin (*Pygoscelis adeliae*) and Chinstrap Penguin (*P. antarctica*)). The IBA comprises the ice-free area from Point Martin to Cape Hartree in the southwest.

The nearest research station is Orcadas (ARG), located several km from the limit of the IBA. Orcadas operates year-round with around 45 personnel present in summer and 14 in winter (COMNAP, Antarctic Facilities, accessed 01/09/2010).

Birds

Coria *et al*. (2011) reported 26 450 breeding pairs of Adélie Penguin at Point Martin in 2004/05, which compares to 25 880 breeding pairs recorded in 1993/94. A total of 13 394 breeding pairs of Chinstrap Penguin were recorded at Point Martin in 1994 (unpublished data N. Coria, compiled by E. Woehler pers. comm. 2004)). Ardley (1936) reported a colony of ~180 breeding pairs of Imperial Shag (*Phalacrocorax* [*atriceps*] *bransfieldensis*) present on a small islet in western Wilton Bay in Jan 1933, although it is unknown whether the colony still exists. It seems possible that this colony may be the same as that identified as IBA ANT013 on the islet southwest of Cape Davidson.

Other threatened / endemic wildlife

None known.

Conservation issues

Orcadas Station (ARG), with associated operational and support activities, is located in close proximity to the IBA.

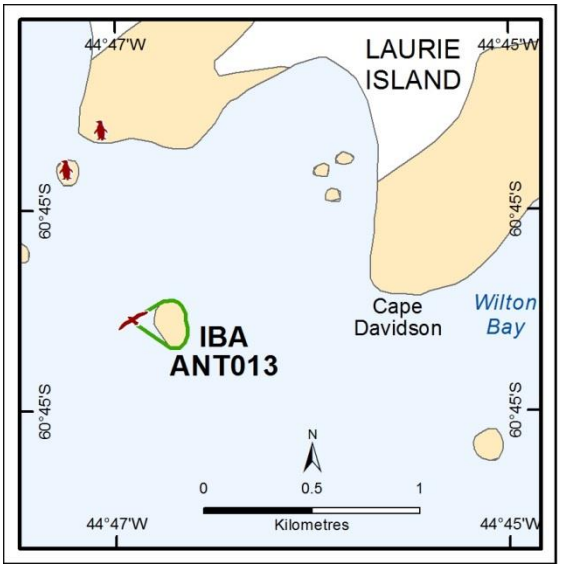
Further reading

Ardley, R.A.B. 1936. The birds of the South Orkney Islands. *Discovery Reports* **12**: 349-76.

Coria, N.R., Montalti, D., Rombola, E.F., Santos, M.M., Garcia Betoño, M.I. & Juares, M.A. 2011. Birds at Laurie Island, South Orkney Islands, Antarctica: breeding species and their distribution. *Marine Ornithology* **39**: 207-13.

ANT013: Islet SW of Cape Davidson

IBA criteria	A4i
Coordinates	44°47' W, 60°45' S
Area	3.6 ha
Altitude	0 to < 250 m
Protection	None



Site description

Cape Davidson is located on the southwest coast of Laurie Island. The IBA qualifies on the basis of the Imperial Shag (*Phalacrocorax* [*atriceps*] *bransfieldensis*) colony present and comprises a small (2.8 ha) rocky islet lying offshore ~1 km southwest from Cape Davidson.

The nearest research station is Orcadas (ARG) which is located ~5 km to the east of the IBA. Orcadas operates year-round with around 45 personnel present in summer and 14 in winter (COMNAP, Antarctic Facilities, accessed 01/09/2010).

Birds

Approximately 225 pairs of Imperial Shag were breeding on the islet in 1983 (unpublished data S. Poncet pers. comm. 2005).)). Ardley (1936) reported a colony of ~180 breeding pairs of Imperial Shag present on a small islet in western Wilton Bay in Jan 1933, although it is unknown whether the colony still exists. It seems possible that this colony may be the same as that identified by S. and J. Poncet on the islet southwest of Cape Davidson.

Other threatened / endemic wildlife

None known.

Conservation issues

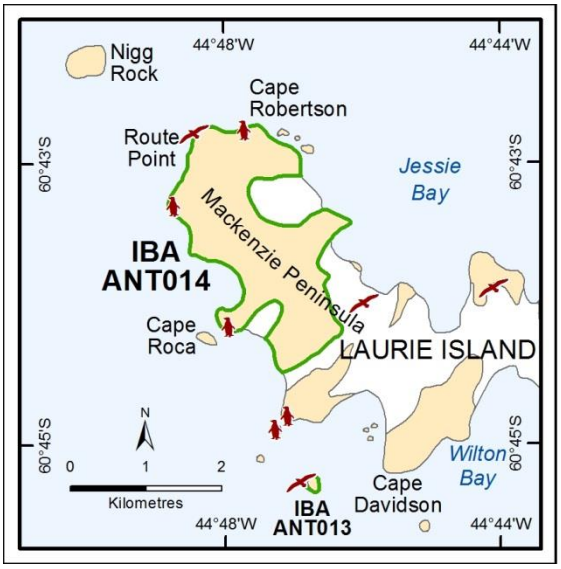
Orcadas Station (ARG), with associated operational and support activities, is located in close proximity to the IBA.

Further reading

Ardley, R.A.B. 1936. The birds of the South Orkney Islands. *Discovery Reports* **12**: 349-76.

ANT014: Cape Robertson, Laurie Island

IBA criteria	A4iii
Coordinates	44°47' W, 60°44' S
Area	384 ha
Altitude	0 to < 500 m
Protection	None



Site description

Cape Robertson is an ice free point rising to over 250 m located on the western coast of Laurie Island, at the northern extremity of the Mackenzie Peninsula. The IBA qualifies on the basis of the concentration of seabirds present (in particular Chinstrap Penguin (*Pygoscelis antarctica*)) present, and extends from Cape Robertson to a coastal headland 1 km south of Cape Roca on the southern coastline of Laurie Island.

The nearest research station is Orcadas (ARG) which is located less than 5 km to the southeast of the IBA. Orcadas operates year-round with around 45 personnel present in summer and 14 in winter (COMNAP, Antarctic Facilities, accessed 01/09/2010).

Birds

Approximately 19 745 pairs of Chinstrap Penguin were breeding at Cape Robertson in 1994 (unpublished data N. Coria, compiled by E. Woehler pers. comm. 2004)), with a further 1300 pairs breeding along the coast between Cape Robertson and Cape Roca (Poncet & Poncet 1985).

Other threatened / endemic wildlife

None known.

Conservation issues

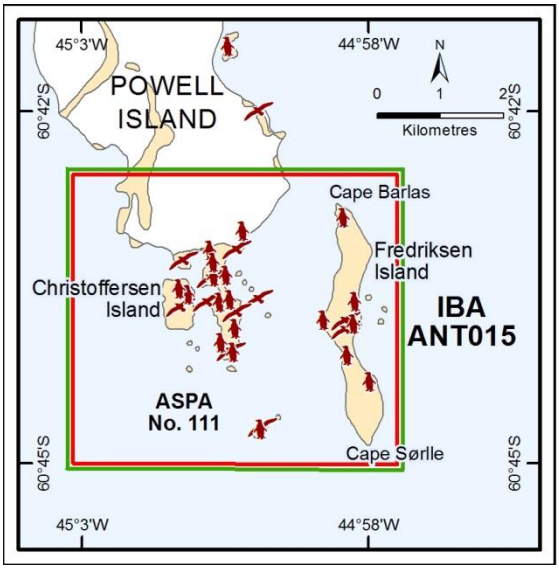
Orcadas Station (ARG), with associated operational and support activities, is located in close proximity to the IBA.

Further reading

Poncet, S. & Poncet, J. 1985. A survey of penguin breeding populations at the South Orkney Islands, Antarctica. *British Antarctic Survey Bulletin* **68**: 71-81.

ANT015: Southern Powell Island and adjacent islands

IBA criteria	A1, A4i, A4ii, A4iii
Coordinates	45°00' W, 60°44' S
Area	2356 ha
Altitude	< c.375 m
Protection	ASPA No.111



Site description

Southern Powell Island is located 7 km east of the southwestern extremity of Coronation Island, between Lewthwaite Strait and Washington Strait, South Orkney Islands. Much of the land area at this site is ice-free in summer, although a permanent icecap covers much of Powell Island. The IBA qualifies on the basis of the Chinstrap Penguin (*Pygoscelis antarctica*), Gentoo Penguin (*P. papua*), Adélie Penguin (*P. adeliae*), Imperial Shag (*Phalacrocorax* [*atriceps*] *bransfieldensis*), and Southern Giant Petrel (*Macronectes giganteus*) colonies present. The IBA boundary follows the boundary of ASPA No. 111.

Vegetation at the site includes moss banks at southern Powell Island, Christoffersen Island and northern Fredriksen Island, and extensive cover of the alga *Prasiola crispa* associated with breeding penguins (ASPA No. 111 Management Plan, 2012). Snow algae also grow on glaciated areas and snow patches around the site.

The nearest research station is Orcadas (ARG), which lies ~17 km to the southeast on Laurie Island and operates year-round with accommodation for ~45 people in summer and a winter complement of ~14 people (COMNAP, Antarctic Facilities, accessed 01/09/2010). See ANT019 for information on meteorological records and facilities at Signy Station (GBR), located 35 km to the west.

Birds

Southern Powell Island is one of the most populous sites for breeding birds in the South Orkney Islands. Over 8000 breeding pairs of Gentoo Penguin were recorded in 1983, at several sites on southern Powell Island (5072 pairs), Michelsen Island (2175 pairs) and Christoffersen Island (710 pairs) (Poncet & Poncet 1985). In the same year, 16 750 pairs of Adélie Penguin and 28 100 pairs of Chinstrap Penguin were recorded at the site. Adélie Penguins breed on Michelsen Island (9000 pairs) and on southern Powell Island (7500 pairs), with a smaller colony on Christoffersen Island (250 pairs). The most abundant Chinstrap breeding site is on Fredriksen Island (21 320 pairs), while smaller colonies are located on southern Powell Island, the southern coast of Michelsen Island (4435 pairs) and on Grey Island (2350 pairs) (Poncet & Poncet 1985). A few Macaroni Penguins (*Eudyptes chrysolophus*) also breed among the Gentoo Penguins at the site (ASPA No. 111 Management Plan, 2012).

Southern Giant Petrel breed on southern Powell Island and on Christoffersen and Michelsen islands, and were estimated at 613 breeding pairs in 1982/83 (Patterson *et al*. 2008). Other breeding birds include the Imperial Shag (144 breeding pairs nesting among Chinstrap Penguins on the northern coast of Grey Island in 1988), and Snow Petrel (*Pagodroma nivea*), which breeds at Ellefsen Harbour, Michelsen Island and Fredricksen Island (Croxall *et al*. 1995). Kelp Gull (*Larus dominicanus*), Cape Petrel (*Daption capense*), Brown Skua (*Catharacta antarctica*) and Snowy Sheathbill (*Chionis albus*) also breed at the site, and Antarctic Prion (*Pachyptila desolata*) and Black-bellied Storm-petrel (*Fregetta tropica*) are possible breeders (ASPA No. 111 Management Plan, 2012).

Other threatened / endemic wildlife

Antarctic Fur Seal (*Arctocephalus gazella*) breed on Michelsen Island, with an upward trend in the breeding population since the 1950's (ASPA No. 111 Management Plan, 2012). Non-breeding mammals observed at the site include

Southern Elephant Seal (*Mirounga leonina*), Weddell Seal (*Leptonychotes weddellii*) and occasionally Leopard Seal (*Hydrurga leptonyx*) and Crabeater Seal (*Lobodon carcinophagus*).

Conservation issues

Southern Powell Island and its adjacent islands were designated as ASPA No. 111 to protect their flora and fauna, which is representative of the natural ecology of the South Orkney Islands, and as an important breeding site for Antarctic Fur Seals (ASPA No. 111 Management Plan, 2012). Access to ASPA No. 111 is prohibited without a permit except for essential management or compelling scientific purposes. The site is remote and visits are few. However, the Antarctic krill fishery operates in nearby waters where penguins and other species forage.

Further reading

ASPA No.111 Southern Powell Island, South Orkney Islands: Management Plan (2012).

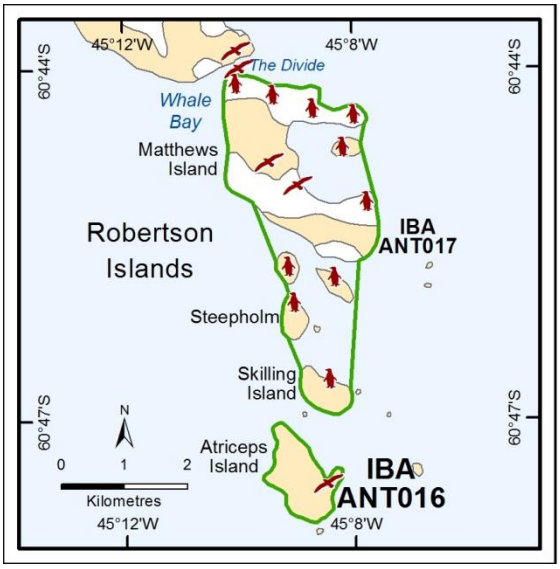
Croxall, J.P., Steele, W.K, McInnes, S.J. & Prince, P.A. 1995. Breeding distribution of the Snow Petrel *Pagodroma nivea*. *Marine Ornithology* **23**: 69-99.

Patterson, D.L., Woehler, E.J., Croxall, J.P., Cooper, J., Poncet, S., Peter, H.-U., Hunter, S. & Fraser, W.R. 2008. Breeding distribution and population status of the Northern Giant Petrel *Macronectes halli* and the Southern Giant Petrel *M. giganteus*. *Marine Ornithology* **36**: 115-24.

Poncet, S. & Poncet, J. 1985. A survey of penguin breeding populations at the South Orkney Islands, Antarctica. *British Antarctic Survey Bulletin* **68**: 71-81.

ANT016: Atriceps Island, Robertson Islands

IBA criteria	A4i
Coordinates	45°09' W, 60°48' S
Area	102 ha
Altitude	< 250 m
Protection	None



Site description

Atriceps Island lies at the southern extremity of the Robertson Islands group, South Orkney Islands. The Robertson Islands group is separated from the southernmost point of Coronation Island by Whale Bay and The Divide, and comprises (from north to south): Matthews Island, Coffer Island, Steepholm, Skilling Island and Atriceps Island. The IBA qualifies on the basis of the Imperial Shag (*Phalacrocorax* [*atriceps*] *bransfieldensis*) colony present and includes all of Atriceps Island. This small ice free island has a maximum elevation of less than 250 m.

See ANT019 for information on meteorological records and facilities at Signy Station (GBR), which is located 25 km to the northwest.

Birds

Approximately 524 pairs of Imperial Shag were recorded breeding on Atriceps Island in 1988 (unpublished data S. Poncet pers. comm. 2005).

Other threatened / endemic wildlife

None known.

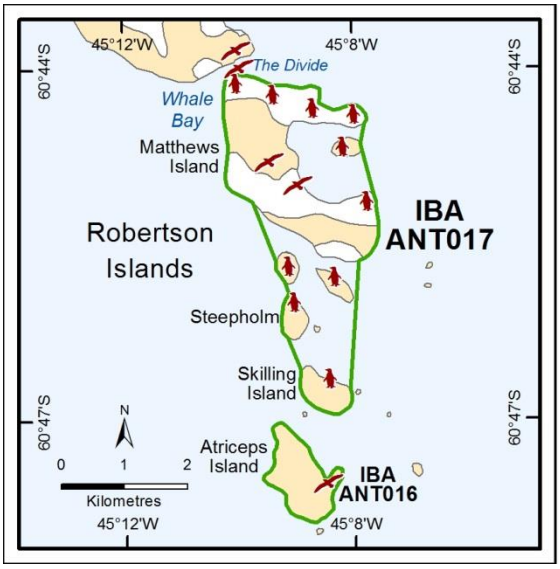
Conservation issues

None known.

Further reading

ANT017: Robertson Islands

IBA criteria	A4ii, A4iii
Coordinates	45°09' W, 60°45' S
Area	796 ha
Altitude	0 to < 500 m
Protection	None



Site description

Matthews Island, Steepholm, Coffer Island and Skilling Island are part of the Robertson Islands group, South Orkney Islands. Matthews Island is the largest of the Robertson Islands, is partly covered in permanent ice and rises to over 250 m at two summits. Other islands in the group reach an altitude of less than 250 m and have no permanent ice. The IBA qualifies on the basis of the Chinstrap Penguin (*Pygoscelis antarctica*) colony present and the high concentration of seabirds. The IBA comprises all islands and skerries lying north of Atriceps Island in the Robertson Islands group and the intervening marine area.

See ANT019 for information on meteorological records and facilities at Signy Station (GBR), which is located 25 km to the northwest.

Birds

Approximately 35 000 breeding pairs of Chinstrap Penguins were recorded in the Robertson Islands in 1983, with 14 750 pairs on Matthews Island, 2100 pairs on Coffer Island, 11 500 pairs on two islands south of Matthews Island and 6520 pairs on Steepholm and Skilling Islands combined (Poncet & Poncet 1985). In addition, Snow Petrels (*Pagodroma nivea*) breed in the area of The Divide (Croxall *et al*. 1995), a narrow channel separating Matthews Island from Coronation Island at the northern limit of the IBA.

Other threatened / endemic wildlife

None known.

Conservation issues

None known.

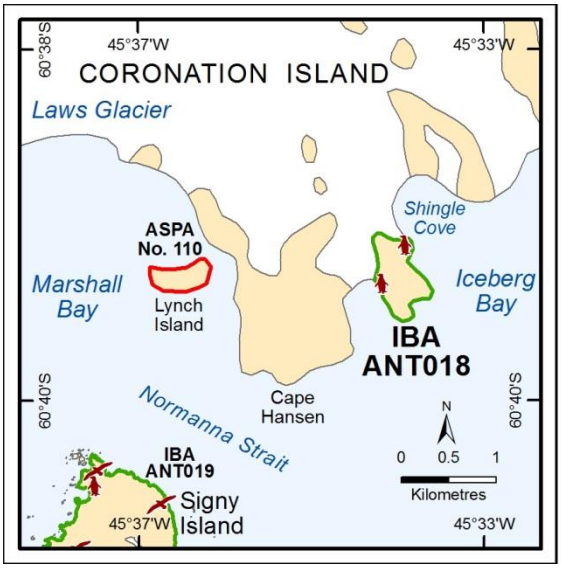
Further reading

Croxall, J.P., Steele, W.K, McInnes, S.J. & Prince, P.A. 1995. Breeding distribution of the Snow Petrel Pagodroma nivea. *Marine Ornithology* **23**: 69-99.

Poncet, S. & Poncet, J. 1985. A survey of penguin breeding populations at the South Orkney Islands, Antarctica. *British Antarctic Survey Bulletin* **68**: 71-81.

ANT018: Shingle Cove

IBA criteria	A4iii
Coordinates	60°39'20" S, 45°34'10" W
Area	34 ha
Altitude	0 to < 500 m
Protection	None



Site description

Shingle Cove is located in Iceberg Bay several km east of Cape Hansen on the southern coast of Coronation Island. The IBA qualifies on the basis of the concentration of seabirds present (in particular Adélie Penguin (*Pygoscelis adeliae*)) and comprises the ice-free area southwest and adjacent to Shingle Cove, ~1.3 km NE of Cape Hansen.

The nearest research station is Signy (GBR), located ~1.5 km southwest of Cape Hansen. See ANT019 for more information on this station.

Birds

Approximately 13 381 pairs of Adélie Penguin were recorded breeding close to and southwest of Shingle Cove in 2003 (Lynch *et al*. 2008; H. Lynch pers. comm. 2010; Naveen & Lynch 2011), referring to this site as 'Marshall Bay'. A small number of Brown Skuas (*Catharacta antarctica*) breed among the penguins; four breeding pairs were counted in 2003 (H. Lynch pers. comm. 2010). Croxall & Kirkwood (1979: 16) reported approximately 10 000 breeding pairs in "A series of Adélie colonies [that] stretches the length of the NE side of the cove to the north ('Half Moon Cove') [of Cape Hansen]", referring to this site as 'Cape Hansen'. It has been concluded that these authors are referring to the same colony, and that it lies along the NE coast of the cove immediately east of Cape Hansen. A colony of Adélie Penguins is also present at Shingle Cove, which comprised ~3041 breeding pairs in 2006 and ~3205 pairs in 2003 (Lynch *et al*. 2008; Naveen & Lynch 2011); around 3000 pairs were estimated in 1978 (Croxall & Kirkwood 1979).

A 'possible colony' of Chinstrap Penguins (*Pygoscelis antarctica*) was reported at Cape Hansen in 1965 (Croxall & Kirkwood 1979), although it seems likely that this was a mistaken reference to the nearby Adélie Penguin colony described above since no Chinstrap Penguin colony exists in this location. Cape Petrel (*Daption capense*), Snow Petrel (*Pagodroma nivea*), skuas (*Catharacta* spp.) and Snowy Sheathbill (*Chionis albus*) are confirmed to breed at the site (ATS Visitor Site Guidelines, Shingle Cove).

Other threatened / endemic wildlife

None known.

Conservation issues

None known.

Further reading

Antarctic Treaty System Visitor Site Guidelines, *Shingle Cove*:
URL: http://www.ats.aq/siteguidelines/documents/shingle_cove_e.pdf Accessed 05/04/2015.

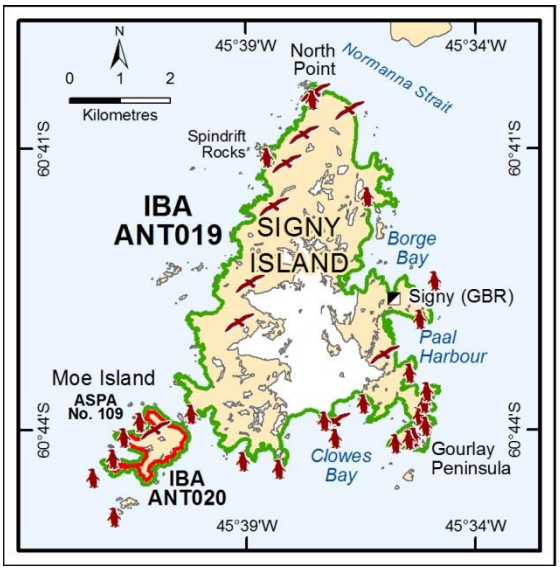
Croxall, J.P. & Kirkwood, E.D. 1979. *The distribution of penguins on the Antarctic Peninsula and Islands of the Scotia Sea*. British Antarctic Survey, Cambridge.

Lynch, H., Naveen, R. & Fagan, W. 2008. Censuses of Penguin, Blue-eyed Shag *Phalacrocorax atriceps* and Southern Giant Petrel *Macronectes giganteus* populations on the Antarctic Peninsula, 2001-2007. *Marine Ornithology* **36**: 83-97.

Naveen, R. & Lynch, H. 2011. *Compendium of Antarctic Peninsula visitor sites (3rd edition): A Report to the United States Environmental Protection Agency*. Oceanites, Chevy Chase, MD.

ANT019: Signy Island

IBA criteria	A4i, A4ii, A4iii
Coordinates	45°38' W, 60°43' S
Area	1926 ha
Altitude	< 278 m
Protection	None



Site description

Signy Island lies 1.6 km southwest of Cape Hansen on the south coast of Coronation Island. The IBA qualifies on the basis of the Chinstrap Penguin (*Pygoscelis antarctica*), Adélie Penguin (*P. adeliae*), Imperial Shag (*Phalacrocorax* [*atriceps*] *bransfieldensis*), Antarctic Prion (*Pachyptila desolata*), Brown Skua (*Catharacta antarctica*), Wilson's Storm-petrel (*Oceanites oceanicus*), and Southern Giant Petrel (*Macronectes giganteus*) colonies present. The IBA comprises all of Signy Island and several offshore islands including Confusion Island, Oliphant Islands, Spindrift Rocks and Shagnasty Island.

Almost half of Signy Island is covered by a permanent ice cap, with the highest point on the island being Tioga Hill (278 m). The coastline is dominated by exposed crags, and rocky headlands, with intervening bouldery slopes and sizeable moss banks (Tickell 1962). There are 16 lakes on the island and several glaciers, the largest of which terminates on the southern coast.

Extensive moss turfs occur particularly on the northwest coast of Signy Island, forming primary breeding habitat for burrowing petrels (R. Fijn pers. comm. 2011). Other flora on Signy Island includes Antarctic Hairgrass (*Deschampsia antarctica*) and Antarctic Pearlwort (*Colobanthus quitensis*), ~50 moss species, ~12 liverworts and ~120 lichen species (BAS, Signy Island Research Station, accessed 02/09/2010). Algae and cyanobacteria have also been observed in wetter sites on the island (Broady 1979).

The winter climate on Signy Island is influenced by pack ice which extends to surround the island from the Weddell Sea. Over summer pack ice retreats and Signy Island has a maritime climate. Mean summer air temperatures are between –2°C to 3°C, whilst during winter the mean monthly air temperature ranges from –2°C to –17° C. Strong winds are frequent, prevailing from the west. The minimum winter temperature on record is –39.3°C, whilst in summer temperatures range from –7°C to 19.8°C.

Signy Research Station (GBR) is located midway along the eastern shoreline of Signy Island, on the southern side of Borge Bay. The summer-only station accommodates ~8 people (COMNAP, Antarctic Facilities, accessed 31/08/2010).

Birds

An exceptionally diverse range of seabirds and waterbirds breed on Signy Island, including three species of penguin, four petrel species, two storm-petrel species, shags, sheathbills, two species of skua, gulls and terns.

Approximately 19 530 breeding pairs of Chinstrap Penguin breed on Signy Island (BAS unpublished data, M. Dunn pers. comm. 2010), with the most concentrated breeding sites on Gourlay Peninsula, an ice-free gently sloping peninsula on the southeast side of Signy Island; Pandemonium Point, on the southwest coast of Signy Island; Confusion Island, 100 m off the south of the island; and North Point (Croxall & Kirkwood 1979). This recent count is likely to be an under-estimate of typical Chinstrap breeding numbers, since this season was reportedly a poor one for this species (M. Dunn, pers. comm. 2011). Approximately 16 900 pairs of Adélie Penguin also breed at Gourlay Peninsula and North Point (Dunn *et al*. 2010), and 753 pairs of Gentoo Penguin (*Pygoscelis papua*) were recorded breeding for all Signy Island in 2010 (BAS unpublished data, M. Dunn pers. comm. 2010). Macaroni Penguins (*Eudyptes chrysolophus*) have not been recorded breeding on Signy Island or its offshore islands for many years, and were last observed breeding in low numbers (11 pairs) in 1979 (Croxall, Rootes & Price 1981).

Imperial Shags breed on ledges of low cliffs on the north coast of Signy Island and constituted 280 pairs in 2006/07 (R. Fijn pers. comm. 2011). Three larger groups of Imperial Shag may breed on flat or shallow-sloping areas on two islets near Shagnasty Island, as Rootes (1988) reported a total of 729 pairs in this area in the mid-1980s, although more recent data on these colonies are not available.

The latest survey in 2005/06 revealed 2351 pairs of Southern Giant Petrel breeding on Signy Island, predominantly on the western coast (M. Dunn & R. Fijn unpublished data, 2006). Approximately 1093 breeding pairs were recorded at North Point, G.P. Ridge and Borge Bay in 1984 (Patterson *et al*. 2008).

High numbers of Wilson's Storm-petrel breed on Signy Island in crevices and between boulders in ice-free areas, and it has been estimated that up to 200 000 breeding pairs were present on the island in 1966-68 (Beck & Brown 1972). It was also estimated that approximately 50 000 pairs of Antarctic Prion (*Pachyptila desolata*) breed on Signy Island, concentrated at Borge Bay on the eastern coastline close to Signy Station (Tickell 1962) and on the western coast from Foca Cove towards North Point (R. Fijn pers. comm. 2015). However, accurate counts of these species are difficult and numbers are approximate.

Approximately 100 pairs of Brown Skua (*Catharacta antarctica*) and a small number of South Polar Skua (*Catharacta maccormicki*) breed on Signy Island (Ritz *et al*. 2006). In addition, 195 pairs of Snow Petrel (*Pagodroma nivea*) were recorded breeding on Signy Island in 1985 (Croxall *et al*. 1995), although more recently numbers were estimated to exceed 1000 pairs (R. Fijn unpublished data, 2006).

Other birds breeding on Signy Island include the Cape Petrel (*Daption capense*), Snowy Sheathbill (*Chionis albus*), Kelp Gull (*Larus dominicanus*), Antarctic Tern (*Sterna vittata*) and Black-bellied Storm-petrel (*Fregetta tropica*) (BAS: Signy Island Research Station, 2010).

Other threatened / endemic wildlife

Antarctic Fur Seals (*Arctocephalus gazella*) haul out in large groups around the coast of Signy Island, concentrated on the eastern and southern coastline, with an estimated 12 245 individuals present in February 2009 (BAS unpublished data, M. Dunn pers. comm. 2009), although numbers vary and reached over 21 000 in 1994 (Waluda *et al*. 2009). Weddell Seals (*Leptonychotes weddellii*) breed on sea-ice around Signy Island over the winter, and Southern Elephant Seals (*Mirounga leonina*) regularly pup in spring (BAS 2010). Southern Elephant Seals and Weddell Seals are common on Signy Island: 522 and 12 respectively counted in Feb 2006 (M. Dunn & R. Fijn unpublished data, R. Fijn pers. comm. 2015), and 309 and 5 respectively in 2009 (BAS unpublished data, M. Dunn pers. comm. 2010). Leopard (*Hydrurga leptonyx*) and Crabeater (*Lobodon carcinophagus*) seals are regularly seen on ice-flows around the island.

Conservation issues

A long-term penguin monitoring program is conducted at Signy Island as part of the CCAMLR Ecosystem Monitoring Program (CEMP). The three species of penguins are surveyed annually to determine population size, breeding success, and diet. Populations of Chinstrap and Adélie Penguins have declined substantially over the past three decades. The decrease in Adélie Penguin numbers between 1987 and 2010 is possibly linked to regional warming and changes in sea ice extent experienced over the same time period (Forcada *et al*. 2006).

Further reading

Beck, J.R. & Brown, D.W. 1972. The biology of Wilson's Storm-petrel, *Oceanites oceanicus* (Kuhl), at Signy Island, South Orkney Islands. *British Antarctic Survey Scientific Reports* **69**. BAS, London.

BAS (British Antarctic Survey) 2010. *Signy Island Research Station*. BAS, Cambridge. URL:http://www.antarctica.ac.uk/living_and_working/research_stations/signy/. Accessed: 02/09/2010.

Broady, P.A. 1979. The terrestrial algae of Signy Island, South Orkney Islands. *British Antarctic Survey Scientific Reports* **98**. BAS, London.

Croxall, J.P. & Kirkwood, E.D. 1979. *The distribution of penguins on the Antarctic Peninsula and Islands of the Scotia Sea*. British Antarctic Survey, Cambridge.

Croxall, J.P., Rootes, D.M. & Price, R.A. 1981. Increases in penguin populations at Signy Island, South Orkney Islands. *British Antarctic Survey Bulletin* **54:** 47-56.

Croxall, J.P., Steele, W.K, McInnes, S.J. & Prince, P.A. 1995. Breeding distribution of the Snow Petrel *Pagodroma nivea. Marine Ornithology* **23**: 69-99.

Dunn, M.J., Silk, J.R.D. & Trathan, P.N. 2010. Post-breeding dispersal of Adélie penguins (*Pygoscelis adeliae*) nesting at Signy Island, South Orkney Islands. *Polar Biology* **34** (2): 205-14.

Forcada, J., Trathan, P.N., Reid, K., Murphy, E.J., & Croxall, J.P. 2006. Contrasting population changes in sympatric penguin species in association with climate warming. *Global Change Biology* **12**(3): 411-23. doi:10.1111/j.1365-2486.2006.01108.x.

Patterson, D.L., Woehler, E.J., Croxall, J.P., Cooper, J., Poncet, S., Peter, H.-U., Hunter, S. & Fraser, W.R. 2008. Breeding distribution and population status of the Northern Giant Petrel *Macronectes halli* and the Southern Giant Petrel *M. giganteus*. *Marine Ornithology* **36**: 115-124.

Ritz, M.S., Hahn, S., Janicke, T. & Peter, H.-U. 2006. Hybridisation between South polar skua (*Catharacta maccormicki*) and Brown skua (*C. antarctica lonnbergi*) in the Antarctic Peninsula region. *Polar Biology* **29***:* 153-59. doi:10.1007/s00300-005-0034-0

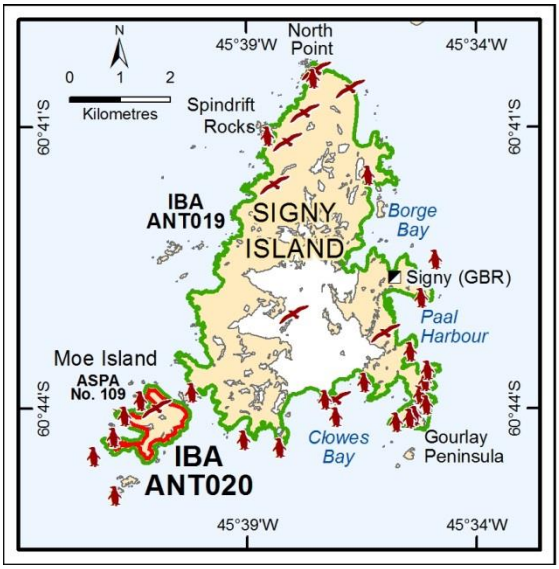
Rootes, D.M. 1988. The status of birds at Signy Island. *British Antarctic Survey Bulletin* **80**: 87-119.

Tickell, W.L.N. 1962. The Dove Prion, *Pachyptila desolata* Gmelin. *British Antarctic Survey Scientific Reports* **33**.

Waluda, C.M., Gregory, S. & Dunn, M.J. 2009. Long-term variability in the abundance of Antarctic fur seals *Arctocephalus gazella* at Signy Island, South Orkneys. *Polar Biology* **33** (3): 305-12.

ANT020: Moe Island

IBA criteria	A4iii
Coordinates	45°41' W, 60°44' S
Area	120 ha
Altitude	0 – 226 m
Protection	ASPA No.109



Site description

Moe Island is a small, low-lying island with an irregular coastline located ~300 m southwest of Signy Island. Moe Island is designated as ASPA No. 109. The IBA qualifies on the basis of the concentration of seabirds present (in particular Chinstrap Penguin (*Pygoscelis antarctica*)) and comprises all of Moe Island (excluding offshore rocks) and coincides with the boundary of ASPA No. 109.

Moe Island has a rugged and steep coastline, and rises to an elevation of 226 m at Snipe Peak. The island is dominated by metamorphic schists and a large proportion of the island is covered by glacial drift and scree. Immature soil deposits are intermixed with gravel and rocks. Some of the largest moss banks of their type in Antarctica are on Moe Island.

The nearest research station is Signy (GBR), located ~5 km to the northeast. See IBA ANT019 for more information.

Birds

Approximately 10 964 pairs of Chinstrap Penguin were recorded breeding in 1978/79 (Croxall, Rootes & Price 1981). However, the Chinstrap population may have since decreased, with ~1100 pairs recorded in February 1994 and ~100 pairs in January 2006 (ASPA No. 109 Management Plan, 2007). About 2000 pairs of Cape Petrel (*Daption capense*) were recorded breeding in 14 colonies on the island in 1966 and a large number of Antarctic Prion (*Pachyptila desolata*) also nest at the site (ASPA No. 109 Management Plan, 2007). Snow Petrels (*Pagodroma nivea*) were recorded breeding on Moe Island in 1957/58 when the colony comprised 34 breeding pairs (Croxall *et al*. 1995), and were confirmed breeding during a survey in 2005/06 (R. Fijn pers. comm. 2015).

Other threatened / endemic wildlife

Weddell Seals (*Leptonychotes weddellii*), Crabeater Seals (*Lobodon carcinophagus*), Leopard Seals (*Hydrurga leptonyx*) and Antarctic Fur Seals (*Arctocephalus gazella*) are regularly observed hauled out in bays along the western shore of Moe Island (ASPA No. 109 Management Plan, 2007).

Conservation issues

Moe Island was designated as ASPA No. 109 to protect its natural environment, which is representative of a maritime Antarctic ecosystem (ASPA No. 109 Management Plan, 2007). Access to Moe Island is prohibited except for essential management or compelling scientific purposes, and visitor numbers and human impacts are low. An increase in the local Antarctic Fur Seal (*Arctocephalus gazella*) population has substantially altered terrestrial environments in some areas, which may also impact on bird breeding habitats. Damage to moss banks by seals has been observed on the most northerly sites on Moe Island, although the steep topography offers protection to some sensitive areas.

Further reading

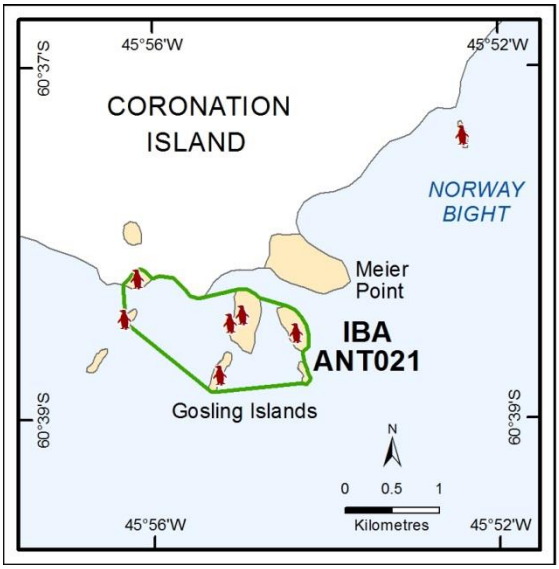
ASPA No.109 Moe Island, South Orkney Islands: Management Plan 2007.

Croxall, J.P., Rootes, D.M. & Price, R.A. 1981. Increases in penguin populations at Signy Island, South Orkney Islands. *British Antarctic Survey Bulletin* **54:** 47-56.

Croxall, J.P., Steele, W.K, McInnes, S.J. & Prince, P.A. 1995. Breeding distribution of the Snow Petrel *Pagodroma nivea. Marine Ornithology* **23**: 69-99.

ANT021: Gosling Islands

IBA criteria	A4iii
Coordinates	45°55' W, 60°38' S
Area	166 ha
Altitude	< 250 m
Protection	None



Site description

The Gosling Islands are a small archipelago located several hundred metres off the southwestern coast of Coronation Island, west of Meier Point. The IBA qualifies on the basis of the concentration of seabirds present (in particular Chinstrap Penguin (*Pygoscelis antarctica*)) and comprises the Gosling Islands and a nearby ice-free headland on the southwestern coast of Coronation Island.

Information on the environment at the Gosling Islands is not available. The nearest research station is Signy (GBR), located 16 km southeast of the Gosling Islands. See ANT019 for information on the environment and facilities at this station.

Birds

Approximately 10 764 breeding pairs of Chinstrap Penguin were present on the Gosling Islands and adjacent ice-free areas on the southern shoreline of Coronation Island in 1984 (Poncet & Poncet 1985). Approximately 8523 Adélie Penguin (*Pygoscelis adeliae*) chicks were also recorded in the Gosling Islands area in 1984 (Poncet & Poncet 1985).

Other threatened / endemic wildlife

None known.

Conservation issues

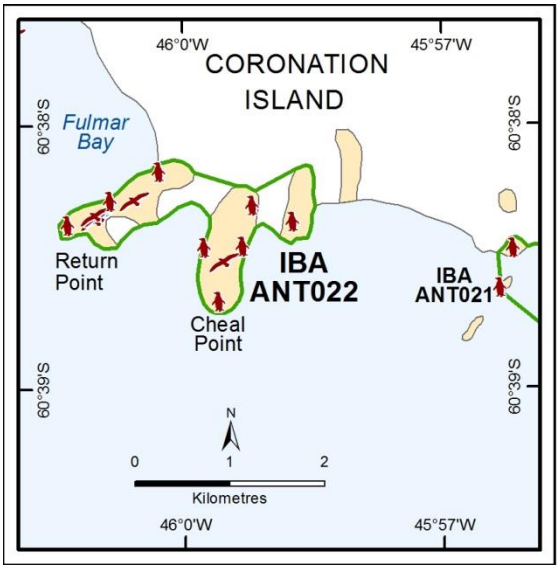
None known.

Further reading

Poncet, S. & Poncet, J. 1985. A survey of penguin breeding populations at the South Orkney Islands, Antarctica. *British Antarctic Survey Bulletin* **68**: 71-81.

ANT022: Return Point / Cheal Point, Coronation Island

IBA criteria	A4ii, A4iii
Coordinates	46°00' W, 60°38' S
Area	170 ha
Altitude	0 to < 250 m
Protection	None



Site description

Return Point and Cheal Point are located on the southwestern coast of Coronation Island, between Moreton Point and the Gosling Islands. The IBA qualifies on the basis of the Chinstrap Penguin (*Pygoscelis antarctica*) colony present and the high concentration of seabirds (in particular Chinstrap Penguin and Southern Fulmar (*Fulmarus glacialoides*)). The IBA comprises three large ice-free areas at Return Point, Cheal Point and to the east of Cheal Point.

The nearest research station is Signy (GBR), located 24 km southeast of the IBA. See ANT019 for information on the environment and facilities at this station.

Birds

Approximately 38 100 pairs of Chinstrap Penguin were recorded breeding on ice-free areas on and around Return Point and Cheal Point in 1984 (Poncet & Poncet 1985).

Southern Fulmars are also confirmed breeders at the site, with many thousands recorded at Cheal Point and Return Point in 1984 (unpublished data S. Poncet pers. comm. 2005).

Other threatened / endemic wildlife

None known.

Conservation issues

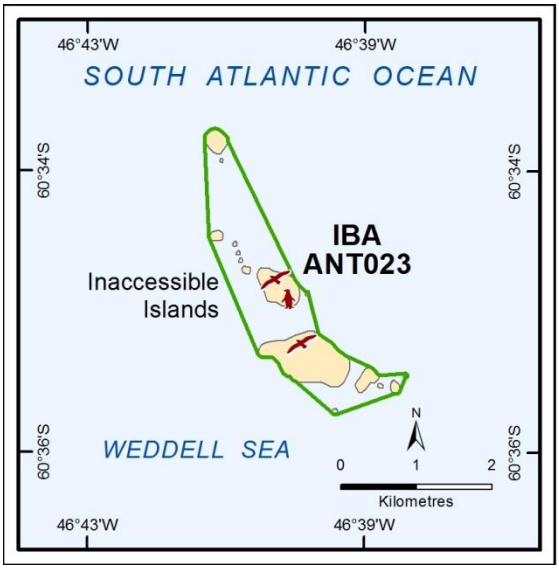
None known.

Further reading

Poncet, S. & Poncet, J. 1985. A survey of penguin breeding populations at the South Orkney Islands, Antarctica. *British Antarctic Survey Bulletin* **68**: 71-81.

ANT023: Inaccessible Islands

IBA criteria	A4ii, A4iii
Coordinates	46°40' W, 60°35' S
Area	305 ha
Altitude	< 250 m
Protection	None



Site description

Inaccessible Islands are the most westerly of the South Orkney Islands. They are located 35 km west of Coronation Island and comprise three main islands and numerous offshore skerries. The IBA qualifies on the basis of the Southern Fulmar (*Fulmarus glacialoides*) colony present and comprises all islands and offshore rocks in the Inaccessible Islands group and the intervening marine area.

The nearest research station is Signy (GBR), located 62 km southeast of the IBA. See ANT019 for information on the environment and facilities at this station.

Birds

Southern Fulmar are the most abundant bird species present at the Inaccessible Islands, with tens of thousands of pairs recorded breeding on the northern coast of islands and islets in 1986 (unpublished data S. Poncet pers. comm. 2005). Ardley (1936) estimated that "not less than half a million" Southern Fulmar nests occupied "top to bottom" of the northern cliffs of the three main islands in Jan 1933. Chinstrap Penguin (*Pygoscelis antarctica*) also breed on the larger islands, and approximately 1000 breeding pairs were recorded in 1986 (S. Poncet pers. comm. 2005; also noted by Ardley 1936). Approximately 100 breeding pairs of Imperial Shag (*Phalacrocorax* [*atriceps*] *bransfieldensis*) were also recorded on the northern coast of the more southerly of the large islands in the Inaccessible Islands group in 1986, and this colony was also reported by Ardley (1936).

Other threatened / endemic wildlife

None known.

Conservation issues

None known.

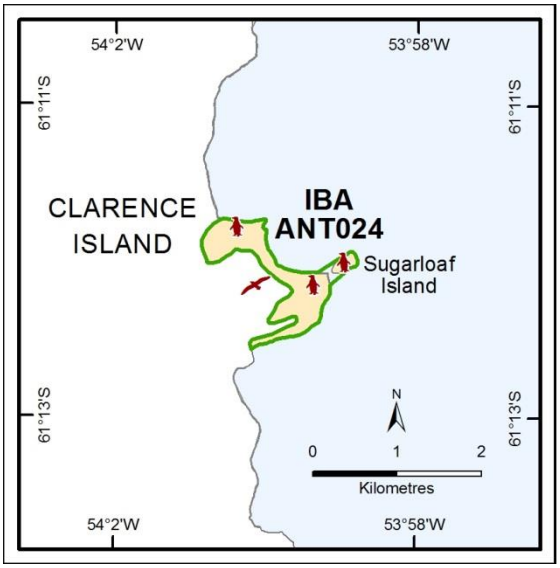
Further reading

Ardley, R.A.B. 1936. The birds of the South Orkney Islands. *Discovery Reports* **12**: 349-76.

South Shetland Islands

ANT024: Sugarloaf Island, Clarence Island

IBA criteria	A4ii, A4iii
Coordinates	54°00' W, 61°12' S
Area	82 ha
Altitude	0 to < 500 m
Protection	None



Site description

Clarence Island is the easternmost of the South Shetland Islands, lying 30 km east of Elephant Island. Sugarloaf Island lies ~100 m east from an ice free point mid-way along the eastern coast of Clarence Island. The IBA qualifies on the basis of the Chinstrap Penguin (*Pygoscelis antarctica*) colony present and the high concentration of seabirds (in particular Chinstrap Penguin and Southern Fulmar (*Fulmarus glacialoides*)). The IBA includes all of Sugarloaf Island, the adjacent ice free area of coast on Clarence Island and the intervening marine area.

There are no research stations in the near vicinity, the closest being around 260 km to the southwest, on King George Island.

Birds

Approximately 57 500 pairs of Chinstrap Penguin were recorded breeding at the ice free point (referred to as 'Fur Seal Point' in Croxall & Kirkwood 1979) and on the adjacent Sugarloaf Island in 1977, along with two smaller breeding sites comprising 12 950 pairs located onshore ~ 1 km to the north (Croxall & Kirkwood 1979).

Southern Fulmar also breed on the ice free slopes adjacent to Sugarloaf Island, one of the two known breeding sites for this species on Clarence Island, the other being at Craggy Point. Approximately 25 475 pairs of Southern Fulmar were estimated over the whole of Clarence Island in 1977 (Furse 1978).

Other threatened / endemic wildlife

None known.

Conservation Issues

None known.

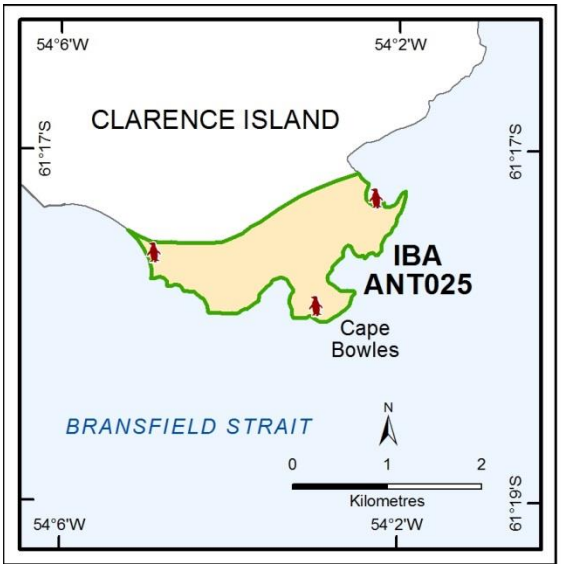
Further Reading

Croxall, J.P. & Kirkwood, E.D. 1979. *The distribution of penguins on the Antarctic Peninsula and Islands of the Scotia Sea*. British Antarctic Survey, Cambridge.

Furse, J. R. 1978. Joint Services Expedition to the Elephant Island group, 1976 – 77. Unpublished report, BAS archives, Cambridge.

ANT025: Cape Bowles, Clarence Island

IBA criteria	A4ii, A4iii
Coordinates	54°03' W, 61°18' S
Area	206 ha
Altitude	0 to < 250 m
Protection	None



Site description

Clarence Island is the easternmost of the South Shetland Islands, lying 30 km east of Elephant Island. The IBA qualifies on the basis of the Chinstrap Penguin (*Pygoscelis antarctica*) colony present and the large concentration of seabirds, and comprises the ice free headland of Cape Bowles, at the southeastern extremity of Clarence Island.

The geology of Clarence Island is predominantly metamorphic of Mesozoic age (Marsh & Thomson 1985). No other information is available on the environment at this site.

There are no research stations in the near vicinity, the closest being ~260 km to the southwest, on King George Island.

Birds

Approximately 58 000 breeding pairs of Chinstrap Penguin were estimated at a site referred to as 'Pink Pool Point' on the eastern side of the headland, 33 000 breeding pairs were at Cape Bowles, and 21 200 at the site referred to as 'Thunder Bay' at the western side of the headland in 1977 (Croxall & Kirkwood 1979).

Other threatened / endemic wildlife

None known.

Conservation issues

None known.

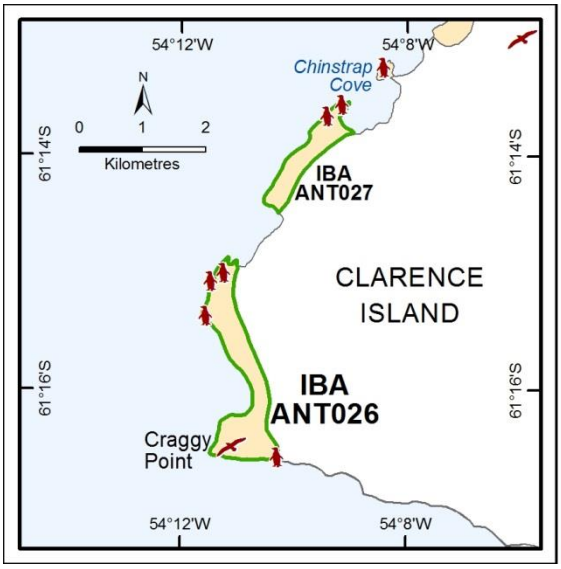
Further reading

Croxall, J.P. & Kirkwood, E.D. 1979. *The distribution of penguins on the Antarctic Peninsula and Islands of the Scotia Sea*. British Antarctic Survey, Cambridge.

Marsh, P.D. & Thomson, J.W. 1985. Report on Antarctic Fieldwork. The Scotia Metamorphic Complex on Elephant Island and Clarence Island, South Shetland Islands. *British Antarctic Survey Bulletin* **69**: 71-75.

ANT026: Craggy Point, Clarence Island

IBA criteria	A1, A4ii, A4iii
Coordinates	54°10' W, 61°16' S
Area	153 ha
Altitude	0 - < 250 m
Protection	None



Site description

Clarence Island is the easternmost of the South Shetland Islands, lying 30 km east of Elephant Island. The IBA qualifies on the basis of the Macaroni Penguin (*Eudyptes chrysolophus*) colony present and the high concentration of seabirds (in particular Chinstrap Penguin (*Pygoscelis antarctica*) and Southern Fulmar (*Fulmarus glacialoides*)). The IBA comprises the ice-free coastline extending northward from Craggy Point in the south 3.5 km along the southwestern shoreline of Clarence Island.

The geology of Clarence Island is predominantly metamorphic of Mesozoic age (Marsh & Thomson 1985). No other information is available on the environment at Craggy Point.

There are no research stations in the near vicinity, the closest being ~250 km to the southwest, on King George Island.

Birds

Approximately 10 370 pairs of Chinstrap Penguin were recorded breeding at this site in 1977 (Croxall & Kirkwood 1979). In the same year around 3350 breeding pairs of Macaroni Penguin were recorded, making this the largest colony of this species in the Antarctic Peninsula region.

Southern Fulmars are also confirmed breeders at Craggy Point. A count of Southern Fulmars over the whole of Clarence Island was estimated at 25 475 pairs in 1977, with breeding recorded at this site and at Fur Seal Point on the eastern coastline (Furse 1978).

Other threatened / endemic wildlife

None known.

Conservation issues

None known.

Further reading

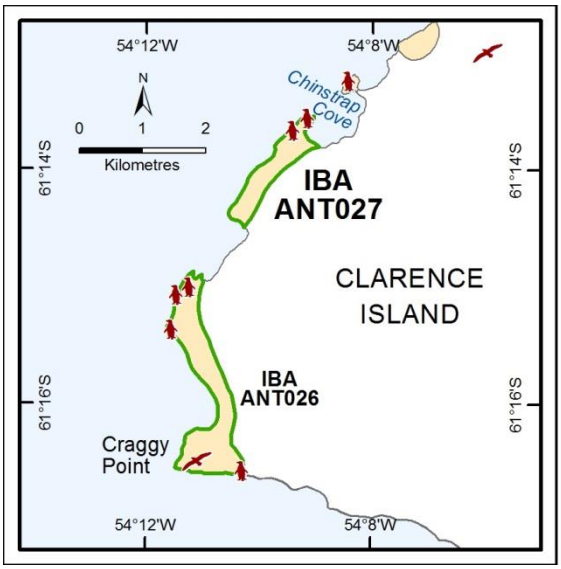
Croxall, J.P. & Kirkwood, E.D. 1979. *The distribution of penguins on the Antarctic Peninsula and Islands of the Scotia Sea*. British Antarctic Survey, Cambridge.

Furse, J.R. 1978. Joint Services Expedition to the Elephant Island group, 1976 – 77. Unpublished report, BAS archives, Cambridge.

Marsh, P.D. & Thomson, J.W. 1985. Report on Antarctic Fieldwork. The Scotia Metamorphic Complex on Elephant Island and Clarence Island, South Shetland Islands. *British Antarctic Survey Bulletin* **69**: 71-75.

ANT027: Chinstrap Cove, Clarence Island

IBA criteria	A4iii
Coordinates	54°10' W, 61°14' S
Area	65 ha
Altitude	0 to < 250 m
Protection	None



Site description

Clarence Island is the easternmost of the South Shetland Islands, lying 30 km east of Elephant Island. Chinstrap Cove lies on the western shore of Clarence Island.

The IBA qualifies on the basis of the concentration of seabirds present (in particular Chinstrap Penguin (*Pygoscelis antarctica*)), and comprises all of the ice-free area south of Chinstrap Cove, extending around 2 km southwards along the coastline of Clarence Island.

Information on the environment at this site is not available. There are no research stations in the near vicinity, the closest being around 250 km to the southwest, on King George Island.

Birds

Approximately 19 500 pairs of Chinstrap Penguin were breeding on the ice-free area at the southern entrance point of Chinstrap Cove in 1977 (Croxall & Kirkwood 1979).

Other threatened / endemic wildlife

None known.

Conservation issues

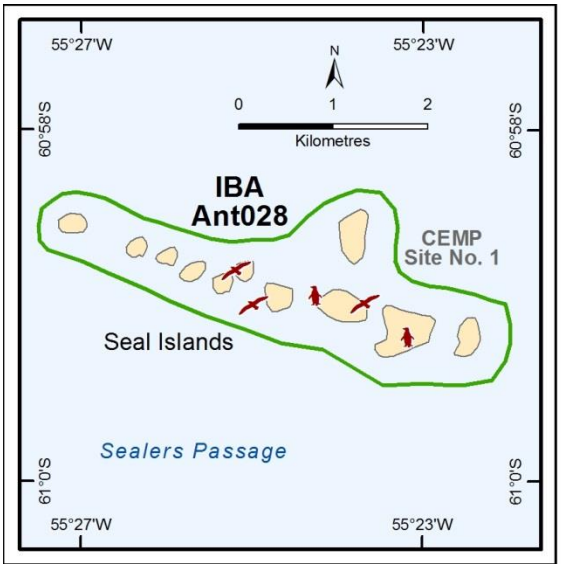
None known.

Further reading

Croxall, J.P. & Kirkwood, E.D. 1979. *The distribution of penguins on the Antarctic Peninsula and Islands of the Scotia Sea*. British Antarctic Survey, Cambridge.

ANT028: Seal Islands

IBA criteria	A4iii
Coordinates	55°24' W, 60°59' S
Area	451 ha
Altitude	< 125 m
Protection	CEMP Site No.1



Site description

Seal Islands lie 7 km north of Elephant Island and comprise a group of small, rocky islets extending over an area ~5 km across. The IBA qualifies on the basis of the concentration of seabirds present (in particular Chinstrap Penguin (*Pygoscelis antarctica*)) and includes the entire Seal Islands group, including all land areas, offshore rocks and the intervening marine area.

The Seal Island coastline is dominated by steep cliffs, except for a sandy beach on the western shore and several small coves. Seal Island (elevation 125 m) is composed of sedimentary rocks susceptible to erosion. Other islands in the group are rocky with precipitous cliffs and few beaches, and ice-cover is seasonal (CEMP Site No. 1 Management Plan, 2001).

Birds

Eight breeding species of bird have been recorded on Seal Islands. Approximately 20 000 pairs of Chinstrap Penguin were estimated in over 60 subcolonies across the island group in 1988/89 (J.L. Bengtson pers. comm., cited in Woehler 1993). Approximately 350 pairs of Macaroni Penguin (*Eudyptes chrysolophus*) were recorded in five colonies on Seal Island (CEMP Site No. 1 Management Plan, 2004). Small numbers of Southern Giant Petrel (*Macronectes giganteus*) and Imperial Shag (*Phalacrocorax* [*atriceps*] *bransfieldensis*) breed, estimated at 25 pairs and 40 pairs respectively in 1971 (Bruce & Furse 1973). Cape Petrels (*Daption capense*) nest on cliffs and Wilson's Storm-petrel (*Oceanites oceanicus*) nest in burrows in talus slopes. Snowy Sheathbill (*Chionis albus*) and Kelp Gull (*Larus dominicanus*) also breed on the islands (CEMP Site No. 1 Management Plan, 2004). Non-breeding birds include the Brown Skua (*Catharacta antarctica*), Adélie Penguin (*Pygoscelis adeliae*), Gentoo Penguin (*P. papua*), King Penguin (*Aptenodytes patagonicus*) and Rockhopper Penguin (*Eudyptes chrysocome*) (CEMP Site No.1 Management Plan, 2004).

Other threatened / endemic wildlife

Antarctic Fur Seal (*Arctocephalus gazella*), Southern Elephant Seal (*Mirounga leonina*), Weddell Seal (*Leptonychotes weddellii*), Leopard Seal (*Hydrurga leptonyx*) and Crabeater Seal (*Lobodon carcinophagus*) haul out on Seal Islands. Antarctic Fur Seals are the only confirmed breeders, with around 600 pups born each year (CEMP Site No. 1 Management Plan, 2004; M. Goebel, pers. comm. 2004). It is suspected that small numbers of Southern Elephant Seal may also breed on the islands.

Conservation issues

Designation of Seal Islands as a CCAMLR Ecosystem Monitoring Program (CEMP) Site lapsed in 2007 because research was no longer being undertaken at the site (CCAMLR 2007).

Further reading

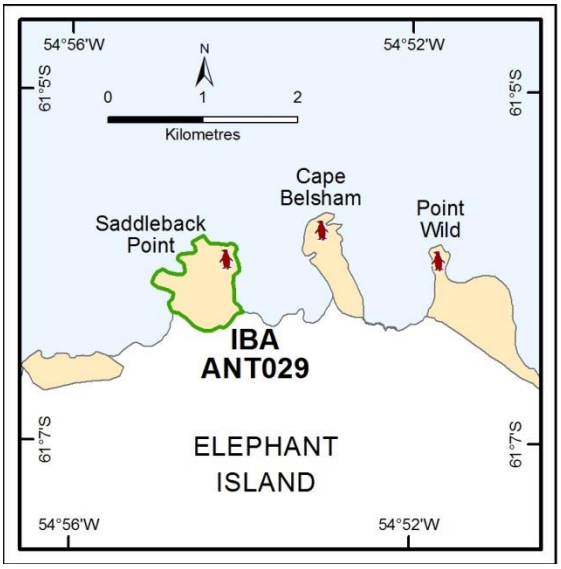
Bruce, G. & Furse, C. 1973. Elephant Island Joint Services Expedition 1970-71. Ornithological Report. BAS Archives Doc. 1999/33/45.

CCAMLR 2007. Report of the Twenty-sixth Meeting of the Scientific Committee for the Conservation of Antarctic Marine Living Resources held in Hobart, Australia, 22 – 26 October 2007.

Woehler, E.J. (ed.) 1993. *The distribution and abundance of Antarctic and sub-Antarctic penguins.* Scientific Committee on Antarctic Research. Cambridge, UK.

ANT029: Saddleback Point, Elephant Island

IBA criteria	A4iii
Coordinates	54°54' W, 61°06' S
Area	57 ha
Altitude	0 to < 250 m
Protection	None



Site description

Saddleback Point is located on the northern coast of Elephant Island. The IBA qualifies on the basis of the concentration of seabirds present (in particular Chinstrap Penguin (*Pygoscelis antarctica*)) and comprises an ice free headland extending ~1 km offshore, several km to the west of Point Wild.

No information is available on the environment specific to the area around Saddleback Point. See ANT032 for more information on the general features, vegetation and meteorology of Elephant Island.

There are no research stations in the vicinity, with the nearest ~205 km to the southwest at King George Island.

Birds

Approximately 10 250 pairs of Chinstrap Penguin were recorded breeding at Saddleback Point in 1971 (Croxall & Kirkwood 1979).

See IBA ANT032 for information on other birds observed in the Elephant Island area.

Other threatened / endemic wildlife

Naveen (2003) reported that Antarctic Fur Seals (*Arctocephalus gazella*) and Southern Elephant Seals (*Mirounga leonina*) regularly haul-out on rocky beaches at Point Wild, 2 km to the east of Saddleback Point.

Conservation issues

None known.

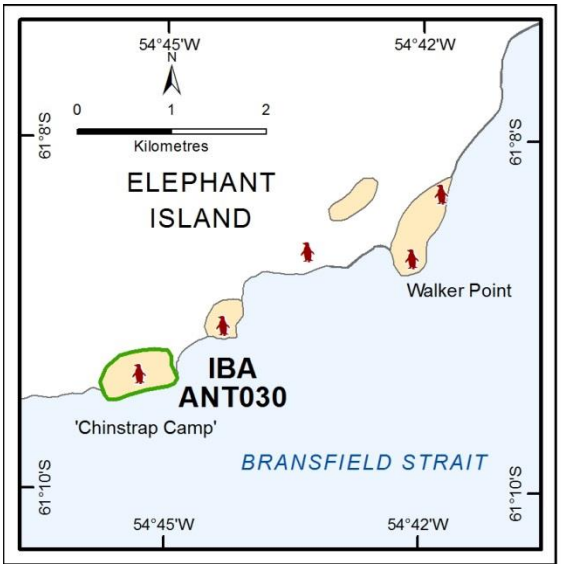
Further reading

Croxall, J.P. & Kirkwood, E.D. 1979. *The distribution of penguins on the Antarctic Peninsula and Islands of the Scotia Sea*. British Antarctic Survey, Cambridge.

Naveen, R. 2003. *Compendium of Antarctic Peninsula visitor sites (2nd edition): A Report to the United States Environmental Protection Agency*. Oceanites, Chevy Chase, MD.

ANT030: Point W of Walker Point, Elephant Island

IBA criteria	A4iii
Coordinates	54°45' W, 61°09' S
Area	31 ha
Altitude	0 to < 250 m
Protection	None



Site description

A small unnamed point located 2.7 km southwest of Walker Point, on the southeastern coast of Elephant Island. The point has been unofficially referred to as 'Chinstrap Camp' (Croxall & Kirkwood 1979; Furse 1979). The IBA qualifies on the basis of the concentration of seabirds present (in particular Chinstrap Penguin (*Pygoscelis antarctica*)) and comprises all of the ice free area at this point.

No information is available on the environment specific to the point known as 'Chinstrap Camp'. See ANT032 for more information on the general features, vegetation and meteorology of Elephant Island.

There are no research stations in the vicinity, with the nearest ~220 km southwest at King George Island.

Birds

Approximately 24 430 pairs of Chinstrap Penguin were breeding at 'Chinstrap Camp' in 1971 (Croxall & Kirkwood 1979). See IBA ANT032 for information on other birds observed in the Elephant Island area.

Other threatened / endemic wildlife

Southern Elephant Seals (*Mirounga leonina*) and Antarctic Fur Seals (*Arctocephalus gazella*) have been recorded at other locations on Elephant Island (Naveen & Lynch 2011).

Conservation issues

None known.

Further reading

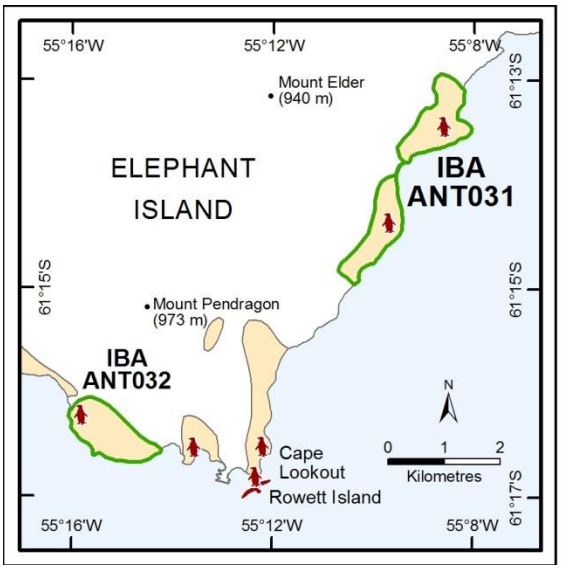
Croxall, J.P. & Kirkwood, E.D. 1979. *The distribution of penguins on the Antarctic Peninsula and Islands of the Scotia Sea*. British Antarctic Survey, Cambridge.

Furse J.R. 1979. *Elephant Island: an Antarctic expedition*. Anthony Nelson, Shrewsbury.

Naveen, R. & Lynch, H. 2011. *Compendium of Antarctic Peninsula visitor sites (3rd edition): A Report to the United States Environmental Protection Agency*. Oceanites, Chevy Chase, MD.

ANT031: Mount Elder, Elephant Island

IBA criteria	A4iii
Coordinates	55°09' W, 61°14' S
Area	184 ha
Altitude	0 to < 250 m
Protection	None



Site description

Mount Elder (~940 m) is located at southwestern Elephant Island. The IBA qualifies on the basis of the concentration of seabirds present (in particular Chinstrap Penguin (*Pygoscelis antarctica*)) and comprises a low-lying ice-free shoreline extending 4 km along the coastline, ~4 km east of Mount Elder

No information is available pertaining to the environment specific the area of the IBA. See ANT032 for more information on the general features, vegetation and meteorology of Elephant Island.

There are no research stations in the vicinity, with the nearest ~200 km to the southwest at King George Island.

Birds

Approximately 14 960 pairs of Chinstrap Penguin were breeding in two main groups at this site in 1971 (Croxall & Kirkwood 1979). Approximately 10 810 pairs were breeding at the northern site and 4150 pairs in the south.

See IBA ANT032 for information on other birds observed in the Elephant Island area.

Other threatened / endemic wildlife

Southern Elephant Seals (*Mirounga leonina*) and Antarctic Fur Seals (*Arctocephalus gazella*) have been recorded at other locations on Elephant Island (Naveen & Lynch 2011).

Conservation issues

None known.

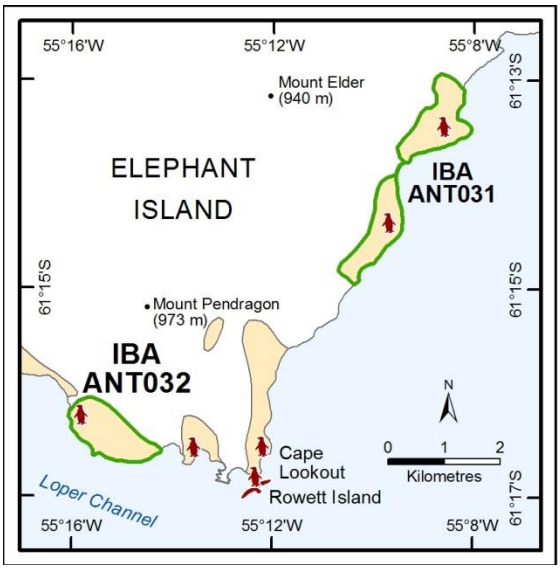
Further reading

Croxall, J.P. & Kirkwood, E.D. 1979. *The distribution of penguins on the Antarctic Peninsula and Islands of the Scotia Sea*. British Antarctic Survey, Cambridge.

Naveen, R. & Lynch, H. 2011. *Compendium of Antarctic Peninsula visitor sites (3rd edition): A Report to the United States Environmental Protection Agency*. Oceanites, Chevy Chase, MD.

ANT032: Point W of Cape Lookout, Elephant Island

IBA criteria	A4iii
Coordinates	55°15' W, 61°16' S
Area	106 ha
Altitude	0 to < 500 m
Protection	None



Site description

Elephant Island is the easternmost of the South Shetland Islands, lying 153 km northeast of King George Island in Bransfield Strait. The IBA comprises an ice free shoreline extending ~2 km and rising to over 250 m located ~2 km west of Cape Lookout. The IBA qualifies on the basis of the concentration of seabirds present (in particular Chinstrap Penguin (*Pygoscelis antarctica*)) present.

Elephant Island is composed of metamorphosed sedimentary rocks and the terrain is largely snow or ice-covered with steep cliffs, narrow beaches, and glacier snouts hugging the shoreline (Allison & Smith 1973). Ice-free habitat suitable for plants and birds is found mainly on coastal headlands, raised marine platforms, intervening valleys and low-lying beaches (Allison & Smith 1973). No meteorological data are available for Elephant Island, although Allison and Smith (1973) recorded a mean daily temperature of 1.4° C with minimum and maximum temperatures of –5° C and 15° C respectively.

There are no research stations in the vicinity, with the nearest facility 180 km to the southwest at King George Island.

Birds

Approximately 11 555 breeding pairs of Chinstrap Penguin were present at the western part of the site in 1971 (Croxall & Kirkwood 1979).

Other birds observed in the Elephant Island area include Antarctic Petrel (*Thalassoica antarctica*), Cape Petrel (*Daption capense*), Kerguelen Petrel (*Lugensa brevirostris*), Blue Petrel (*Halobaena caerulea*), Wilson's Storm-petrel (*Oceanites oceanicus*), Black-bellied Storm-petrel (*Fregetta tropica*), Black-browed Albatross (*Thalassarche melanophrys*), Grey-headed Albatross (*Thalassarche chrysostoma*), Light-mantled Albatross (*Phoebetria palpebrata*), Kelp Gull (*Larus dominicanus*) and the Snowy Sheathbill (*Chionis albus*) (Whitehouse & Veit 1994). Of these, Bruce & Furse (1973) recorded ~50 breeding pairs of Snow Petrel (*Pagodroma nivea*) on the island in 1970/71 (Croxall *et al.* 1995) and 190 breeding pairs of Brown Skua (*Catharacta antarctica*) were recorded in 1983 (M. Sanders pers. comm. in Ritz *et al.* 2006).

Other threatened / endemic wildlife

Naveen (2003) reported that Antarctic Fur Seals (*Arctocephalus gazella*) and Southern Elephant Seals (*Mirounga leonina*) regularly haul out at Cape Lookout, 2 km to the east.

Conservation issues

None known.

Further reading

Allison, J.S. & Smith, R.I.L. 1973. The vegetation of Elephant Island, South Shetland Islands. *British Antarctic Survey Bulletin* **33** & **34**: 185-212.

Bruce, G. & Furse, C. 1973. Elephant Island Joint Services Expedition 1970-71. Ornithological Report. BAS Archives Doc. 1999/33/45.

Croxall, J.P. & Kirkwood, E.D. 1979. *The distribution of penguins on the Antarctic Peninsula and Islands of the Scotia Sea*. British Antarctic Survey, Cambridge.

Croxall, J.P., Steele, W.K, McInnes, S.J. & Prince, P.A. 1995. Breeding distribution of the Snow Petrel *Pagodroma nivea. Marine Ornithology* **23**: 69-99.

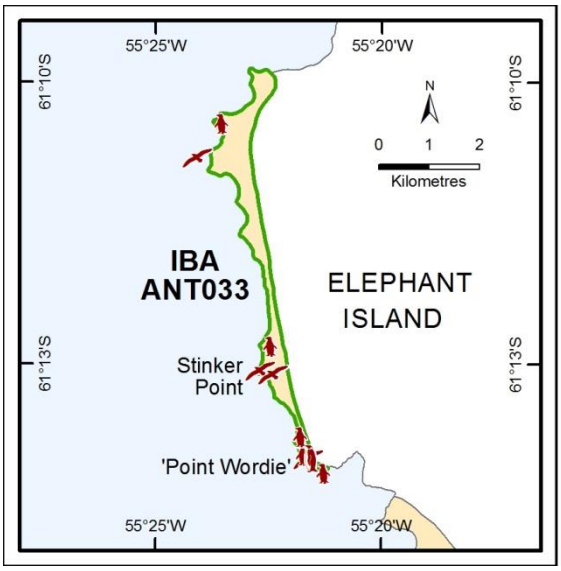
Naveen, R. 2003. *Compendium of Antarctic Peninsula visitor sites (2nd edition): A Report to the United States Environmental Protection Agency*. Oceanites, Chevy Chase, MD.

Ritz, M.S., Hahn, S., Janicke, T. & Peter, H.-U. 2006. Hybridisation between South polar skua (*Catharacta maccormicki*) and Brown skua (*C. antarctica lonnbergi*) in the Antarctic Peninsula region. *Polar Biology* **29***:* 153-59. doi:10.1007/s00300-005-0034-0

Whitehouse, M.J. & Veit, R.R. 2004. Distribution and abundance of seabirds and fur seals near the Antarctic Peninsula during the austral winter 1986. *Polar Biology* **14** (5): 325-30.

ANT033: Stinker Point, Elephant Island

IBA criteria	A4iii
Coordinates	55°23' W, 61°12' S
Area	288 ha
Altitude	0 to < 250 m
Protection	None



Site description

Stinker Point is located on the western coast of Elephant Island. The IBA qualifies on the basis of the concentration of seabirds present (in particular Chinstrap Penguin (*Pygoscelis antarctica*)) and includes the ice free coastline extending ~9 km northwards from 'Point Wordie', and includes Stinker Point. See ANT032 for more information on the general features, vegetation and meteorology of Elephant Island.

There are no research stations in the vicinity, with the nearest being ~185 km to the southwest at King George Island.

Birds

Approximately 12 455 pairs of Chinstrap Penguin were breeding at Stinker Point and 'Point Wordie' in 1971 (Croxall & Kirkwood 1979). A further 100 breeding pairs of Chinstrap Penguin were recorded at Mensa Bay, at the northern extent of the IBA. Approximately 1000 pairs of Gentoo Penguin (*Pygoscelis papua*) and 200 pairs of Macaroni Penguin (*Eudyptes chrysolophus*) were recorded breeding at 'Point Wordie' in 1971. Two small colonies of Imperial Shag (*Phalacrocorax* [*atriceps*] *bransfieldensis*), constituting 5 and 35 breeding pairs in 1971, are located close to the Chinstrap colonies at Mensa Bay and at Stinker Point (Bruce & Furse 1973). Approximately 295 pairs of Southern Giant Petrel (*Macronectes giganteus*) were nesting in several locations across the site in 1971 (Patterson *et al.* 2008). Two breeding pairs of King Penguin (*Aptenodytes patagonicus*) were recorded at Stinker Point in 2009/10, suggesting a possible range extension of this species (Petry *et al*. 2013). See IBA ANT032 for information on other birds observed in the Elephant Island area.

Other threatened / endemic wildlife

Antarctic Fur Seals (*Arctocephalus gazella*) have been observed breeding at Stinker Point (M. Goebel (NOAA), pers. comm. 2004). Southern Elephant Seals (*Mirounga leonina*) are also present on the island (Naveen 2003).

Conservation issues

None known.

Further reading

Bruce, G. & Furse, C. 1973. Elephant Island Joint Services Expedition 1970-71. Ornithological Report. BAS Archives Doc. 1999/33/45.

Croxall, J.P. & Kirkwood, E.D. 1979. *The distribution of penguins on the Antarctic Peninsula and Islands of the Scotia Sea*. British Antarctic Survey, Cambridge.

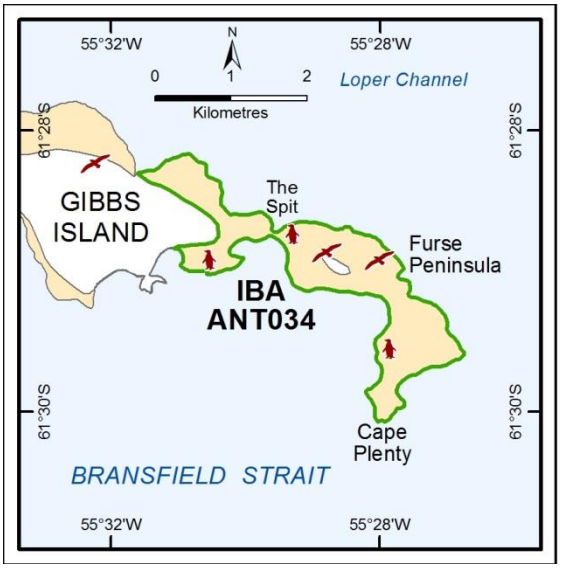
Naveen, R. 2003. *Compendium of Antarctic Peninsula visitor sites (2nd edition): A Report to the United States Environmental Protection Agency*. Oceanites, Chevy Chase, MD.

Patterson, D.L., Woehler, E.J., Croxall, J.P., Cooper, J., Poncet, S., Peter, H.-U., Hunter, S. & Fraser, W.R. 2008. Breeding distribution and population status of the Northern Giant Petrel *Macronectes halli* and the Southern Giant Petrel *M. giganteus*. *Marine Ornithology* **36**: 115-24.

Petry, M., Basler, A., Valls, F., & Krüger, L. 2013. New southerly breeding location of king penguins (*Aptenodytes patagonicus*) on Elephant Island (Maritime Antarctic). *Polar Biology* **36** (4): 603.

ANT034: Gibbs Island

IBA criteria	A1, A4ii, A4iii
Coordinates	55°29' W, 61°29' S
Area	325 ha
Altitude	0 to < 500 m
Protection	None



Site description

Gibbs Island is a small island (~22 km^2) located ~25 km to the southwest of Elephant Island, bordered to the north by the Loper Channel and to the south by Bransfield Strait. A narrow strip of land known as The Spit joins Furse Peninsula in the east to the main part of Gibbs Island in the west. The IBA comprises Furse Peninsula at the eastern extremity of Gibbs Island, The Spit and a small ice-free area on Gibbs Island west of The Spit. The IBA qualifies on the basis of the Chinstrap Penguin (*Pygoscelis antarctica*), Southern Fulmar (*Fulmarus glacialoides*) and Macaroni Penguin (*Eudyptes chrysolophus*), and the high concentration of seabirds present.

A range of lichens, mosses, algae and liverworts have been recorded on Gibbs Island. On the south coast of the island, ~800 m west of The Spit, moss communities grow at altitudes of ~100 m (Allison & Smith 1973). Mosses, lichens and algae are also found at the eastern extremity of Gibbs Island growing at elevations of 250 – 300 m. (Lindsay 1969, in Allison & Smith 1973).

No long-term meteorological records exist for Gibbs Island. However, meteorological observations made in the Elephant Island group between 10 Dec 1970 and 26 March 1971 show the mean daily temperature was 1.4° C with minimum and maximum temperatures of below –5° C and 15° C respectively (Allison & Smith 1973). Cloud cover and precipitation were frequent, with over 415 mm falling as snow or rain over the 107 days, and a mean wind speed for the survey period of 7.2 ms^{-1}.

Birds

Approximately 1672 pairs of Macaroni Penguin breed within the IBA, split between a large colony located at southern Furse Peninsula and a small colony on the east side of The Spit (Croxall & Kirkwood 1979). Colonies of Chinstrap Penguin breed in several ice-free areas west of The Spit, on The Spit and on southern Furse Peninsula, with 11 200, 6160 and 13 000 pairs respectively in 1977 (Croxall & Kirkwood 1979). A large number of Southern Fulmar also breed in this area, on Furse Peninsula and to the west of The Spit, constituting around 18 680 pairs in 1971 (Furse 1978).

Other threatened / endemic wildlife

None known.

Conservation issues

None known.

Further reading

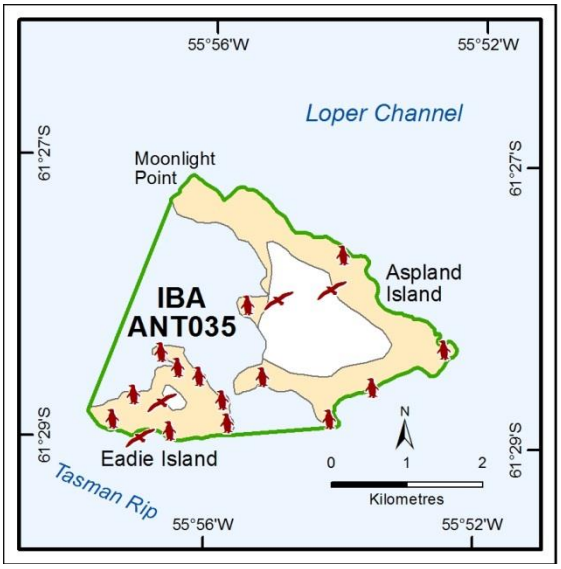
Allison, J.S. & Smith, R.I.L. 1973. The vegetation of Elephant Island, South Shetland Islands. *British Antarctic Survey Bulletin* **33** & **34**: 185-212.

Croxall, J.P. & Kirkwood, E.D. 1979. *The distribution of penguins on the Antarctic Peninsula and Islands of the Scotia Sea.* British Antarctic Survey, Cambridge.

Furse, J.R. 1978. Joint Services Expedition to the Elephant Island group, 1976 – 77. Unpublished report, BAS archives, Cambridge.

ANT035: Aspland Island / Eadie Island

IBA criteria	A4ii, A4iii
Coordinates	55°55'23'' W, 61°28'11'' S
Area	1004 ha
Altitude	0 to < 500 m
Protection	None



Site description

Aspland Island and Eadie Island and O'Brien Island are ~40-50 km southwest of Elephant Island, in the eastern region of the South Shetland Islands. Aspland Island is the largest of the two, with its lower slopes being ice-free with a permanent ice cap rising to 735 m covering higher terrain. Eadie Island is a small rocky island approximately 2 km across, with an ice-capped summit of over 250 m. The IBA qualifies on the basis of the concentration of seabirds present (in particular Chinstrap Penguin (*Pygoscelis antarctica*) and Southern Fulmar (*Fulmarus glacialoides*)) and comprises both islands.

Over 80 terrestrial plant species have been recorded on Elephant Island and its neighbouring islands. On Eadie Island, these include the moss *Orthotrichum crassifolium*, the lichens *Caloplaca* sp., *Catillaria corymbosa* and *Unsea antarctica*, and the alga *Prasiola crispa* (Allison & Smith 1973).

There are no scientific stations in the vicinity, with the nearest facility 155 km to the southwest on King George Island.

Birds

Sizeable colonies of Chinstrap Penguin breed on these islands, with approximately 8650 pairs on Aspland Island (Croxall & Kirkwood 1979) and ~5150 pairs on Eadie Island in 1977.

Large colonies of Southern Fulmar also breed on these islands, with ~9800 pairs estimated on Aspland Island (Furse 1978) and ~8500 pairs estimated on Eadie Island in 1977 (Creuwels *et al.* 2007). Information on other species is not available.

Other threatened / endemic wildlife

None known.

Conservation issues

None known.

Further reading

Allison, J.S. & Smith, R.I.L. 1973. The vegetation of Elephant Island, South Shetland Islands. *British Antarctic Survey Bulletin* **33** & **34**: 185-212.

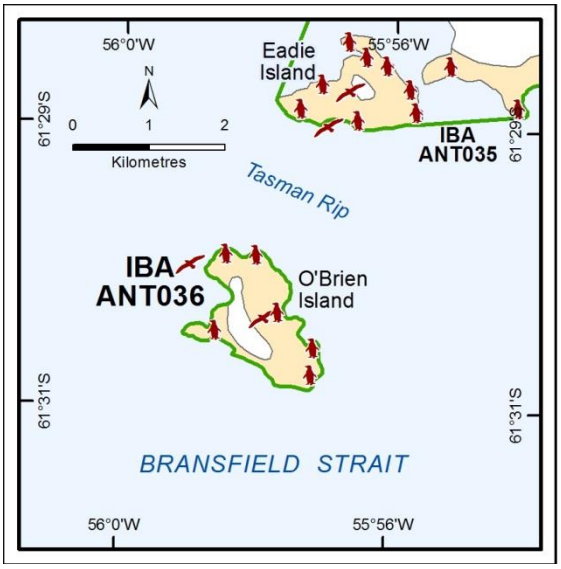
Creuwels, J.C.S., Poncet, S., Hodum, P.J. & van Franeker, J.A. 2007. Distribution and abundance of the Southern Fulmar *Fulmarus glacialoides*. *Polar Biology* **30:** 1083-97.

Croxall, J.P. & Kirkwood, E.D. 1979. *The distribution of penguins on the Antarctic Peninsula and Islands of the Scotia Sea*. British Antarctic Survey, Cambridge.

Furse, J.R. 1978. Joint Services Expedition to the Elephant Island group, 1976 – 77. Unpublished report, BAS archives, Cambridge.

ANT036: O'Brien Island

IBA criteria	A4iii
Coordinates	55°58' W, 61°30' S
Area	168 ha
Altitude	0 to < 500 m
Protection	None



Site description

O'Brien Island is part of the Elephant Island group of the South Shetland Islands and lies several km southwest of Eadie Island (IBA ANT035) in Bransfield Strait. O'Brien Island is largely ice free with an ice-capped summit rising to over 250 m. The IBA qualifies on the basis of the concentration of seabirds present (in particular Chinstrap Penguin (*Pygoscelis antarctica*) and Southern Fulmar (*Fulmarus glacialoides*)) and comprises all of O'Brien Island.

There are no research stations in the vicinity of the site, with the nearest facility ~160 km to the southwest on King George Island.

Birds

Approximately 21 400 pairs of Chinstrap Penguin and ~7880 pairs of Southern Fulmar were estimated as breeding on O'Brien Island in 1977 (Furse 1978). Information on other bird species in the area is not available.

Other threatened / endemic wildlife

None known.

Conservation issues

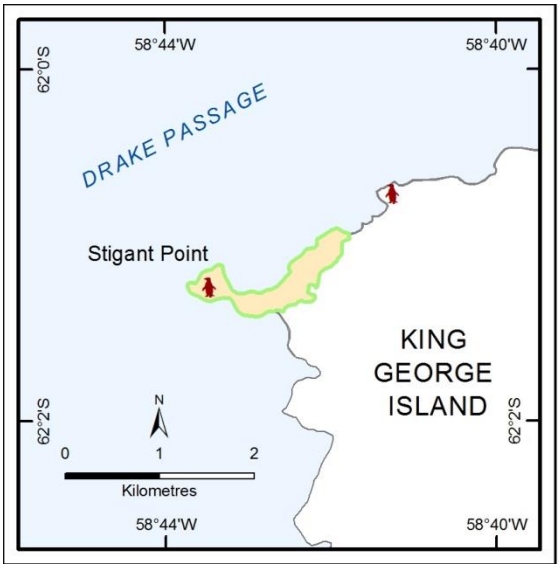
None known.

Further reading

Furse, J. R. 1978. Joint Services Expedition to the Elephant Island group, 1976–77. Unpublished report, BAS archives, Cambridge.

Stigant Point, King George Island – Delisted (ex ANT054)

IBA criteria	Originally A4iii; Does not qualify (2015)
Coordinates	58°43' W, 62°01' S
Area	50 ha
Altitude	0 to < 250 m
Protection	None



Site description

Stigant Point lies on the northern coast of King George Island, about 18 km northeast of Fildes Peninsula and 13 km southwest of Davey Point. The IBA originally qualified on the basis of the concentration of seabirds present (in particular Chinstrap Penguin (*Pygoscelis antarctica*)) and comprised the ice free ground at Stigant Point and adjacent snow-slopes. The IBA no longer qualifies and has been delisted.

The nearest permanent scientific station is Comandante Ferraz (Brazil) which operates year-round on the northern shoreline of Admiralty Bay, located 19 km to the southeast of Stigant Point, and which accommodates a maximum of ~40 people in the summer (COMNAP, Antarctic Facilities, accessed 24/08/2010).

A number of large scientific stations are located ~20 km southwest on Fildes Peninsula, more information on which can be found under IBA ANT048.

Birds

The site originally qualified as an IBA because Woehler (1993) reported 10 893 breeding pairs of Chinstrap Penguin at Stigant Point, meeting the A4iii IBA criteria. However, data from Jablonski (1984) reported 9658 breeding pairs of Chinstrap Penguin present at Stigant Point, 955 pairs present at Cieślak Point, and a further 280 pairs at a point 2 km west of Cieślak Point. In addition, only 6775 pairs were reported at the site in January 1987 (Shuford & Spear 1988b). More accurate mapping shows the colonies to be separated by a distance that exceeds the maximum allowed in the seabird aggregation analysis, and therefore the site no longer qualifies as an IBA and has been delisted.

Other threatened / endemic wildlife

Antarctic Fur Seals (*Arctocephalus gazella*) breed at Stigant Point (M. Goebel (NOAA), pers. comm. 2004).

Conservation issues

None known.

Further reading

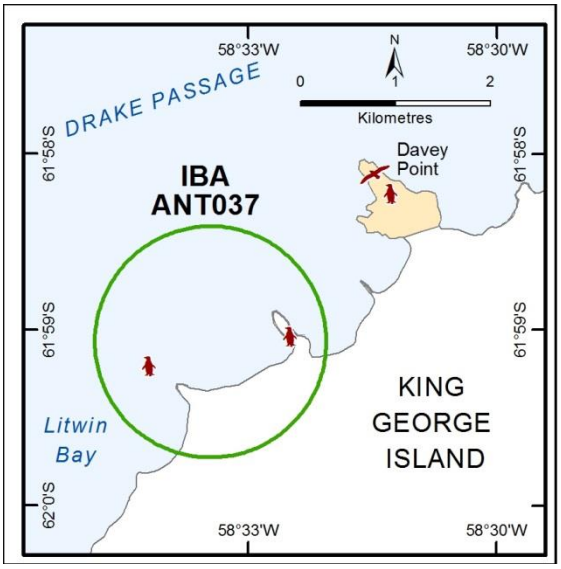
Jablonski, B. 1984. Distribution and numbers of penguins in the region of King George Island (South Shetland Islands) in the breeding season 1980/81. *Polish Polar Research* **5**:17-30

Shuford, W.D. & Spear, L.B. 1988b. Surveys of breeding Chinstrap Penguins in the South Shetland Islands, Antarctica. *British Antarctic Survey Bulletin* **81**: 19-30.

Woehler, E.J. (ed.) 1993. *The distribution and abundance of Antarctic and sub-Antarctic penguins.* Scientific Committee on Antarctic Research. Cambridge, UK.

ANT037: Eastern Litwin Bay, King George Island

IBA criteria	A4iii
Coordinates	58°33' W, 61°59' S
Area	500 ha
Altitude	0 to < 250 m
Protection	None



Site description

Litwin Bay is situated between Davey Point and Stigant Point on the northern coast of King George Island. The IBA qualifies on the basis of the concentration of seabirds present (in particular Chinstrap Penguin (*Pygoscelis antarctica*)) and comprises the islets in Litwin Bay, the adjacent coastline of King George Island and the intervening marine area.

The nearest permanent scientific station is Comandante Ferraz (Brazil) which operates year-round on the northern shoreline of Admiralty Bay, located ~14 km to south, and which accommodates a maximum of ~40 people in the summer (COMNAP, Antarctic Facilities, accessed 24/08/2010).

Birds

The site at Litwin Bay originally encompassed the ice free ground at Davey Point (Harris *et al*. 2011). However, it has since been determined that only ~560 breeding pairs of Chinstrap Penguin were present at Davey Point in 1980/81, while 8500 pairs were present at a small peninsula southwest of Davey Point and a further 12 630 pairs were present on a number of islets situated in eastern Litwin Bay (Jablonski 1984). The IBA boundary has therefore been adjusted to cover the area of Litwin Bay where the penguins are concentrated, rather than the ice free ground at Davey Point where relatively few penguins are known to breed. Shuford & Spear (1988b) reported an estimated 12 500 breeding pairs in the Davey Point area, however it is not clear over which area this count was aggregated. Information on other bird species in the area is not available.

Other threatened / endemic wildlife

None known.

Conservation issues

None known.

Further reading

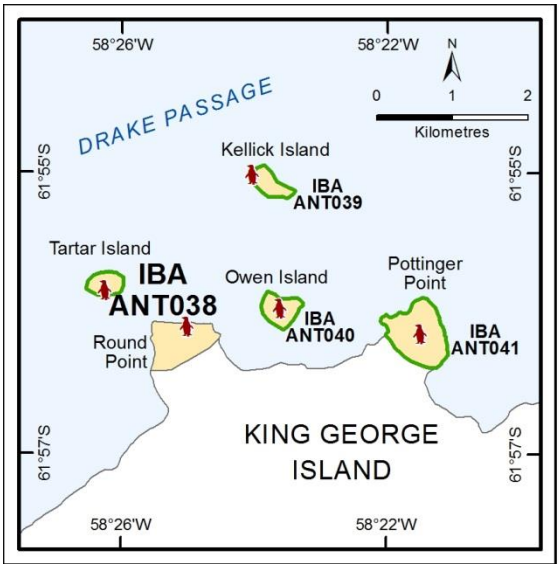
Harris, C.M., Carr, R., Lorenz, K. & Jones, S. 2011. Important Bird Areas in Antarctica: Antarctic Peninsula, South Shetland Islands, South Orkney Islands. Final Report for BirdLife International and UK Foreign & Commonwealth Office. Environmental Research & Assessment, Cambridge.

Jablonski, B. 1984. Distribution and numbers of penguins in the region of King George Island (South Shetland Islands) in the breeding season 1980/81. *Polish Polar Research* **5**: 17-30

Shuford, W.D. & Spear, L.B. 1988b. Surveys of breeding Chinstrap Penguins in the South Shetland Islands, Antarctica. *British Antarctic Survey Bulletin* **81**: 19-30.

ANT038: Tartar Island, King George Island

IBA criteria	A4iii
Coordinates	58°26' W, 61°56' S
Area	12 ha
Altitude	0 to < 250 m
Protection	None



Site description

Tartar Island is a small (13 ha) ice-free oval-shaped island ~600 m across at its widest point and situated ~700 m northwest of Round Point on the northern coast of King George Island. The IBA qualifies on the basis of the concentration of seabirds present (in particular Chinstrap Penguin (*Pygoscelis antarctica*)) and comprises the whole of Tartar Island.

The nearest permanent scientific station is Comandante Ferraz (Brazil) which operates year-round on the northern shoreline of Admiralty Bay, located ~18 km to south, and which accommodates a maximum of ~40 people in the summer (COMNAP, Antarctic Facilities, accessed 24/08/2010).

Birds

Approximately 18 640 breeding pairs of Chinstrap Penguin were present on Tartar Island in 1980 (Jablonski 1984). Shuford & Spear (1988b) reported an estimated 15 000 to 20 000 pairs, although this count is for Tartar Island and Round Point combined. Information on other bird species in the area is not available.

Other threatened / endemic wildlife

None known.

Conservation issues

None known.

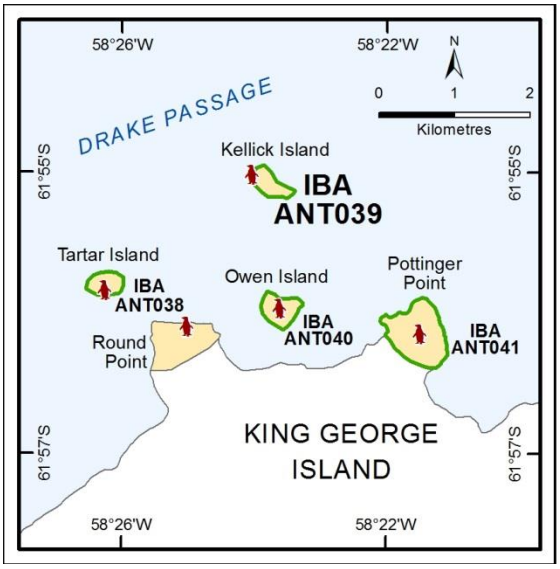
Further reading

Jablonski, B. 1984. Distribution and numbers of penguins in the region of King George Island (South Shetland Islands) in the breeding season 1980/81. *Polish Polar Research* **5**:17-30.

Shuford, W.D. & Spear, L.B. 1988b. Surveys of breeding Chinstrap Penguins in the South Shetland Islands, Antarctica. *British Antarctic Survey Bulletin* **81**: 19-30.

ANT039: Kellick Island, King George Island

IBA criteria	A4iii
Coordinates	58°24' W, 61°55' S
Area	13 ha
Altitude	0 to < 250 m
Protection	None



Site description

Kellick Island is a low-lying, ice-free island of ~13 ha lying ~2 km north of King George Island between Stigant Point and False Round Point. The IBA qualifies on the basis of the concentration of seabirds present (in particular Chinstrap Penguin (*Pygoscelis antarctica*)) and includes all of Kellick Island.

The nearest permanent scientific station is Comandante Ferraz (Brazil) which operates year-round on the northern shoreline of Admiralty Bay, located ~19 km to south, and which accommodates a maximum of ~40 people in the summer (COMNAP, Antarctic Facilities, accessed 24/08/2010).

Birds

Approximately 26 890 breeding pairs of Chinstrap Penguin were present at Kellick Island in 1980 (Jablonski 1984). Shuford & Spear (1988b) reported an estimated 15 000 to 25 000 breeding pairs in January 1987. Information on other bird species in the area is not available.

Other threatened / endemic wildlife

None known.

Conservation issues

None known.

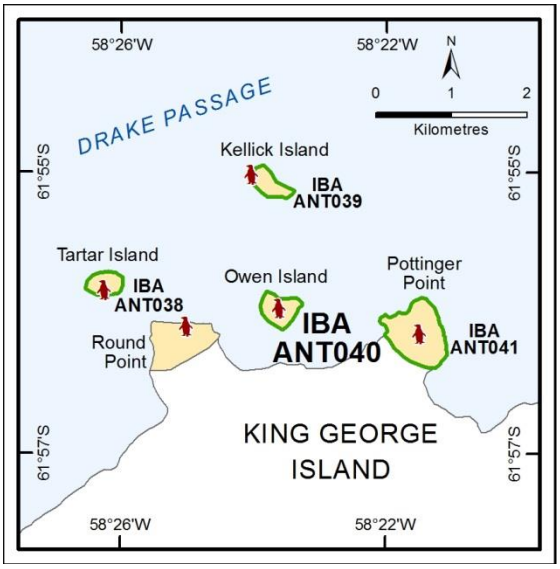
Further reading

Jablonski, B. 1984. Distribution and numbers of penguins in the region of King George Island (South Shetland Islands) in the breeding season 1980/81. *Polish Polar Research* **5**:17-30.

Shuford, W.D. & Spear, L.B. 1988b. Surveys of breeding Chinstrap Penguins in the South Shetland Islands, Antarctica. *British Antarctic Survey Bulletin* **81**: 19-30.

ANT040: Owen Island, King George Island

IBA criteria	A4iii
Coordinates	58°24' W, 61°56' S
Area	17 ha
Altitude	0 to < 250 m
Protection	None



Site description

Owen Island is a small, roughly circular ice-free island situated between Pottinger Point and Round Point ~500 m from the northern coast of King George Island. The IBA qualifies on the basis of the concentration of seabirds present (in particular Chinstrap Penguin (*Pygoscelis antarctica*)) and includes all of Owen Island.

The nearest permanent scientific station is Comandante Ferraz (Brazil) which operates year-round on the northern shoreline of Admiralty Bay, located ~17 km to south, and which accommodates a maximum of ~40 people in the summer (COMNAP, Antarctic Facilities, accessed 24/08/2010).

Birds

Approximately 21 551 breeding pairs of Chinstrap Penguin were present at Owen Island in 1980 (Jablonski 1984). Shuford & Spear (1988b) estimated more than 12 500 breeding pairs in January 1987. Information on other bird species in the area is not available.

Other threatened / endemic wildlife

None known.

Conservation issues

None known.

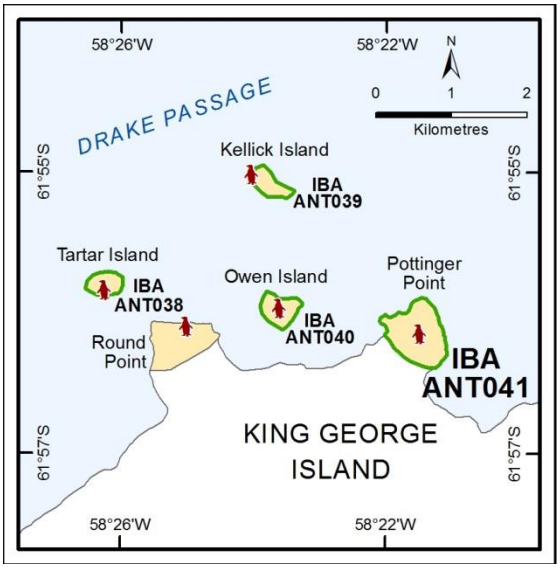
Further reading

Jablonski, B. 1984. Distribution and numbers of penguins in the region of King George Island (South Shetland Islands) in the breeding season 1980/81. *Polish Polar Research* **5**:17-30.

Shuford, W.D. & Spear, L.B. 1988b. Surveys of breeding Chinstrap Penguins in the South Shetland Islands, Antarctica. *British Antarctic Survey Bulletin* **81**: 19-30.

ANT041: Pottinger Point, King George Island

IBA criteria	A4ii, A4iii
Coordinates	58°21' W, 61°57' S
Area	51 ha
Altitude	0 to < 250 m
Protection	None



Site description

Pottinger Point is a low-lying ice-free promontory extending ~500 m on the northern coast of King George Island, between Stigant Point and False Round Point, and 2 km southeast of Kellick Island. The IBA qualifies on the basis of the Chinstrap Penguin (*Pygoscelis antarctica*) colony present and comprises all of the ice-free ground at Pottinger Point.

The nearest permanent scientific station is Comandante Ferraz (Brazil) which operates year-round on the northern shoreline of Admiralty Bay, located ~17 km to south, and which accommodates a maximum of ~40 people in the summer (COMNAP, Antarctic Facilities, accessed 24/08/2010).

Birds

Approximately 55 861 breeding pairs of Chinstrap Penguin were present at Pottinger Point in 1980 (Jablonski 1984). Shuford & Spear (1988b) reported an estimated 75 000 to 100 000 breeding pairs in January 1987. The colony at Pottinger Point is one of the largest in the South Shetland Islands. Information on other bird species in the area is not available.

Other threatened / endemic wildlife

None known.

Conservation issues

None known.

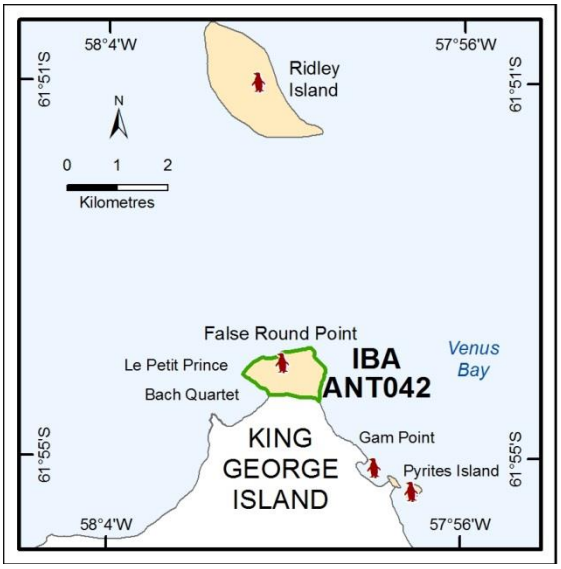
Further reading

Jablonski, B. 1984. Distribution and numbers of penguins in the region of King George Island (South Shetland Islands) in the breeding season 1980/81. *Polish Polar Research* **5**:17-30.

Shuford, W.D. & Spear, L.B. 1988b. Surveys of breeding Chinstrap Penguins in the South Shetland Islands, Antarctica. *British Antarctic Survey Bulletin* **81**: 19-30.

ANT042: False Round Point, King George Island

IBA criteria	A4ii, A4iii
Coordinates	58°00' W, 61°54' S
Area	111 ha
Altitude	0 to < 250 m
Protection	None



Site description

False Round Point is an ice-free headland on the northern coast of King George Island. The IBA qualifies on the basis of the Chinstrap Penguin (*Pygoscelis antarctica*) colony present and comprises all of the ice-free area at False Round Point.

The nearest permanent scientific station is Comandante Ferraz (Brazil) which operates year-round on the northern shoreline of Admiralty Bay, located ~30 km to southwest, and which accommodates a maximum of ~40 people in the summer (COMNAP, Antarctic Facilities, accessed 24/08/2010).

Birds

Approximately 49 410 breeding pairs of Chinstrap Penguin were present on the ice-free area at False Round Point in 1980 (Jablonski 1984), which is the second largest Chinstrap colony on King George Island after IBA ANT041 at Pottinger Point. Shuford & Spear (1988b) reported an estimated 50 000 to 87 500 breeding pairs in January 1987, although this count also included Chinstrap Penguins breeding on Pyrites Island, three small islets north of Gam Point, on Bach Quartet and on an islet south of Le Petit Prince. Information on other bird species in the area is not available.

Other threatened / endemic wildlife

None known.

Conservation issues

None known.

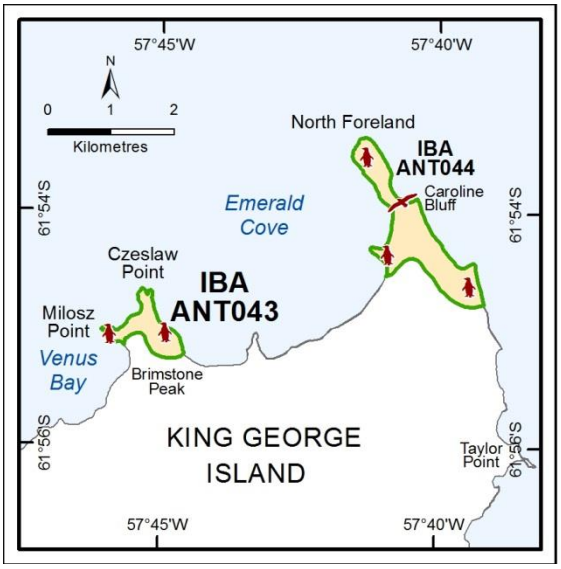
Further reading

Jablonski, B. 1984. Distribution and numbers of penguins in the region of King George Island (South Shetland Islands) in the breeding season 1980/81. *Polish Polar Research* **5**: 17-30.

Shuford, W.D. & Spear, L.B. 1988b. Surveys of breeding Chinstrap Penguins in the South Shetland Islands, Antarctica. *British Antarctic Survey Bulletin* **81**: 19-30.

ANT043: Milosz Point / Czeslaw Point, King George Island

IBA criteria	A4iii
Coordinates	57°45' W, 61°55' S
Area	52 ha
Altitude	0 to < 250 m
Protection	None



Site description

Milosz Point and Czeslaw Point are situated near Brimstone Peak on the northern coast of King George Island, and lie ~4 km west of North Foreland between Venus Bay and Emerald Cove. The IBA qualifies on the basis of the concentration of seabirds present (in particular Chinstrap Penguin (*Pygoscelis antarctica*)) and comprises the entire ice-free area of Milosz Point and Czeslaw Point.

The nearest permanent scientific station is Comandante Ferraz (Brazil) which operates year-round on the northern shoreline of Admiralty Bay, located ~40 km to southwest, and which accommodates a maximum of ~40 people in the summer (COMNAP, Antarctic Facilities, accessed 24/08/2010).

Birds

Approximately 16 770 breeding pairs of Chinstrap Penguin were present at Milosz Point and Czeslaw Point in 1980 (Jablonski 1984). Shuford & Spear (1988b) estimated between 7500 to 8500 breeding pairs in January 1987, although this was only a rough count. In view of the size of the colony, the age of count and interseasonal fluctuations in breeding numbers, a conservative approach has been taken and the IBA has been retained pending further data. Information on other birds breeding at the site is not available.

Other threatened / endemic wildlife

None known.

Conservation issues

None known.

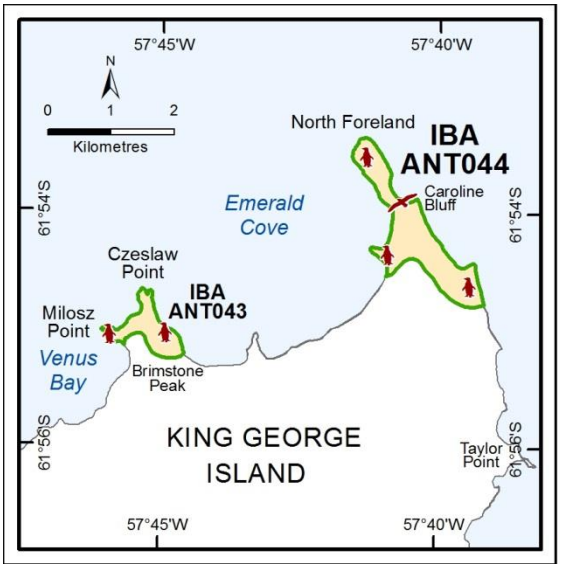
Further reading

Jablonski, B. 1984. Distribution and numbers of penguins in the region of King George Island (South Shetland Islands) in the breeding season 1980/81. *Polish Polar Research* **5**: 17-30.

Shuford, W.D. & Spear, L.B. 1988b. Surveys of breeding Chinstrap Penguins in the South Shetland Islands, Antarctica. *British Antarctic Survey Bulletin* **81**: 19-30.

ANT044: North Foreland, King George Island

IBA criteria	A4iii
Coordinates	57°40' W, 61°54' S
Area	152 ha
Altitude	0 to < 250 m
Protection	None



Site description

North Foreland is a headland extending several km from the permanent ice cap at the northeastern extremity of King George Island, lying at the eastern entrance to Emerald Cove. The IBA qualifies on the basis of the concentration of seabirds present (in particular Chinstrap Penguin (*Pygoscelis antarctica*)) and includes all of the ice-free area at North Foreland.

The nearest permanent scientific station is Comandante Ferraz (Brazil) which operates year-round on the northern shoreline of Admiralty Bay, located ~42 km to southwest, and which accommodates a maximum of ~40 people in the summer (COMNAP, Antarctic Facilities, accessed 24/08/2010).

Birds

Approximately 23 286 breeding pairs of Chinstrap Penguin were present at North Foreland in 1980 (Jablonski 1984). Shuford & Spear (1988b) reported an estimated 30 100 breeding pairs in January 1987. Southern Giant Petrels (*Macronectes giganteus*) are also believed to breed at North Foreland, with 248 pairs estimated nesting at the site in 1966 (Patterson *et al.* 2008). However, more recent census data for these species and other bird species in the area are not available.

Other threatened / endemic wildlife

None known.

Conservation issues

None known.

Further reading

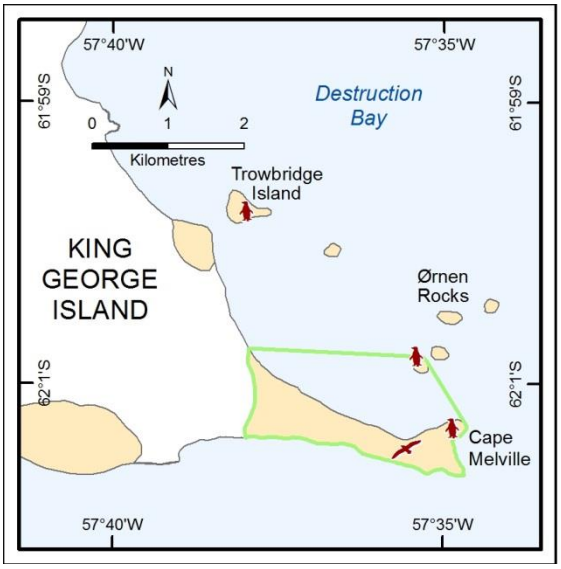
Jablonski, B. 1984. Distribution and numbers of penguins in the region of King George Island (South Shetland Islands) in the breeding season 1980/81. *Polish Polar Research* **5**: 17-30

Patterson, D.L., Woehler, E.J., Croxall, J.P., Cooper, J., Poncet, S., Peter, H.-U., Hunter, S. & Fraser, W.R. 2008. Breeding distribution and population status of the Northern Giant Petrel *Macronectes halli* and the Southern Giant Petrel *M. giganteus*. *Marine Ornithology* **36**: 115-124.

Shuford, W.D. & Spear, L.B. 1988b. Surveys of breeding Chinstrap Penguins in the South Shetland Islands, Antarctica. *British Antarctic Survey Bulletin* **81**: 19-30.

Cape Melville, King George Island – Delisted (ex ANT063)

IBA criteria	Originally A4iii; Does not qualify (2015)
Coordinates	57°36' W, 62°01' S
Area	344 ha
Altitude	< 250 m
Protection	None



Site description

Cape Melville is a low-lying, ice-free headland at the eastern extremity of King George Island. The original IBA qualified on the basis of the concentration of seabirds present (in particular Chinstrap Penguin (*Pygoscelis antarctica*)). The IBA included all of the ice-free area of Cape Melville and Ørnen Rocks, which lie ~1 km north of Cape Melville, and the intervening marine area.

The nearest permanent scientific station is Comandante Ferraz (Brazil) ~43 km to the west in Admiralty Bay, more information on which can be found under IBA ANT037.

Birds

The site originally qualified as an IBA because Woehler (1993) reported 16 278 breeding pairs of Chinstrap Penguin in the Cape Melville area, meeting the A4iii IBA criteria. On closer investigation, Croxall & Kirkwood (1979) reported 3250 pairs of Chinstrap Penguin at Cape Melville and 1100 pairs at Ørnen Rocks, based on counts made at the end of January 1966 with an estimated accuracy of ±10-15%. However, Jablonski (1984) reported 9970 pairs present at Cape Melville, and 6308 pairs present at Trowbridge Island, although the timing, method and accuracy of these counts are unknown. Jablonski (1984) found no penguin colony at Ørnen Rocks, but rather Imperial Shags (*Phalacrocorax* [*atriceps*] *bransfieldensis*), and noted the presence of shear coastal cliffs, perhaps making penguin breeding unlikely. The report of a Chinstrap Penguin colony at Ørnen Rocks in Croxall & Kirkwood (1979) may be a case of mistaken identification. Shuford & Spear (1988b) made a rough estimate (accuracy ±10-20%) of 4000 to 4500 pairs at Cape Melville and ~1000 pairs at Trowbridge Island, while no count was made at Ørnen Rocks. The number given in Woehler (1993) is an aggregation of counts for Cape Melville and Trowbridge Island made by Jablonski (1984).

In view of the considerable uncertainty and lack of recent and reliable data, and taking into account that the colonies at Cape Melville and Trowbridge Island are widely separated, it was concluded that the site does not presently qualify as an IBA and it has been delisted.

Other threatened / endemic wildlife

None known.

Conservation issues

None known.

Further reading

Croxall, J.P. & Kirkwood, E.D. 1979. *The distribution of penguins on the Antarctic Peninsula and Islands of the Scotia Sea*. British Antarctic Survey, Cambridge.

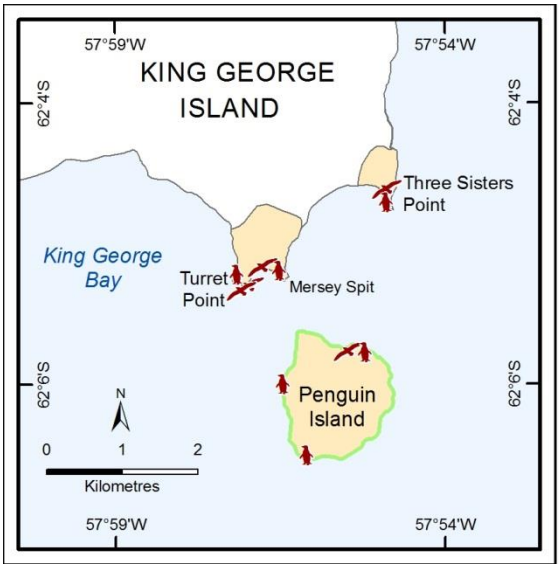
Jablonski, B. 1984. Distribution and numbers of penguins in the region of King George Island (South Shetland Islands) in the breeding season 1980/81. *Polish Polar Research* **5**:17-30

Shuford, W.D. & Spear, L.B. 1988b. Surveys of breeding Chinstrap Penguins in the South Shetland Islands, Antarctica. *British Antarctic Survey Bulletin* **81**: 19-30.

Woehler, E.J. (ed.) 1993. *The distribution and abundance of Antarctic and sub-Antarctic penguins.* Scientific Committee on Antarctic Research. Cambridge, UK.

Penguin Island, King George Island – Delisted (ex ANT064)

IBA criteria	Originally A4ii, A4iii; Does not qualify (2015)
Coordinates	57°56' W, 62°06' S
Area	182 ha
Altitude	0 – c.170 m
Protection	None



Site description

Penguin Island is an oval-shaped ice-free island ~1.6 km across lying ~1 km southeast of Turret Point on the southern coast of King George Island. The original IBA comprised all of Penguin Island.

Penguin Island is an extinct volcanic cone, which rises to ~170 m at Deacon Peak. The shoreline is generally of low cliffs, although a beach on the northern coast offers the most practical access. A small lake lies in the northeast of the island. Vegetation includes a variety of lichens, mosses, and the two vascular plant species Antarctic Hairgrass *(Deschampsia antarctica)* and Antarctic Pearlwort (*Colobanthus quitensis)* (ATS Visitor Site Guide, Penguin Island, accessed 06/08/2010).

The nearest permanent scientific station is Comandante Ferraz (Brazil) in Admiralty Bay ~25 km to the west, more information on which can be found under IBA ANT037.

Birds

The site originally qualified as an IBA because it supported a wide range of birds, including a substantial colony of Southern Giant Petrel (*Macronectes giganteus*) breeding along the northern and northwestern shoreline, with 634 pairs recorded in 1999 (Naveen 2003). Southern Giant Petrel numbers have fluctuated, although appear to have declined with 288 pairs recorded in 2012 (Antarctic Site Inventory (ASI) data; R. Naveen and H. Lynch pers. comm. 2014), on which basis the site no longer qualifies as an IBA.

Adélie Penguins (*Pygoscelis adeliae*) breed on the southern side of Penguin Island, with 2441 pairs recorded in 1997 (Naveen 2003). Approximately 7581 pairs of Chinstrap Penguin (*Pygoscelis antarctica*) were breeding on Penguin Island in 1980 (Jablonski 1984). ASI data reported that Adélie Penguins decreased to 54 breeding pairs in 2013, while Chinstraps decreased to 1545 (R. Naveen and H. Lynch pers. comm. 2014). The combined number of penguins present, and other seabirds, is no longer sufficient to qualify the site for IBA status.

Other confirmed breeders include the Antarctic Tern (*Sterna vittata*), Kelp Gull (*Larus dominicanus*) and skuas (*Catharacta* spp.). The Snowy Sheathbill (*Chionis albus*) and Wilson's Storm-petrel (*Oceanites oceanicus*) are frequent visitors and may breed at the site, whilst the Imperial Shag (*Phalacrocorax* [*atriceps*] *bransfieldensis*) is a regular visitor (ATS Visitor Site Guidelines, Penguin Island).

Other threatened / endemic wildlife

Southern Elephant Seals (*Mirounga leonina*) and Weddell Seals (*Leptonychotes weddellii*) regularly haul out on Penguin Island (ATS Visitor Site Guidelines, Penguin Island, accessed 06/08/2010).

Conservation issues

Penguin Island is a popular tourist destination, receiving an average of 1502 visitors annually (IAATO Tourism Statistics 2005-06 – 2009-10, accessed 06/08/2010). Tourist visits are managed by the ATS Visitor Site Guidelines for Penguin Island, which provides specific procedures for visitors ashore to follow. Included are the requirements that visitors maintain a separation distance of at least 50 m from Southern Giant Petrels and at least 5 m from all other wildlife, and several breeding areas are completely closed to tourist visits. A trail has developed on the pedestrian route leading to Deacon Peak (ATS Visitor Site Guidelines, Penguin Island, accessed 06/08/2010). It is unclear whether the

decline in Southern Giant Petrels is related to human disturbance, although this cannot be discounted as a possibility and there is a need for more research into the causes of seabird decline on the island.

Further reading

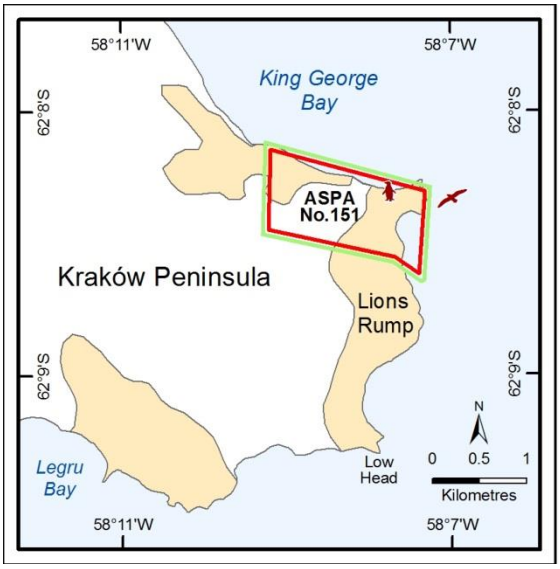
Antarctic Treaty System Visitor Site Guidelines, *Penguin Island*:
URL: http://www.ats.aq/siteguidelines/documents/Penguin_e.pdf. Accessed 06/08/2010.

Jablonski, B. 1984. Distribution and numbers of penguins in the region of King George Island (South Shetland Islands) in the breeding season 1980/81. *Polish Polar Research* **5**: 17-30

Naveen, R. 2003. *Compendium of Antarctic Peninsula visitor sites (2nd edition): A Report to the United States Environmental Protection Agency*. Oceanites, Chevy Chase, MD.

Lions Rump, King George Island – Delisted (ex ANT065)

IBA criteria	Originally A4iii; Does not qualify (2015)
Coordinates	58°08' W, 62°08' S
Area	132 ha
Altitude	< c.190 m
Protection	ASPA No.151



Site description

Lions Rump is located on the southwest coast of King George Bay, southern King George Island, South Shetland Islands. The original IBA was defined by the boundary of Antarctic Specially Protected Area No. 151. Relief at the site is varied and rises to ~190 m, with raised beaches, freshwater pools and streams (ASPA No. 151 Management Plan, 2000).

ASPA No. 151 is designated to protect the ecological values of the area, including vascular plants, lichens and diverse avian fauna, and representative examples of maritime Antarctic habitats (ASPA No. 151 Management Plan, 2000).

The nearest permanent scientific stations are Comandante Ferraz (BRA) and Arctowski (POL), both located ~15 km west in Admiralty Bay.

Birds

The site originally qualified as an IBA because in 1980 it supported ~12 345 breeding pairs of Adélie Penguin (*Pygoscelis adeliae*) (Jablonski 1984), with smaller colonies of Gentoo (*P. papua*) and Chinstrap (*P. antarctica*) penguins. Approximately 1105 breeding pairs of Gentoo Penguin were present in 1980, whilst the Chinstrap colony was estimated at 10 breeding pairs in the same year (Jablonski 1984). More recently, Adélie Penguins have declined to 3751 breeding pairs in 2010/11 (Korczak-Abshire *et al*. 2013), and the site no longer qualifies as an IBA.

Other confirmed breeders at the site are the Southern Giant Petrel (*Macronectes giganteus*), Cape Petrel (*Daption capense*), Wilson's Storm-petrel (*Oceanites oceanicus*), Black-bellied Storm-petrel (*Fregetta tropica*), Snowy Sheathbill (*Chionis albus*), South Polar Skua (*Catharacta maccormicki*), Brown Skua (*Catharacta antarctica*), Kelp Gull (*Larus dominicanus*) and the Antarctic Tern (*Sterna vittata*) (ASPA No.151 Management Plan, 2000).

Other threatened / endemic wildlife

Southern Elephant Seal (*Mirounga leonina*), Antarctic Fur Seal (*Arctocephalus gazella*) and Weddell Seal (*Leptonychotes weddellii*) are reported to breed on beaches at Lions Rump (ASPA No. 151 Management Plan, 2000).

Conservation issues

Entry to ASPA No. 151 is by permit and the management plan requires visitors to minimise disturbance to birds. Overflight by helicopters or fixed-wing aircraft must be at least 250 m offshore, and helicopters are not permitted to land within the ASPA (ASPA No. 151 Management Plan, 2000). Although helicopters are used to access nearby stations in Admiralty Bay, the site is not in the vicinity of the usual flight-paths to and from these stations.

Further reading

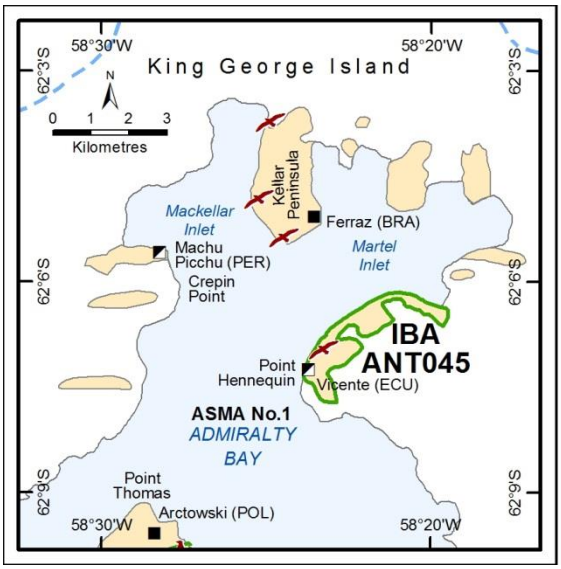
ASPA No. 151 Lions Rump, King George Island: Management Plan (2000).

Jablonski, B. 1984. Distribution and numbers of penguins in the region of King George Island (South Shetland Islands) in the breeding season 1980/81. *Polish Polar Research* **5**:17-30.

Korczak-Abshire, M., Węgrzyn, M., Angiel, P.J. & Lisowska, M. 2013. Pygoscelid penguins breeding distribution and population trends at Lions Rump rookery, King George Island. *Polish Polar Research* **34** (1): 87-99. doi:10.2478/popore.

ANT045: Point Hennequin, King George Island

IBA criteria	A4ii
Coordinates	58°22'48" W, 62°06'57" S
Area	277 ha
Altitude	0 – 250 m
Protection	ASMA No.1



Site description

Point Hennequin is situated in the northeastern side of Admiralty Bay, King George Island, at the entrance to Martel Inlet. The IBA qualifies on the basis of the South Polar Skua (*Catharacta maccormicki*) colony present at the site. The IBA comprises all of the ice free ground at Point Hennequin and lies within ASMA No. 1 Admiralty Bay.

Vicente Station (summer-only, ECU) is located on Point Hennequin and Comandante Ferraz (year-round, BRA) is situated ~ 3km north on Keller Peninsula.

Birds

Seven bird species were breeding at Point Hennequin in 2004/05 (Table 045.1), while only five were recorded in 1978/79. The 3 newly recorded species include Cape Petrel (*Daption capense)*, Black-bellied Storm-petrel (*Fregetta tropica*) and Chilean Skua (*Catharacta chilensis*). South Polar Skua and Kelp Gull (*Larus dominicanus*) showed an increase in population between the two surveys, whereas Wilson's Storm-petrel (*Oceanites oceanicus*), Brown Skua (*Catharacta antarctica*) and Antarctic Tern (*Sterna vittata*) showed a decrease. Imperial Shag (*Phalacrocorax* [*atriceps*] *bransfieldensis*), Gentoo Penguin (*Pygoscelis papua*), Adélie Penguin (*Pygoscelis adeliae*) and Chinstrap Penguin (*Pygoscelis antarctica*) have been reported as visitors to Point Hennequin (Schneider *et al*. 2008).

Table 045.1: Breeding birds at Point Hennequin.

Common name	Scientific name	Breeding pairs 1978/79[1]	Breeding pairs 2004/05[2]
South Polar Skua	*Catharacta maccormicki*	9	116
Brown Skua	*Catharacta antarctica*	10	2
Mixed (including Chilean Skua) / Hybrid skua pairs	*Catharacta maccormicki, C. antarctica, C. chilensis*	0	8
Cape Petrel	*Daption capense*	0	5
Wilson's Storm-petrel	*Oceanites oceanicus*	70	50
Black-bellied Storm-petrel	*Fregetta tropica*	0	10
Kelp gull	*Larus dominicanus*	5	24
Antarctic Tern	*Sterna vittata*	7	4

[1] Source: Jablonski (1986) cited in Schneider Costa & Alves 2008.
[2] Source: Schneider Costa & Alves 2008.

Other threatened / endemic wildlife

None known.

Conservation issues

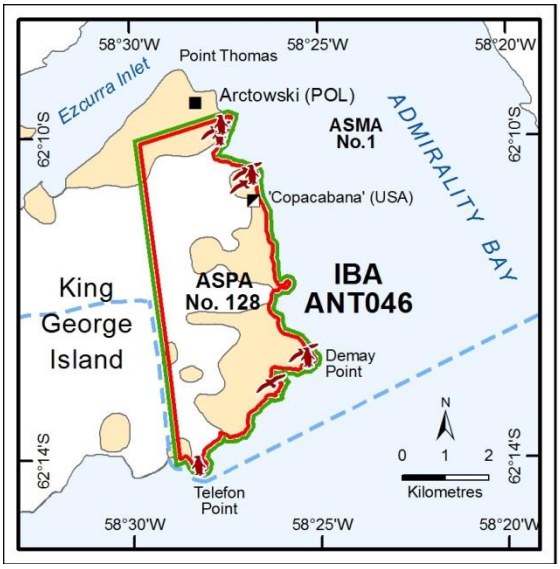
See ANT046 for more information on conservation issues within ASMA No. 1.

Further reading

Schneider Costa, E. & Alves, M.A.S. 2008. The breeding birds of Hennequin Point an ice-free area of Admiralty Bay (Antarctic Specially Managed Area) King George Island, Antarctica. *Revista Brasileira de Ornitologia* **16**(2): 137-41.

ANT046: West Admiralty Bay, King George Island

IBA criteria	A1, A4ii, A4iii
Coordinates	58°28' W, 62°12' S
Area	1804 ha
Altitude	0 – c.350 m
Protection	ASPA No.128, ASMA No.1



Site description

Admiralty Bay lies on the southern coast of King George Island. The IBA qualifies on the basis of the numbers of Gentoo Penguin (*Pygoscelis papua*) and the concentration of seabirds present (in particular penguins). The IBA is defined by the boundary of ASPA No. 128, which extends from Telefon Point in the southwest to a point ~0.5 km south of Arctowski Station (POL).

The western shore of Admiralty Bay rises to a maximum elevation of around 350 m and is shaped by glacial and coastal marine processes. Approximately 80% of the IBA is permanently covered by snow and ice (ASPA No. 128 Management Plan, 2014). Ice-free areas are located on raised beaches, moraines, rocky headlands, islets and spurs. Several shallow beaches are present on the northeastern coast.

ASPA No. 128 was designated to protect the diverse avian and mammalian fauna and locally rich vegetation, and provides a representative example of a maritime Antarctic ecosystem (ASPA No. 128 Management Plan, 2014). The site also lies within ASMA No. 1 Admiralty Bay.

Vegetation is typical of the maritime Antarctic, with lichens, mosses and the flowering plants Antarctic Hairgrass (*Deschampsia Antarctica)* and Antartic Pearlwort (*Colobanthus quitensis)* (ASPA No. 128 Management Plan, 2014).

The nearest permanent year-round scientific station is Arctowski (POL), located outside the IBA near Point Thomas. Arctowski has a capacity for ~40 people in summer and 12 in winter (COMNAP, Antarctic Facilities, accessed 25/08/2010). A small semi-permanent summer-only field camp ('Copacabana' (USA)) is located near the shore of Admiralty Bay within the IBA and the ASPA ~3 km southeast of Arctowski station.

Birds

Twelve bird species breed at the site, detailed information on which may be found in the ASPA No. 128 Management Plan (2014). In summary, approximately 15 151 pairs of Adélie Penguin (*Pygoscelis adeliae*), 2287 pairs of Gentoo Penguin and 2545 pairs of Chinstrap Penguin (*P. antarctica*) were recorded in 1994/95 (Ciaputa & Sierakowski 1999). Four-year averages over 2009-12 showed 7032 pairs of Adélie, 4736 pairs of Gentoo, and 950 pairs of Chinstrap Penguin (Ciaputa & Sierakowski 1999; US AMLR program unpublished data). Also breeding at the site are Southern Giant Petrel (*Macronectes giganteus*), Cape Petrel (*Daption capense*), Snowy Sheathbill (*Chionis albus*), skua (*Catharacta maccormicki* and *C. antarctica*), Kelp Gull (*Larus dominicanus*), Antarctic Tern (*Sterna vittata*), Wilson's Storm-petrel (*Oceanites oceanicus*) and Black-bellied Storm-petrel (*Fregetta tropica*) (ASPA No. 128 Management Plan, 2014).

Four South American bird species have also been recorded as temporary visitors: Black-necked Swan (*Cygnus melanocoryphus*), South Georgia Pintail (*Anas georgica*), White-rumped Sandpiper (*Calidris fuscicollis*) and Wilson's Phalarope (*Pharalopus tricolor*) (ASPA No. 128 Management Plan, 2014).

Other threatened / endemic wildlife

Southern Elephant Seals (*Mirounga leonina*), Antarctic Fur Seals (*Arctocephalus gazella*) and Weddell Seals (*Leptonychotes weddellii*) regularly haul out at the site, and Southern Elephant and Weddell seals have been observed breeding in the area (ASPA No.128 Management Plan, 2014). Over winter, Leopard Seals (*Hydrurga leptonyx*) and

Crabeater Seals (*Lobodon carcinophagus*) are regularly observed on nearby ice floes (ASPA No. 128 Management Plan, 2014).

Conservation issues

Four permanent scientific stations (Brazil, Ecuador, Peru, Poland) operate within close proximity of the IBA, with associated activities and logistic support. In addition, Admiralty Bay is regularly visited by tourist vessels and yachts. The concentration of activity increases the risk of accidents, such as an oil spill, which could have significant implications for the IBA. Activities within Admiralty Bay are managed within ASMA No. 1, which aims to manage potential conflicts of interest between different activities, and to minimise cumulative environmental impacts in the area so that any environmental disturbance is kept to a minimum (ASMA No. 1 Management Plan, 2014).

All access and activities within ASPA No. 128 are strictly by permit. All helicopters landing at Arctowski Station should approach from and depart towards the sea and avoid flying over bird colonies. All aircraft should maintain a horizontal and vertical separation distance of 2000 ft (~610 m) from the coast and from the breeding wildlife within ASPA No. 128.

Further reading

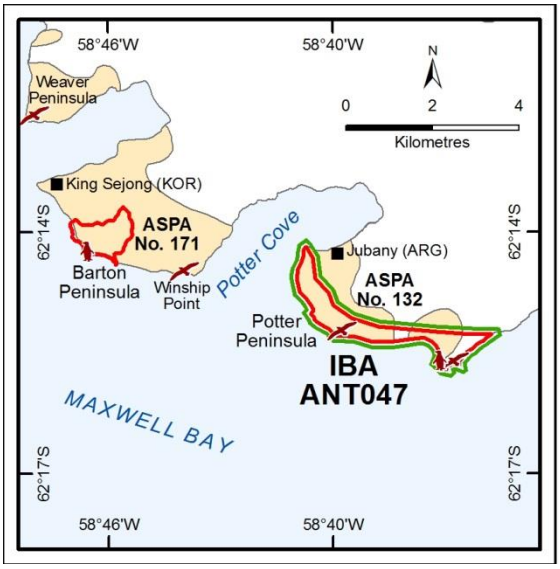
ASPA No. 128 Western shore of Admiralty Bay, King George Island: Management Plan (2014).

ASMA No. 1 Admiralty Bay, King George Island: Management Plan (2014).

Ciaputa, P. & Sierakowski, K. 1999. Long-term population changes of Adélie, chinstrap, and gentoo penguins in the regions of SSSI No. 8 and SSSI No. 34, King George Island, Antarctica. *Polish Polar Research* **20**(4): 355-65.

ANT047: Potter Peninsula, King George Island

IBA criteria	A4ii
Coordinates	58°39' W, 62°15' S
Area	217 ha
Altitude	< 250 m
Protection	ASPA No.132



Site description

Potter Peninsula, King George Island, lies on the northeastern shore of Maxwell Bay, bordered to the west by Potter Cove and to the east by Stranger Point. Small bays along the shoreline separate rocky headlands. The southern shoreline of Potter Peninsula is designated ASPA No. 132 and the IBA is defined to cover the same area. The IBA qualifies on the basis of the South Polar Skua (*Catharacta maccormicki*) colony present, although prior to recent declines in local numbers of Adélie Penguins (*Pygoscelis adeliae*) also qualified on the basis of the high concentration of seabirds present.

The site is largely ice free and comprises raised pebble beaches, basaltic structures and moraines with relatively diverse vegetation dominated by lichens (ASPA No. 132 Management Plan, 2013).

The nearest permanent scientific station is Jubany (ARG), which operates year-round with a maximum capacity of 100 personnel (COMNAP, Antarctic Facilities, accessed 25/08/2010). Jubany Station is located ~500 m from in the northwestern boundary of the ASPA and IBA. A number of other scientific stations also operate in Maxwell Bay, more information on which can be found under IBA ANT048.

Birds

Potter Peninsula supports a diverse range of avifauna, with 14 554 breeding pairs of Adélie Penguin recorded in 1988/89 (Aguirre 1995), most being at Stranger Point (ASPA No. 132 Management Plan, 2013). Aguirre (1995) also recorded 2325 pairs of Gentoo Penguin (*Pygoscelis papua*) and 265 pairs of Chinstrap Penguin (*P. antarctica*) breeding in the summer of 1988-89. More recently, the Management Plan for ASPA No. 132 (2013) reported only 3000 pairs of Adélie Penguin, although an increase in Gentoo Penguins to ~3800 pairs.

South Polar Skuas breed at the site, with 63 breeding pairs in 2002 (Ritz *et al.* 2006). In 1998, 46 pairs of Southern Giant Petrel (*Macronectes giganteus*) were recorded breeding on Potter Peninsula (Hahn *et al.* 1998), while 87 pairs were recorded in 2007 (ACAP 2010b). In addition, approximately 200 breeding pairs of Storm-petrel (mainly *Oceanites oceanicus*) are estimated in the area (ASPA No. 132 Management Plan, 2013). Other confirmed breeders include Cape Petrel (*Daption capense*), Black-bellied Storm-petrel (*Fregetta tropica*), Imperial Shag (*Phalacrocorax* [*atriceps*] *bransfieldensis*), Snowy Sheathbill (*Chionis albus*), Brown Skua (*Catharacta antarctica*), hybrid skuas (*Catharacta* sp.), Kelp Gull (*Larus dominicanus*) and Antarctic Tern (*Sterna vittata*) (Hahn *et al.* 1998).

Other threatened / endemic wildlife

Large numbers of Southern Elephant Seals (*Mirounga leonina*) haul out annually to breed on Potter Peninsula (ASPA No. 132 Management Plan, 2013). A. Carlini (pers. comm. 2010) recorded 272 female Southern Elephant Seals in the 2006 season. Antarctic Fur Seals (*Arctocephalus gazella*) and occasionally Weddell Seals (*Leptonychotes weddellii*), Crabeater Seals (*Lobodon carcinophagus*) and Leopard Seals (*Hydrurga leptonyx*) haul out along beaches at this site.

Conservation issues

All access and activities at Potter Peninsula are undertaken strictly by permit under ASPA No. 132. Tourists and recreational activities are prohibited within the ASPA. Jubany Station (ARG), with associated operational and support activities, is located in close proximity to the IBA.

Further reading

ACAP (Agreement on the Conservation of Albatrosses and Petrels) 2010b. ACAP Species assessment: Southern Giant Petrel *Macronectes giganteus*. Downloaded from http://www.acap.aq on 12/03/2015.

ASPA No. 132 Potter Peninsula, King George Island: Management Plan (2013).

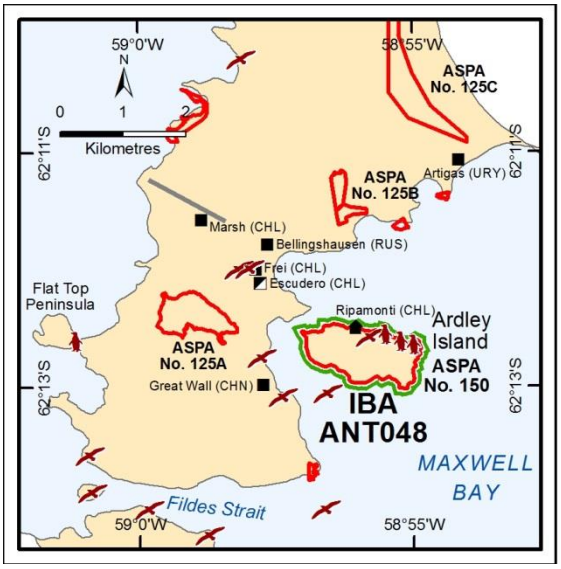
Aguirre, C. A. 1995. Distribution and abundance of birds at Potter Peninsula, 25 de Mayo (King George) Island, South Shetland Islands, Antarctica. *Marine Ornithology* **23:** 23-31.

Hahn, S., Peter, H.-U., Quillfeldt, P. & Reinhardt, K. 1998. The birds of the Potter Peninsula, King George Island, South Shetland Islands, Antarctica, 1965-1998. *Marine Ornithology* **26**: 1-6.

Ritz, M.S., Hahn, S., Janicke, T. & Peter, H.-U. 2006. Hybridisation between South polar skua (*Catharacta maccormicki*) and Brown skua (*C. antarctica lonnbergi*) in the Antarctic Peninsula region. *Polar Biology* **29***:* 153-59. doi:10.1007/s00300-005-0034-0

ANT048: Ardley Island, King George Island

IBA criteria	A1, A4ii
Coordinates	58°56' W, 62°13' S
Area	122 ha
Altitude	0 – c.65 m
Protection	ASPA No.150



Site description

Ardley Island is located in Maxwell Bay, ~500 m from Fildes Peninsula, King George Island. The island is ice-free, about 2 km by 1 km in size, and is connected to Fildes Peninsula by an isthmus that becomes submerged at high water (ASPA No. 150 Management Plan, 2009). Ardley Island is designated ASPA No. 150 for the diverse range of seabirds that breed within the area. The IBA qualifies on the basis of the Gentoo Penguin (*Pygoscelis papua*) colony present and is defined by the boundary of ASPA No. 150, which includes all of Ardley Island.

Ardley Island is largely snow-free in summer and has relatlively low relief rising to ~65 m (ASPA No. 150 Management Plan, 2009). The island supports some of the best developed plant communities in the South Shetland Islands with ~250 lichen species and numerous mosses and liverworts. Antarctic Hairgrass (*Deschampsia antarctica)* is well-established and increasingly abundant on the island.

Ripamonti Station (CHL) is a small summer-only research facility with capacity for ~4 personnel located on the northern coast of the island (COMNAP, Antarctic Facilities, accessed 24/08/2010). Six major scientific stations with a combined capacity of more than 200 personnel are located within Maxwell Bay and nearby to the IBA: Great Wall (CHN, 850 m), Eduardo Frei and Teniente Marsh (CHL, 1 km), Bellingshausen (RUS, 1.5 km), Artigas (URY, 2.9 km), King Sejong (KOR, 6.5 km) and Jubany (ARG, 13 km).

Birds

Approximately 4635 breeding pairs of Gentoo Penguin were present on Ardley Island in 2005/06 (ASPA No. 150 Management Plan, 2009, data from J. Valencia). Adélie Penguins (*Pygoscelis* adeliae) and Chinstrap Penguins (*P. antarctica*) also breed at the site, with 334 pairs and 9 pairs respectively in 2005/06, and 260 pairs and 15 pairs respectively counted on 11 Dec 2014 (H. Lynch pers. comm. 2015). A small number of Southern Giant Petrel (*Macronectes giganteus*) breed on Ardley Island, estimated at 5 breeding pairs in 1998 (Patterson *et al.* 2008).

Other confirmed breeding species include the Brown Skua (*Catharacta antarctica*), South Polar Skua (*Catharacta maccormicki*), Wilson's Storm-petrel (*Oceanites oceanicus*), Black-bellied Storm-petrel (*Fregetta tropica*), Cape Petrel (*Daption capense*) and Antarctic Tern (*Sterna vittata*).

Other threatened / endemic wildlife

Weddell Seals (*Leptonychotes weddellii*) frequent Ardley Island and are known to breed on beaches and sea ice in Maxwell Bay between September and November (ASPA No. 150 Management Plan, 2009). Crabeater Seals (*Lobodon carcinophagus*), Antarctic Fur Seals (*Arctocephalus gazella*) and Leopard Seals (*Hydrurga leptonyx*) are regularly observed in the Ardley Island area and occasionally haul out on the island.

Conservation issues

All access and activities at Ardley Island are undertaken strictly by permit under ASPA No. 150. The IBA lies in close proximity to relatively large research stations on Fildes Peninsula. In particular, the main flight path to the airstrip on Fildes Peninsula passes near to Ardley Island, and the management plan for ASPA No. 150 recommends that overflight restrictions at the site are followed. Aircraft landings, and tourists and recreational activities are prohibited within

ASPA No. 150. A small area for recreational visitor access lies on the northern coast of Ardley Island outside of the ASPA.

Long-term ornithological research on Ardley Island indicates a significant decline in Southern Giant Petrels on Ardley Island since 1979 may be a direct result of disturbances from visitors, aircraft and constructions on the island and nearby (ASPA No. 150 Management Plan, 2009).

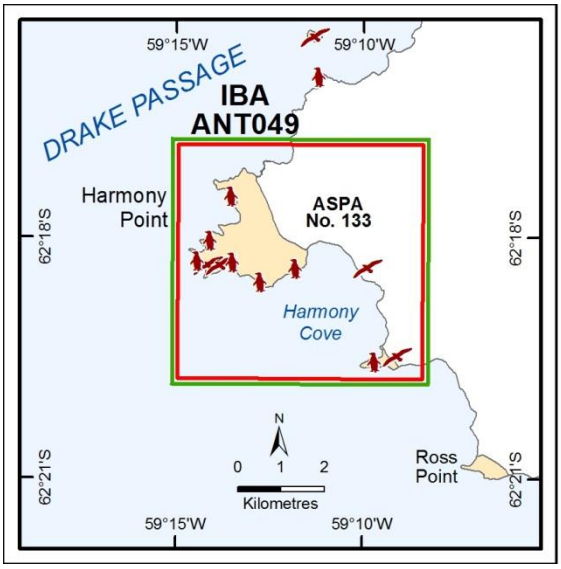
Further reading

ASPA No. 150 Ardley Island, King George Island: Management Plan (2009).

Patterson, D.L., Woehler, E.J., Croxall, J.P., Cooper, J., Poncet, S., Peter, H.-U., Hunter, S. & Fraser, W.R. 2008. Breeding distribution and population status of the Northern Giant Petrel *Macronectes halli* and the Southern Giant Petrel *M. giganteus*. *Marine Ornithology* **36**: 115-24.

ANT049: Harmony Point, Nelson Island

IBA criteria	A4ii, A4iii
Coordinates	59°12' W, 62°18' S
Area	3069 ha
Altitude	0 to c. 250 m
Protection	ASPA No.133



Site description

Harmony Point is an ice-free headland located on the western coast of Nelson Island, South Shetland Islands. Harmony Point is designated ASPA No. 133 and the IBA is defined to cover the same area. The IBA qualifies on the basis of the Chinstrap Penguin (*Pygoscelis antarctica*) colony present and for the high concentration of seabirds.

Harmony Point is of undulating topography rising to ~40 m, with numerous streams and abundant vegetation comprising mainly mosses, lichens, and two species of vascular plant (*Deschampsia antarctica* and *Colobanthus quitensis*).

The nearest permanent scientific station is Great Wall (CHN), a year-round facility with a capacity for 40 people situated on King George Island, ~16 km to the northeast of Harmony Point (COMNAP, Antarctic Facilities, accessed 31/08/2010).

Birds

The ice-free area at Harmony Point supports a wide range of birds including one of the largest colonies of Chinstrap Penguins in the Antarctic Peninsula region, with approximately 90 000 pairs present in 1995/96 (Silva *et al.* 1998) and around 10 000 to 12 500 breeding pairs recorded at The Toe in 1987 (Shuford & Spear 1988b). In 1995/96, 3347 breeding pairs of Gentoo Penguin were recorded and 45 breeding pairs of Imperial Shag (*Phalacrocorax* [*atriceps*] *bransfieldensis*). N. Coria (pers. comm. 2010) reported 395 pairs of Southern Giant Petrel (*Macronectes giganteus*) breeding in 2009/10, which compares to 485 pairs recorded in 2004/05 (ACAP 2010b). Silva *et al.* (1998) reported 479 pairs of Cape Petrel (*Daption capense*), 144 pairs of Snowy Sheathbill (*Chionis albus*), 61 pairs of Brown Skua (*Catharacta antarctica*), 128 pairs of Kelp Gull (*Larus dominicanus*), 173 pairs of Antarctic Tern (*Sterna vittata*), and a total of around 1000 pairs of Wilson's Storm-petrel (*Oceanites oceanicus*) and Black-bellied Storm-petrel (*Fregetta tropica*) at Harmony Point in 1995/96.

Other threatened / endemic wildlife

Weddell Seal (*Leptonychotes weddellii*), Antarctic Fur Seal (*Arctocephalus gazella*) and Southern Elephant Seal (*Mirounga leonina*) frequently haul out on beaches at Harmony Point, and the latter have been recorded breeding (Carlini *et al.* 2003). Crabeater Seals (*Lobodon carcinophagus*) are occasionally seen in the vicinity.

Conservation issues

ASPA No. 133 Harmony Point was designated to protect the terrestrial ecosystem and bird communities at Harmony Point. All access is strictly by permit and aircraft access is required to follow a designated route that avoids bird colonies. A small scientific research hut is located near the coast at the SE of Harmony Point.

Further reading

ACAP (Agreement on the Conservation of Albatrosses and Petrels) 2010b. ACAP Species assessment: Southern Giant Petrel *Macronectes giganteus*. Downloaded from http://www.acap.aq on 12/03/2015.

ASPA No. 133 Harmony Point, Nelson Island: Management Plan (2005).

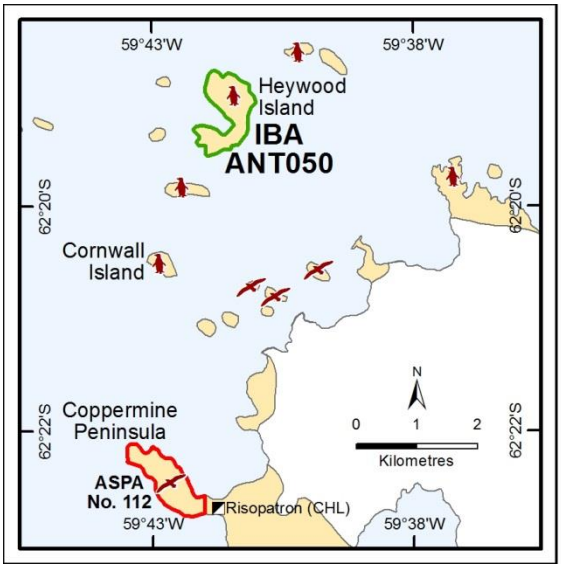
Carlini, A.R., Poljak, S., Casaux, R., Daneri, G.A. & Gasco, M. 2003. Southern elephant seals breeding at Nelson Island South Shetland Islands. *Polish Polar Research* **24**(2): 143-47.

Shuford, W.D. & Spear, L.B. 1988b. Surveys of breeding Chinstrap Penguins in the South Shetland Islands, Antarctica. *British Antarctic Survey Bulletin* **81**: 19-30.

Silva P., Favero, M., Casaux, R. & Baroni, A. 1998. The status of breeding birds at Harmony Point, Nelson Island, Antarctica, in summer 1995–96. *Marine Ornithology* **26**: 75-78.

ANT050: Heywood Island

IBA criteria	A4ii, A4iii
Coordinates	59°42' W, 62°19' S
Area	75 ha
Altitude	0 to < 250 m
Protection	None



Site description

Heywood Island is a small ice-free island lying ~3 km northwest of Catharina Point, Robert Island, and ~6 km northeast of Table Island, in the South Shetland Islands. Heywood Island is a roughly crescent shaped, 1.4 km in length and 250 m across at its narrowest point.

The IBA qualifies on the basis of the Chinstrap Penguin (*Pygoscelis antarctica*) colony present. The IBA comprises all of Heywood Island. Small rocky islands surround Heywood Island, including Cornwall Island to the southwest, all of which are low-lying and also provide suitable habitat for Chinstrap Penguins to breed, although these lie outside of the IBA.

The nearest permanent scientific station is Luis Risopatron (CHL), a summer-only facility located 5.5 km south of Heywood Island with capacity for ~8 people (COMNAP, Antarctic Facilities, accessed 24/08/2010). This station is temporarily closed.

Birds

Approximately 90 000 pairs of Chinstrap Penguin were estimated breeding on Heywood Island in 1987 (S. & J. Poncet pers. comm. cited in Woehler 1993), making it one of the largest Chinstrap Penguin colonies in the Antarctic Peninsula region. More recent data and information on other bird species breeding at the site are not available.

Other threatened / endemic wildlife

None known.

Conservation issues

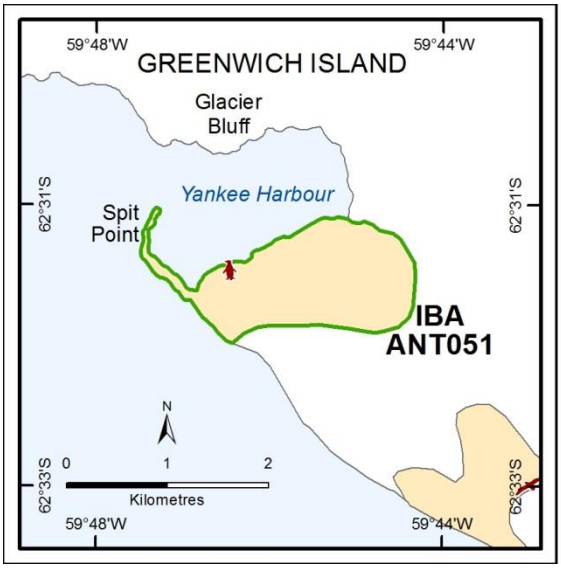
None known.

Further reading

Woehler, E.J. (ed.) 1993. *The distribution and abundance of Antarctic and sub-Antarctic penguins.* Scientific Committee on Antarctic Research. Cambridge, UK.

ANT051: Yankee Harbour, Greenwich Island

IBA criteria	A1, A4ii
Coordinates	59°46' W, 62°32' S
Area	197 ha
Altitude	0 to < 500 m
Protection	None



Site description

Yankee Harbour lies on the southwestern coastline of Greenwich Island, South Shetland Islands. Yankee Harbour is bordered by Glacier Bluff to the north and east, and enclosed by Spit Point to the west. A large terraced beach in the southeast of Yankee Harbour contains a melt pool, beyond which steep scree slopes rise sharply inland to over 250 m. The IBA qualifies on the basis of the Gentoo Penguin (*Pygoscelis papua*) colony present and comprises the ice-free area from Spit Point to the foot of the permanent ice on Greenwich Island.

Mosses, lichens, algae and the flowering plants Antarctic Hairgrass (*Deschampsia antarctica*) and Antarctic Pearlwort (*Colobanthus quitensis*) are found at Yankee Harbour (ATS Visitor Site Guidelines, Yankee Harbour). Yankee Harbour was once a popular anchorage for sealers, with some artefacts still present. The nearest scientific station is Arturo Prat (CHL), which has capacity for ~15 people and operates year-round on the northern coast of Greenwich Island ~7 km from Yankee Harbour (COMNAP, Antarctic Facilities, accessed 23/08/2010).

Birds

Approximately 4918 breeding pairs of Gentoo Penguin were present on the beach and slopes around the southeast shoreline of Yankee Harbour in 2003 (Lynch *et al.* 2008), and 4803 pairs in 2012/13 (Lynch *et al*. 2013). Skuas (*Catharacta* spp.) also breed in the area although no census has been reported. Snowy Sheathbill (*Chionis albus*) and Wilson's Storm-petrel (*Oceanites oceanicus*) are suspected breeders.

Other threatened / endemic wildlife

Southern Elephant Seals (*Mirounga leonina*), Weddell Seals (*Leptonychotes weddellii*) and Antarctic Fur Seals (*Arctocephalus gazella*) regularly haul out along the beaches of Yankee Harbour (ATS Visitor Site Guidelines, Yankee Harbour). There are no records of seals breeding in the area.

Conservation issues

With its interesting history and wildlife, Yankee Harbour is a popular tourist destination, with an average of 2570 visitors landing annually (IAATO Tourism Statistics 2005–2010, accessed: 06/08/2010). Guidance for tourist visits is available in the ATS Visitor Site Guidelines for Yankee Harbour. Tourists are generally in organised tours supervised by expedition guides, and are advised to walk slowly and maintain a distance of at least 5 m from birds. Visitor impacts on birds at the site are unknown, although because of the management measures in place are expected to be low.

Further reading

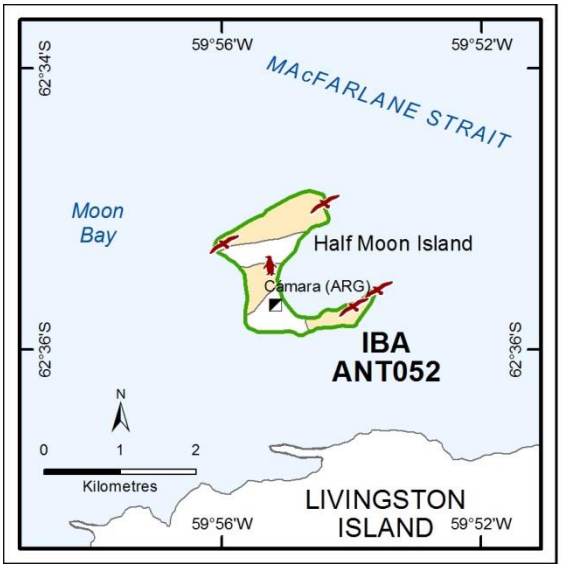
Antarctic Treaty System Visitor Site Guidelines: Yankee Harbour.
URL: http://www.ats.aq/siteguidelines/documents/yankee_e.pdf. Accessed 04/08/2010.

Lynch, H., Naveen, R. & Fagan, W. 2008. Censuses of Penguin, Blue-eyed Shag *Phalacrocorax atriceps* and Southern Giant Petrel *Macronectes giganteus* populations on the Antarctic Peninsula, 2001-2007. *Marine Ornithology* **36**: 83-97.

Lynch, H.J., Naveen, R. & Casanovas, P.V. 2013. Antarctic Site Inventory breeding bird survey data 1994 – 2013. *Ecology* (Data Paper) **94**(11): 2653. doi: 10.1890/13-1108.1

ANT052: Half Moon Island

IBA criteria	A4ii
Coordinates	59°55' W, 62°35' S
Area	152 ha
Altitude	0 to < 250 m
Protection	None



Site description

Half Moon Island is a rocky island lying in Moon Bay, 2 km north of Livingston Island, South Shetland Islands. Raised cobble beaches line the south and central shorelines, while steep scree slopes lead to a low summit at the north of the island. East-facing slopes are typically snow-covered. The IBA qualifies on the basis of the South Polar Skua (*Catharacta maccormicki*) colony present and comprises the entire island.

Several moss and lichen species and the native Antarctic Hairgrass (*Deschampsia antarctica*) are found on Half Moon Island (ATS Visitor Site Guidelines, Half Moon Island).

Cámara Station (ARG) (summer-only) is located in the southern part of Half Moon Island and has capacity for ~36 people (COMNAP, Antarctic Facilities, accessed 24/08/2010).

Birds

South Polar Skua breed at several locations on Half Moon Island, mostly in the north, with 103 pairs recorded in the 1995-96 (Garcia Esponda *et al.* 2000). Approximately 2094 pairs of Chinstrap Penguin (*Pygoscelis antarctica*) were breeding on the island in December 2012 (Lynch *et al*. 2013). Antarctic Terns (*Sterna vittata*) nest in rocky outcrops and 125 breeding pairs were recorded in 1995/96, along with 39 pairs of Kelp Gull (*Larus dominicanus*) (Garcia Esponda *et al.* 2000). Wilson's Storm-petrel (*Oceanites oceanicus*) also breed, with 377 pairs in 1995/96. Other birds breeding in low numbers include the Imperial Shag (*Phalacrocorax* [*atriceps*] *bransfieldensis*), Snowy Sheathbill (*Chionis albus*), Cape Petrel (*Daption capense*), Brown Skua (*Catharacta antarctica*) and Black-bellied Storm-petrel (*Fregetta tropica*) (Garcia Esponda *et al.* 2000).

Other threatened / endemic wildlife

Weddell Seals (*Leptonychotes weddellii*) and Antarctic Fur Seals (*Arctocephalus gazella*) are regularly observed at local beaches (ATS Visitor Site Guidelines Half Moon Island; Naveen & Lynch 2011).

Conservation Issues

Cámara Station (ARG) operates in close proximity to local breeding wildlife. Half Moon Island is one of the most popular tourist destinations in the Antarctic Peninsula region, with 9760 tourists landing ashore in the 2009/10 season (IAATO Tourism Statistics, accessed: 06/08/2010). There is evidence of damage to soils and vegetation and concern that visitors may disturb wildlife or damage breeding burrows (ATS Visitor Site Guidelines, Half Moon Island). Tourism is supervised by expedition staff and station personnel.

Further Reading

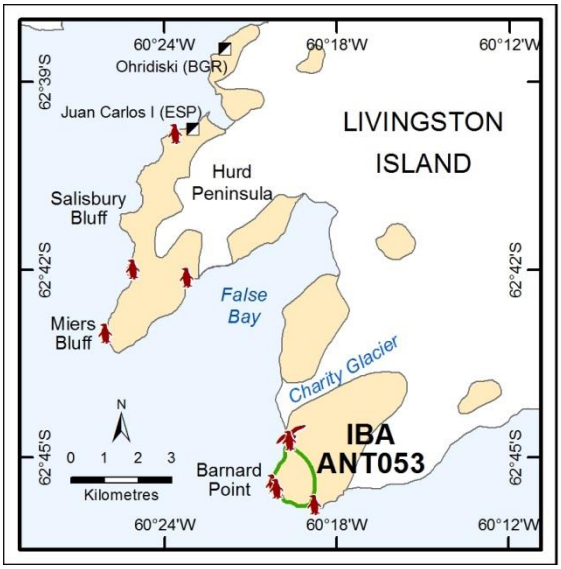
Antarctic Treaty System Visitor Site Guidelines: *Half Moon Island*:
URL: http://www.ats.aq/siteguidelines/documents/Half_moon_e.pdf. Accessed: 06/08/2010.

Garcia Esponda, C.M.G., Coria, N.R. & Montalti, D. 2000. Breeding birds at Halfmoon Island, South Shetland Islands, Antarctica, 1995/96. *Marine Ornithology* **28**: 59-62.

Lynch, H.J., Naveen, R. & Casanovas, P.V. 2013. Antarctic Site Inventory breeding bird survey data 1994 – 2013. *Ecology* (Data Paper) **94**(11): 2653. doi: 10.1890/13-1108.1

ANT053: Barnard Point, Livingston Island

IBA criteria	A4iii
Coordinates	60°19' W, 62°45' S
Area	156 ha
Altitude	0 to < 500 m
Protection	None



Site description

Barnard Point lies at the southern extremity of Livingston Island, South Shetland Islands. The ice-free area rises to over 250 m in the east where it meets the permanent ice cap. The IBA qualifies on the basis of the concentration of seabirds present (in particular Chinstrap Penguin (*Pygoscelis antarctica*)) and comprises the coastal part of the ice-free area at Barnard Point.

The nearest permanent scientific stations are Juan Carlos I (ESP), a summer-only facility with capacity for ~25 personnel, and Ohridiski (BGR), with capacity for 12 people, located on Hurd Peninsula ~11 km to the northwest (COMNAP, Antarctic Facilities, accessed 10/05/2011).

No meteorological records are available for Barnard Point, although the climate is expected to be similar to that of Base Juan Carlos I, more information on which can be found under IBA ANT054.

Birds

Approximately 13 000 pairs of Chinstrap Penguin and 600 pairs of Gentoo Penguin (*Pygoscelis papua*) were breeding at Barnard Point in 1987 (S. & J. Poncet pers. comm., cited in Woehler 1993). A small number of Southern Giant Petrels (*Macronectes giganteus*) breed at the site, estimated at 30 breeding pairs in 1986 (Patterson *et al.* 2008).

Other threatened / endemic wildlife

None known.

Conservation issues

Juan Carlos I and Ohridiski stations, with accompanying local operational support by ships and aircraft, are in close proximity to Barnard Point. However, overland and sea access to the site are relatively difficult from these stations, so it is anticipated that relatively few visits are made by station personnel. False Bay is regularly visited by tourists, with visits made in 7 of the 10 seasons from 2004-14, with a total of 10 vessels averaging 287 passengers per vessel. However, few landings were made, with only three over this period and averaging 53 visitors per landing (IAATO Tourism Statistics, accessed: 06/05/2015). Disturbance by visitors is thus expected to be low.

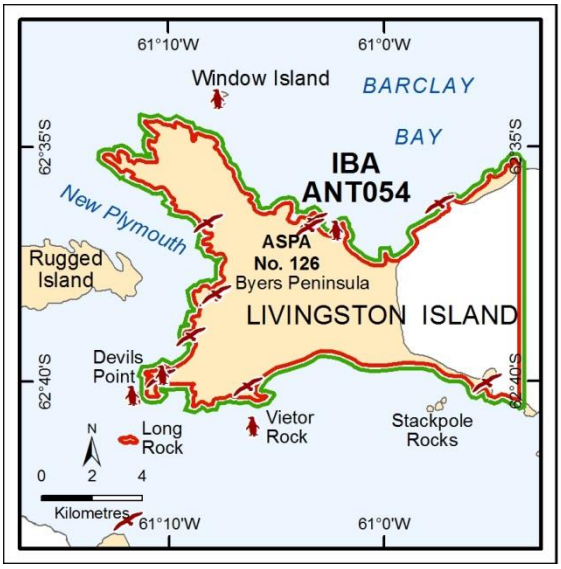
Further reading

Patterson, D.L., Woehler, E.J., Croxall, J.P., Cooper, J., Poncet, S., Peter, H.-U., Hunter, S. & Fraser, W.R. 2008. Breeding distribution and population status of the Northern Giant Petrel *Macronectes halli* and the Southern Giant Petrel *M. giganteus*. *Marine Ornithology* **36**: 115-124.

Woehler, E.J. (ed.) 1993. *The distribution and abundance of Antarctic and sub-Antarctic penguins.* Scientific Committee on Antarctic Research. Cambridge, UK.

ANT054: Byers Peninsula, Livingston Island

IBA criteria	A4i
Coordinates	61°05' W, 62°38' S
Area	9034 ha
Altitude	< c.265 m
Protection	ASPA No. 126



Site description

Byers Peninsula is a relatively large (6062 ha) ice-free promontory at the western extremity of Livingston Island. Byers Peninsula is designated as Antarctic Specially Protected Area No. 126. The IBA qualifies on the basis of the Antarctic Tern (*Sterna vittata*) and Kelp Gull (*Larus dominicanus*) colonies present. The IBA covers the same area as ASPA No. 126, and includes the ice-free peninsula and part of the permanent ice cap on Livingston Island, as well as several offshore islands and ice-free areas to the east of Byers Peninsula.

Detailed information describing Byers Peninsula may be found in the ASPA No. 126 Management Plan (2002), which is summarised here. Sedimentary and fossiliferous strata are present, together with rocks of volcanic origin. Well-preserved sub-fossil whale bones occur on raised beaches. The site supports a sparse but varied flora and cyanobacteria, including several rare cryptograms and the flowering plants Antarctic Hairgrass (*Deschampsia antarctica*) and Antarctic Pearlwort (*Colobanthus quitensis*). At least 56 lichen species, 29 mosses, 5 hepatics and 2 phanerogams have been recorded at Byers Peninsula, making it one of the most diverse sites for terrestrial flora in maritime Antarctica. Byers Peninsula contains numerous lakes, freshwater ponds and extensive streams, some of which provide habitat for several native midges. Byers Peninsula has a large number of historical relics from the sealing expeditions of the early 1800s.

The climate at Byers Peninsula is likely to be similar to that of Base Juan Carlos I on Hurd Peninsula, which experiences a mean annual temperature of below 0°C, with temperatures rising above 0°C for several months each summer. Precipitation is around 800 mm/yr, mostly falling as rain during summer. The peninsula is generally snow-covered except near the end of the summer. Winds prevail from the north and northwest and from the south.

The nearest permanent scientific stations to the IBA are Base Juan Carlos I (ESP) and Ohridiski (BGR) on Hurd Peninsula, Livingston Island, around 30 km to the east. These stations have a capacity of 25 and 12 people respectively (COMNAP, Antarctic Facilities, accessed 10/05/2011).

Birds

This site is recognised for the high diversity of bird species breeding on ice-free areas, mainly near the coast in the west and south (ASPA No. 126 Management Plan, 2002). Approximately 1760 pairs of Antarctic Tern and 449 pairs of Kelp Gull were breeding on Byers Peninsula in 1965 (White, 1965 cited in ASPA No. 126 Management Plan, 2002). Other confirmed breeders are the Chinstrap Penguin (*Pygoscelis antarctica*), Gentoo Penguin (*P. papua*), Wilson's Storm-petrel (*Oceanites oceanicus*), Cape Petrel (*Daption capense*), Southern Giant Petrel (*Macronectes giganteus*), Black-bellied Storm-petrel (*Fregetta tropica*), Imperial Shag (*Phalacrocorax* [*atriceps*] *bransfieldensis*), Brown Skua (*Catharacta antarctica*) and Snowy Sheathbill (*Chionis albus*). Prions (*Pachyptila* sp.) and Snow Petrels (*Pagodroma nivea*) have been recorded on Byers Peninsula, although these species are not confirmed breeders.

Other threatened / endemic wildlife

A large number of Southern Elephant Seals (*Mirounga leonina*) are known to breed and haul out on South Beaches. Over 2500 individuals were recorded in one season, one of the largest concentrations of this species in the South Shetland Islands (Torres *et al.* 1981 cited in ASPA No. 126 Management Plan, 2002). Non-breeding Weddell

(*Leptonychotes weddellii*), Crabeater (*Lobodon carcinophagus*) and Leopard (*Hydrurga leptonyx*) seals occasionally haul out around the shoreline.

Conservation issues

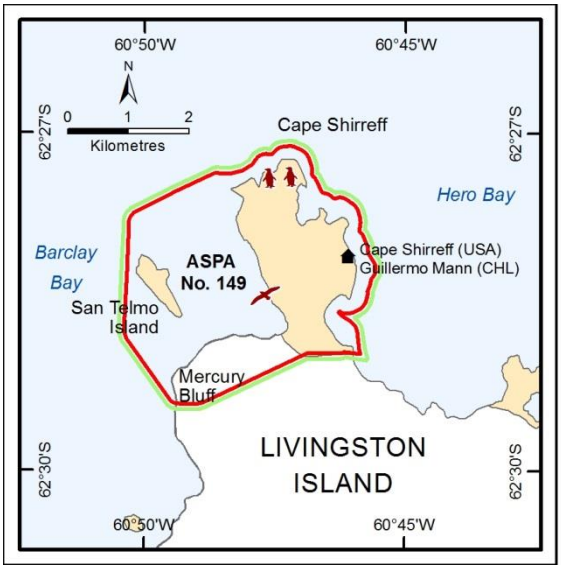
Access to Byers Peninsula is strictly by permit under ASPA No. 126. Thus, present-day human activity on Byers Peninsula is restricted to scientific research and essential management. The impact of these activities are "believed to be minor and limited to items such as campsites, footprints, markers of various kinds, sea-borne litter washed onto beaches…and from human wastes and scientific sampling" (ASPA No. 126 Management Plan, 2002). Livingston Island generally appears to be infrequently visited by tourist vessels (IAATO Tourism Statistics, accessed 06/08/2010).

Further reading

ASPA No. 126 Byers Peninsula, Livingston Island: Management Plan (2002).

Cape Shirreff, Livingston Island – Delisted (ex ANT046)

IBA criteria	Originally A4iii – Does not qualify (2015)
Coordinates	60°48' W, 62°28' S
Area	1248 ha
Altitude	< 82 m
Protection	ASPA No.149; CEMP Site No.2 (lapsed)



Site description

Cape Shirreff is an ice-free peninsula situated between Barclay Bay and Hero Bay on the northern coast of Livingston Island. San Telmo Island lies several km west of Cape Shirreff. The area is designated as ASPA No. 149: Cape Shirreff and San Telmo Island. The ASPA is designated to protect seabird and pinniped populations that are subject to long term scientific monitoring. The IBA was originally designated on the basis of the concentration of seabirds present, although the site no longer qualifies because of recent declines in penguin populations.

Cape Shirreff is characterised by raised beaches and hills rising to a maximum height of 82 m, with steep cliffs on the western coast and long sand and gravel beaches on the east.

Two small permanent summer-only scientific stations are located on the eastern coast of the peninsula near sea level; Guillermo Mann (CHL) and Cape Shirreff Field Station (USA) have a combined capacity for ~12 personnel.

Birds

This site is recognised for the high diversity of avifauna present (ASPA No. 149 Management Plan, 2011). The most abundant bird species is the Chinstrap Penguin (*Pygoscelis antarctica*), with numbers previously fluctuating between ~5200 and ~10 400 breeding pairs in the 1980s. Gentoo Penguins (*P. papua*) breed in small colonies on the northeastern and northwestern sides of the ice-free peninsula, alongside colonies of Chinstraps, and peaked at 1043 breeding pairs in 2000/01 (AMLR data). More recently the combined total for both species has remained less than ~6500 pairs, with <5000 in 2007/08 and 2008/09 (AMLR data). The site has therefore been delisted.

Other confirmed breeders include the Kelp Gull (*Larus dominicanus*), Brown Skua (*Catharacta antarctica*), Snowy Sheathbill (*Chionis albus*), Antarctic Tern (*Sterna vittata*), Imperial Shag (*Phalacrocorax* [*atriceps*] *bransfieldensis*), Cape Petrel (*Daption capense*), Wilson's Storm-petrel (*Oceanites oceanicus*) and Black-bellied Storm-petrel (*Fregetta tropica*) (ASPA No. 149 Management Plan, 2011). Southern Giant Petrels (*Macronectes giganteus*) are frequent summer-visitors.

Other threatened / endemic wildlife

The site contains the highest number of breeding Antarctic Fur Seals (*Arctocephalus gazella*) in the Antarctic Peninsula region.

Conservation issues

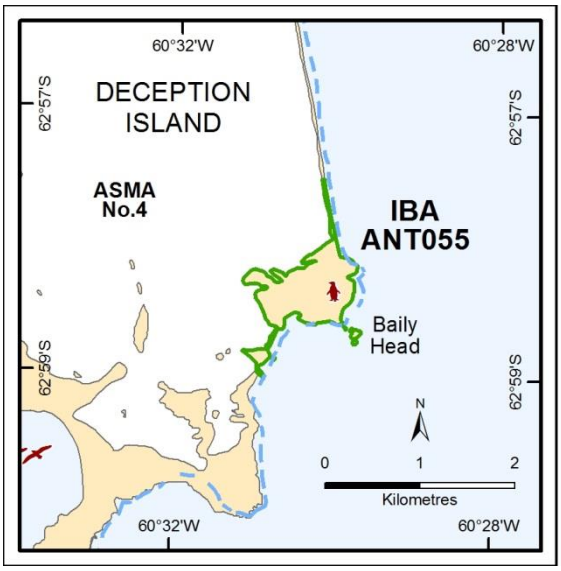
Krill fishing is carried out within the foraging range of species breeding at Cape Shirreff, and the site is thus important for ecosystem monitoring, which helps to meet the objectives of the Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR). Access to Cape Shirreff is strictly by permit under ASPA No. 149. Access is mainly for research purposes and visitation is low.

Further reading

ASPA No. 149 Cape Shirreff and San Telmo Island Management Plan 2011.

ANT055: Baily Head, Deception Island

IBA criteria	A4ii, A4iii
Coordinates	60°30' W, 62°58' S
Area	70 ha
Altitude	0 – c.160 m
Protection	ASMA No.4



Site description

Baily Head is a prominent rock headland forming the eastern extremity of Deception Island. A black-sand beach forms the eastern shoreline of Deception Island, running nearly 7 km northward from Baily Head. The IBA qualifies on the basis of the Chinstrap Penguin (*Pygoscelis antarctica*) colony present and comprises the ice free ground at Baily Head, including the headland and approximately 800 m of beach to either side.

A substantial melt-stream cuts through the ice cliffs at Baily Head and drains to form a semi-circular 'amphitheatre' valley. The valley slopes are often snow-covered until early summer each year, when it is replaced by the terrestrial green alga *Prasiola crispa* (Naveen & Lynch 2011).

More information on Deception Island and nearby stations can be found under IBA ANT056.

Birds

Approximately 100 000 pairs of Chinstrap Penguin were breeding along the beach at Baily Head and on slopes rising from the beach to a ridgeline of ~150 m in 1989 (S. & J. Poncet pers. comm.; Naveen & Lynch 2011). More recently, 50 408 breeding pairs were reported by the Antarctic Site Inventory in December 2013 (Naveen *et al*. 2013).

Brown Skua (*Catharacta antarctica*), Cape Petrel (*Daption capense*) and Snowy Sheathbill (*Chionis albus*) are also confirmed breeders at Baily Head (ASMA No. 4 Management Plan, Appendix 5, 2005).

Other threatened / endemic wildlife

Antarctic Fur Seals (*Arctocephalus gazella*) frequently haul out along the beach at Baily Head and Weddell Seals (*Leptonychotes weddellii*), Crabeater Seals (*Lobodon carcinophagus*), Southern Elephant Seals (*Mirounga leonina*) and Leopard Seals (*Hydrurga leptonyx*) have also been observed hauled out at this site (Naveen & Lynch 2011).

Conservation issues

More information on conservation issues and management at Deception Island can be found under IBA ANT056.

Further reading

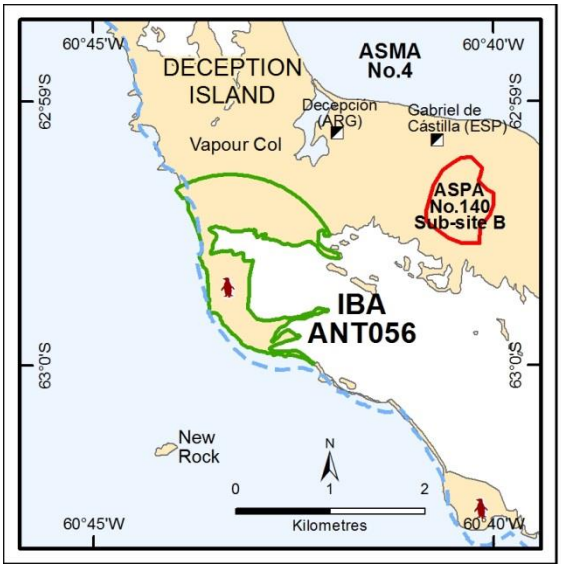
ASMA No. 4 Deception Island, South Shetland Islands: Management Plan (2005).

Naveen, R. & Lynch, H. 2011. *Compendium of Antarctic Peninsula visitor sites (3rd edition): A Report to the United States Environmental Protection Agency*. Oceanites, Chevy Chase, MD.

Naveen, R., Lynch,H.J., Forrest, S., Mueller, T. & Polito, M. 2012. First direct, site-wide penguin survey at Deception Island, Antarctica suggests significant in breeding chinstrap penguins. *Polar Biology* **35**(12): 1879-88.

ANT056: Vapour Col, Deception Island

IBA criteria	A4iii
Coordinates	60°44' W, 62°59' S
Area	132 ha
Altitude	0 – c.340 m
Protection	ASMA No.4



Site description

Vapour Col lies above the southwestern coast of Deception Island, South Shetland Islands. The IBA qualifies on the basis of the concentration of seabirds present (in particular Chinstrap Penguin (*Pygoscelis antarctica*)) and comprises ice-free ground rising steeply from the shore of Deception Island to around 340 m at Vapour Col.

Deception Island is a currently dormant volcanic caldera flooded by the sea, although the last eruption was in 1967-70. Large colonies of wildlife and a diversity of cryptograms, lichens and invertebrates are found on Deception Island. The island is designated as Antarctic Specially Managed Area No. 4 to help manage scientific and tourist use of the island and to protect its exceptional flora and fauna, historical features and scientific values (ASMA No. 4 Management Plan, 2005).

The climate at Deception Island shows average annual air temperatures of 2.9°C at sea level with prevailing winds from the northeast and west. Precipitation is ~500 mm mean annual water equivalent, falling on more than half of summer days (ASMA No. 4 Management Plan, 2005).

The nearest permanent scientific stations to the IBA are Decepciòn (ARG) and Gabriel de Castilla (ESP) located on the coast of Port Foster, Deception Island, around 800 m and 1.4 km northeast of the IBA respectively. These summer-only stations have a combined capacity of 90 people (COMNAP, Antarctic Facilities, accessed 23/08/2010).

Birds

Approximately 7500 pairs of Chinstrap Penguin were breeding on the coastal ice-free area near Vapour Col in 1987 (Shuford & Spear 1988b). A more recent census in December 2011 recorded 19 177 pairs (Naveen *et al*. 2013). Information on other bird species at Vapour Col is not available.

Other threatened / endemic wildlife

Antarctic Fur Seals (*Arctocephalus gazella*), Weddell Seals (*Leptonychotes weddellii*), Crabeater Seals (*Lobodon carcinophagus*), Southern Elephant Seals (*Mirounga leonina*) and Leopard Seals (*Hydrurga leptonyx*) are frequently observed hauled out on the inner and outer coasts of Deception Island (ASMA No. 4 Management Plan, 2005).

Conservation issues

Activities at Deception Island are carried out under the Management Plan for Antarctic Specially Managed Area No. 4. Station personnel are required to follow guidelines in the Management Plan, the implementation of which is monitored by national programmes operating in the area.

Deception Island is one of the most popular tourist destinations in Antarctica, with an average of 14 600 tourists visiting the site by ship annually from 2005-10 (IAATO Tourism Statistics, accessed: 06/08/2010). Tourists follow a Code of Conduct (ASMA No. 4 Management Plan, Appendix 5, 2005), which directs recreational visits to selected sites. Tourists are discouraged from visiting other areas, including the colony near Vapour Col, so visitor impacts on the avifauna at Vapour Col are likely to be low.

ASPAs No. 140 and No. 145 are designated at Deception Island, although these are protected for reasons related to terrestrial and marine ecology rather than for birds.

Birds inhabiting volcanic islands typically exhibit higher mortality rates than at other locations due to the unstable nature of the environment, including geothermal activity, eruptions, gas seeps, and earthquakes (Convey *et al.* (1999) in Kendall *et al.* (2009)).

Further reading

ASMA No. 4 Deception Island, South Shetland Islands: Management Plan (2005).

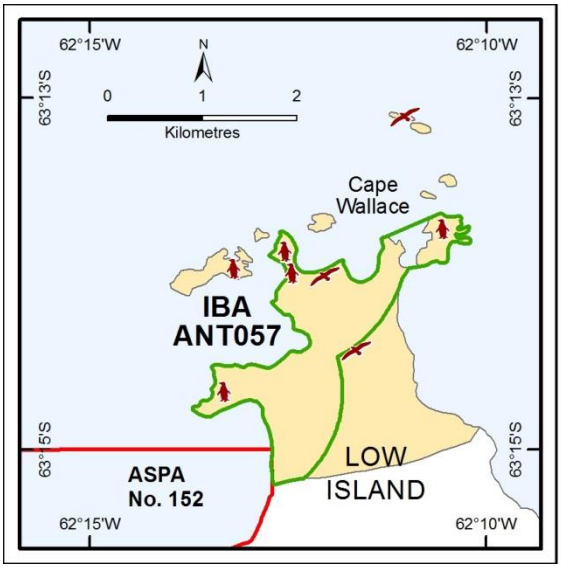
Kendall, K., Ruhl, H. & Wilson, R. 2003. Distribution and abundance of marine bird and pinniped populations within Port Foster, Deception Island, Antarctica. *Deep Sea Research Part II: Tropical studies in Oceanography* **50** (10): 1873-88.

Naveen, R., Lynch,H.J., Forrest, S., Mueller, T. & Polito, M. 2012. First direct, site-wide penguin survey at Deception Island, Antarctica suggests significant in breeding chinstrap penguins. *Polar Biology* **35**(12): 1879-88.

Shuford, W.D. & Spear, L.B. 1988b. Surveys of breeding Chinstrap Penguins in the South Shetland Islands, Antarctica. British *Antarctic Survey Bulletin* **81**: 19-30.

ANT057: Cape Wallace, Low Island

IBA criteria	A4ii, A4iii
Coordinates	62°12' W, 63°14' S
Area	246 ha
Altitude	0 to < 250 m
Protection	ASPA No.152 applies to adjacent marine area.



Site description

Low Island is the southernmost of the South Shetland Islands, and is situated in the western region of Bransfield Strait. Cape Wallace is a rocky headland extending around 3 km at the northwestern extremity of Low Island. The IBA qualifies on the basis of the Chinstrap Penguin (*Pygoscelis antarctica*) colony present and includes the ice free area on northern coast of Cape Wallace.

The nearest permanent scientific stations to Cape Wallace are Decepción (ARG) and Gabriel de Castilla (ESP), located ~80 km to the northeast at Deception Island. These summer-only stations have a combined capacity of 90 people.

Birds

Approximately 75 000 to 150 000 breeding pairs of Chinstrap Penguin were estimated at Cape Wallace in 1987 (Shuford & Spear 1988b), making it the largest colony on Low Island and one of the largest in the region. A small group of ~250 breeding pairs of Gentoo Penguin (*Pygoscelis papua*) were nesting close to the Chinstraps in 1987 (Shuford & Spear 1988a). A further 25 000 to 50 000 breeding pairs of Chinstrap Penguin were estimated at a bluff south of Cape Wallace and 25 000 pairs were estimated at an island north-east of Cape Wallace (Shuford & Spear 1988b). Cape Petrel (*Daption capense*) and Southern Giant Petrel (*Macronectes giganteus*) are known to breed at Cape Wallace (Hodum *et al*. 2004; Patterson *et al.* 2008).

Other threatened / endemic wildlife

None known.

Conservation issues

None known.

Further reading

ASPA No. 152 Western Bransfield Strait: Management Plan (2010).

Hodum, P., Croxall, J.P., Poncet, S. & Woehler, E. 2004. Breeding distribution of the Cape Petrel *Daption capense*. Unpublished draft manuscript.

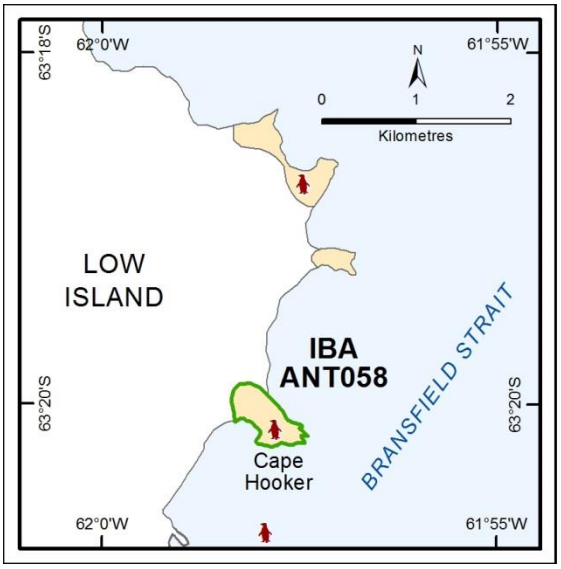
Patterson, D.L., Woehler, E.J., Croxall, J.P., Cooper, J., Poncet, S., Peter, H.-U., Hunter, S. & Fraser, W.R. 2008. Breeding distribution and population status of the Northern Giant Petrel *Macronectes halli* and the Southern Giant Petrel *M. giganteus*. *Marine Ornithology* **36**: 115-24.

Shuford, W.D. & Spear, L.B. 1988a. Surveys of breeding penguins and other seabirds in the South Shetland Islands, Antarctica, January-February 1987. NOAA Technical Memorandum NMFS-F/NEC-59.

Shuford, W.D. & Spear, L.B. 1988b. Surveys of breeding Chinstrap Penguins in the South Shetland Islands, Antarctica. *British Antarctic Survey Bulletin* **81**: 19-30.

ANT058: Cape Hooker, Low Island

IBA criteria	A4iii
Coordinates	61°58' W, 63°19' S
Area	28 ha
Altitude	0 to < 250 m
Protection	None



Site description

Low Island is the southernmost of the South Shetland Islands, and is situated in the western region of Bransfield Strait. Cape Hooker is a rocky headland at the eastern extremity of Low Island. The IBA qualifies on the basis of the concentration of seabirds present (in particular Chinstrap Penguin (*Pygoscelis antarctica*)) and includes the ice-free area of Cape Hooker.

The nearest permanent scientific stations to Cape Hooker are Decepción (ARG) and Gabriel de Castilla (ESP), located ~75 km to the northeast at Deception Island. These summer-only stations have a combined capacity of 90 people.

Birds

The IBA originally encompassed the ice free ground north of Cape Hooker (Harris *et al*. 2011). However, recent analysis shows that only around 50 pairs of Chinstrap Penguin breed on the ice-free peninsula north of Cape Hooker, whereas 7500 – 10 000 pairs breed at Cape Hooker itself (Shuford & Spear 1988b). Croxall & Kirkwood (1979) reported 10 000 – 15 000 pairs at Cape Hooker in Jan 1975. The IBA boundary has been adjusted to encompass the main breeding area at Cape Hooker. Recent data and information on other birds breeding in the area are not available.

Other threatened / endemic wildlife

None known.

Conservation issues

None known.

Further reading

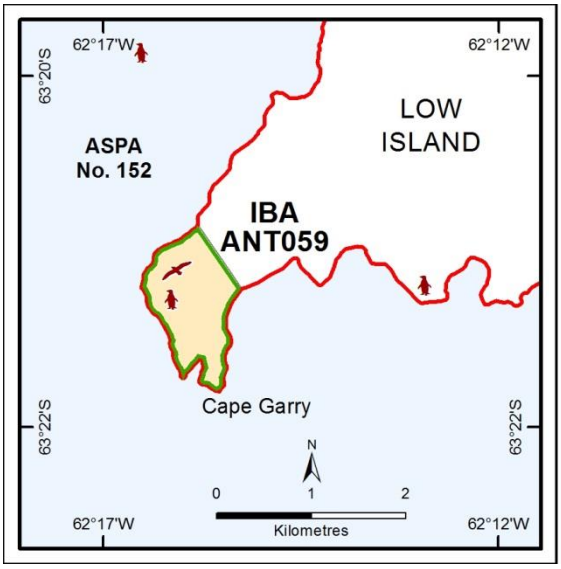
Croxall, J.P. & Kirkwood, E.D. 1979. *The distribution of penguins on the Antarctic Peninsula and Islands of the Scotia Sea.* British Antarctic Survey, Cambridge.

Harris, C.M., Carr, R., Lorenz, K. & Jones, S. 2011. Important Bird Areas in Antarctica: Antarctic Peninsula, South Shetland Islands, South Orkney Islands. Final Report for BirdLife International and Polar Regions Department, UK Foreign & Commonwealth Office. Environmental Research & Assessment, Cambridge.

Shuford, W.D. & Spear, L.B. 1988b. Surveys of breeding Chinstrap Penguins in the South Shetland Islands, Antarctica. *British Antarctic Survey Bulletin* **81**: 19-30.

ANT059: Cape Garry, Low Island

IBA criteria	A4ii, A4iii
Coordinates	62°15' W, 63°21' S
Area	107 ha
Altitude	0 to < 250 m
Protection	ASPA No.152 applies to adjacent marine area.



Site description

Low Island is the southernmost of the South Shetland Islands, and is situated in the western region of Bransfield Strait. Cape Garry lies at the southwest extremity of Low Island and is a small, largely ice-covered headland about 1.5 km in length. The IBA qualifies on the basis of the Chinstrap Penguin (*Pygoscelis antarctica*) colony present and includes the ice free area of Cape Garry.

The coastline of Low Island forms the northeastern boundary of ASPA No. 152, recognised as an important site of long-term scientific research on several fish species, including Black Rockcod (*Notothenia coriiceps*) and the icefish *Chaenocephalus aceratus* (ASPA No. 152 Management Plan, 2003). The IBA lies outside of the ASPA.

The nearest permanent scientific stations to Cape Garry are Decepción (ARG) and Gabriel de Castilla (ESP), located ~90 km to the northeast at Deception Island. These summer-only stations have a combined capacity of 90 people.

Birds

Around 100 000 pairs of Chinstrap Penguin breed at Cape Garry (Shuford & Spear 1988b), constituting the second largest Chinstrap colony on Low Island, the largest being at Cape Wallace. A small number of Imperial Shags (*Phalacrocorax* [*atriceps*] *bransfieldensis*) breed close to the Chinstraps, constituting 10 pairs in 1987 (Shuford & Spear 1988a).

Other threatened / endemic wildlife

None known.

Conservation issues

None known.

Further reading

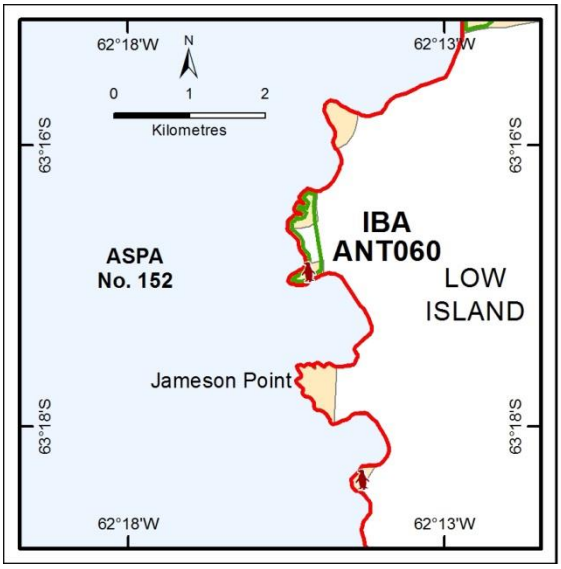
ASPA No. 152 Western Bransfield Strait: Management Plan (2010).

Shuford, W.D. & Spear, L.B. 1988a. Surveys of breeding penguins and other seabirds in the South Shetland Islands, Antarctica, January-February 1987. NOAA Technical Memorandum NMFS-F/NEC-59.

Shuford, W.D. & Spear, L.B. 1988b. Surveys of breeding Chinstrap Penguins in the South Shetland Islands, Antarctica. *British Antarctic Survey Bulletin* **81**: 19-30.

ANT060: Jameson Point, Low Island

IBA criteria	A4iii
Coordinates	62°15' W, 63°17' S
Area	34 ha
Altitude	0 to < 250 m
Protection	ASPA No.152 applies to adjacent marine area.



Site description

Low Island is the southernmost of the South Shetland Islands, and is situated in the western region of Bransfield Strait. Jameson Point is a small headland that lies on the western coast of Low Island. The IBA qualifies on the basis of the concentration of seabirds present (in particular Chinstrap Penguin (*Pygoscelis antarctica*)) and includes the ice free area ~1 km north of Jameson Point.

ASPA No. 152 Western Bransfield Strait covers the marine area adjacent to the west of Jameson Point, more information on which is available under IBA ANT059. The IBA lies outside of the ASPA.

The nearest permanent scientific stations to Jameson Point are Decepción (ARG) and Gabriel de Castilla (ESP), located ~80 km to the northeast at Deception Island. These summer-only stations have a combined capacity of 90 people.

Birds

Approximately 20 000 to 35 000 pairs of Chinstrap Penguin were breeding at Jameson Point in 1987 (Shuford & Spear 1988b). Information on other birds breeding in the area is not available.

Other threatened / endemic wildlife

None known.

Conservation issues

None known.

Further reading

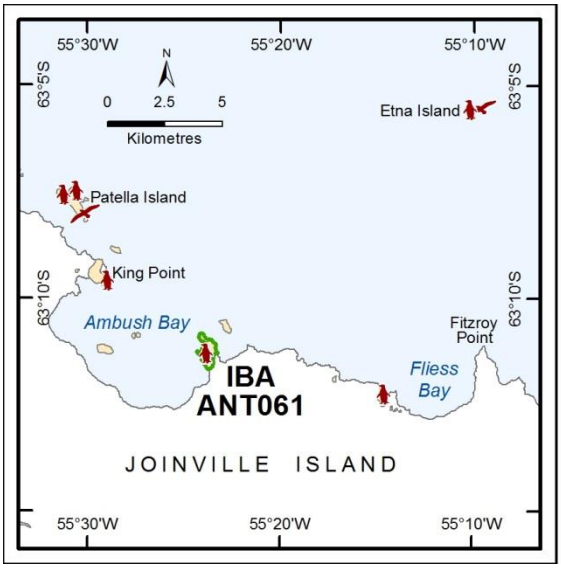
ASPA No. 152 Western Bransfield Strait: Management Plan (2010).

Shuford, W.D. & Spear, L.B. 1988b. Surveys of breeding Chinstrap Penguins in the South Shetland Islands, Antarctica. *British Antarctic Survey Bulletin* **81**: 19-30.

Erebus and Terror Gulf

ANT061: Ambush Bay, Joinville Island

IBA criteria	A4iii
Coordinates	55°23'45" W, 63°11'16" S
Area	69 ha
Altitude	Not known
Protection	None



Site description

Ambush Bay is situated on the northern coast of Joinville Island, southeast of King Point. It is ~ 6 km long and 4 km wide.

The IBA qualifies on the basis of the concentration of seabirds present (in particular Adélie Penguin (*Pygoscelis adeliae*)) and comprises all of the ice free ground on the eastern side of the bay.

The summer-only station Petrel (ARG) is located 54 km to the southwest on Dundee Island and the year-round station Esperanza (ARG) and summer only station Elichiribehety (URY) is situated 86 km to the southwest in Hope Bay

Birds

Approximately 17 621 breeding pairs (95% CI: 10 630, 28 934) of Adélie Penguin were present at the eastern coast of Ambush Bay as estimated from December 2011 satellite imagery (Lynch & LaRue 2014). The penguins breed along the beach on the ice free ground. A breeding colony was reported here in 1978, although no census was made (Elliott *et al*. 1978). No other birds are known to breed in the area.

Other threatened / endemic wildlife

None known.

Conservation issues

None known.

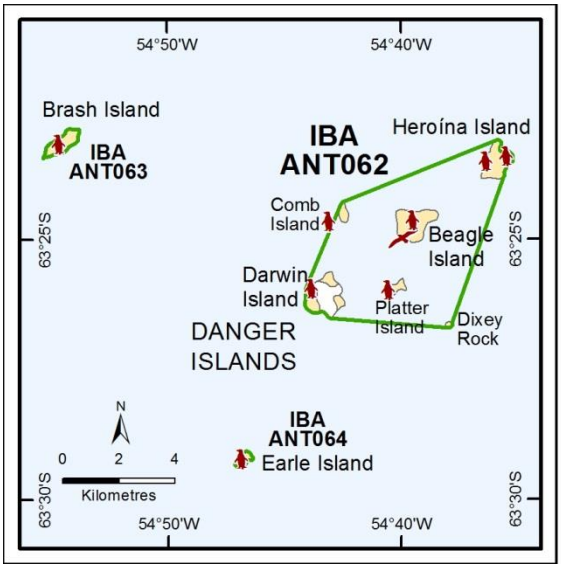
Further reading

Elliott, D.H., Watts, D.R., Alley, R.B. & Gracanin, T.M. 1978. Bird and seal observations at Joinville Island and offshore islands. *Antarctic Journal of the United States* **13**: 154-55.

Lynch, H.J. & LaRue, M.A. 2014. First global census of the Adélie Penguin. *The Auk* **131**(4): 457-66. doi:10.1642/AUK-14-31.1

ANT062: Danger Islands

IBA criteria	A1, A4ii, A4iii
Coordinates	54°39'40'' W, 63°25'06'' S
Area	3017 ha
Altitude	< 250 m
Protection	None



Site description

Danger Islands lie ~19 km southeast of Joinville Island, in the Erebus and Terror Gulf. The site comprises several small islands which are largely ice-free. The Danger Islands lie ~50 km northeast of IBAs ANT065: Eden Rocks and ANT066 Paulet Island. The IBA qualifies on the basis of the Adélie Penguin (*Pygoscelis adeliae*) colonies present and the concentration of seabirds, and includes all of the islands in the eastern part of the Danger Islands group and the intervening marine area.

The nearest permanent scientific station is Petrel (ARG), a summer-only facility for up to ~55 people (COMNAP, Antarctic Facilities, accessed 06/08/2010) located ~70 km to the west on Dundee Island.

Birds

A large number of Adélie Penguins breed in the Danger Islands group, with between 285 115 and 305 165 Adélie Penguin nests estimated in 1996 (Naveen & Lynch 2011). Breeding occurs on slopes and ridges across most of the islands in the group (Elliott *et al*. 1978; Naveen & Lynch 2011; Lynch & LaRue 2014; Lynch & Schwaller 2014). Brash and Earle islands possess breeding colonies of Pygoscelid penguins of sufficient size and distance from each other and the other islands to warrant qualification as IBAs in their own right, and these are described in IBAs ANT063 and ANT064. Numbers of breeding pairs of Pygoscelid penguins on the remaining islands were estimated by Lynch & LaRue (2014) and Lynch & Schwaller (2014) (Table 062.1).

Table 062.1: Estimates of the number of breeding pairs of Pygoscelid penguins on northeastern Danger Islands

Island	Species	Breeding Pairs	95% CI	Source
Heroína	*Pygoscelis adeliae*	51 358	31 184, 83 938	Lynch & LaRue 2014
Beagle	*Pygoscelis adeliae*	96 892	59 507, 158 260	Lynch & LaRue 2014
Comb (Peine[1])	*Pygoscelis adeliae*	3 311	1805, 5564	Lynch & LaRue 2014
Platter (Plato[1])	*Pygoscelis adeliae*	27 902	16 876, 45 600	Lynch & LaRue 2014
Darwin	*Pygoscelis* sp.	7 419	5384, 9931	Lynch & Schwaller 2014
Totals		**186 882**		

[1] Geographical name used in Lynch & LaRue 2014.

Gentoo Penguins (*Pygoscelis papua*) also breed on the Danger Islands in small numbers, with 215 pairs present on Heroína Island in 1996 and 173 chicks counted in late Jan 2009, reported by the Antarctic Site Inventory (Naveen & Lynch 2011; Lynch *et al*. 2013).

Other birds thought to breed at the site include the Cape Petrel (*Daption capense*), Snowy Sheathbill (*Chionis albus*), Kelp Gull (*Larus dominicanus*), Brown Skua (*Catharacta antarctica*), Wilson's Storm-petrel (*Oceanites oceanicus*) and Antarctic Tern (*Sterna vittata*). Occasional visitors include Chinstrap Penguin (*Pygoscelis antarctica*), Southern Giant Petrel (*Macronectes giganteus*), Snow Petrel (*Pagodroma nivea*), Imperial Shag (*Phalacrocorax* [*atriceps*] *bransfieldensis*) and South Polar Skua (*Catharacta maccormicki*) (Naveen & Lynch 2011).

Other threatened / endemic wildlife

Antarctic Fur Seals (*Arctocephalus gazella*) have been observed hauled out at Heroína Island (Naveen & Lynch 2011).

Conservation issues

Only a small number of tour vessels appear to frequent the Danger Islands, with an annual average of 237 visitors (passengers, staff and crew) to Heroína Island (IAATO Tourism Statistics 2005-10, accessed: 06/08/2010).

Further reading

Elliott, D.H., Watts, D.R., Alley, R.B. & Gracanin, T.M. 1978. Bird and seal observations at Joinville Island and offshore islands. *Antarctic Journal of the United States* **13**: 154-55.

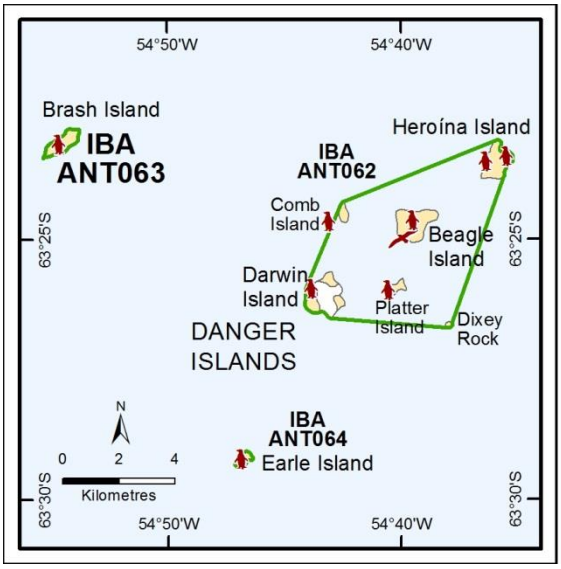
Lynch, H.J. & LaRue, M.A. 2014. First global census of the Adélie Penguin. *The Auk* **131**(4): 457-66. doi:10.1642/AUK-14-31.1

Lynch, H.J. & Schwaller, M.R. 2014. Mapping the abundance and distribution of Adélie Penguins using Landsat-7 : first steps towards an integrated multi-sensor pipeline for tracking populations at the continental scale. *PLoS ONE* **9**(11): 5-12. doi:10.1371/journal.pone.0113301

Naveen, R. & Lynch, H. 2011. *Compendium of Antarctic Peninsula visitor sites (3rd edition): A Report to the United States Environmental Protection Agency*. Oceanites, Chevy Chase, MD.

ANT063: Brash Island, Danger Islands

IBA criteria	A1(?), A4ii, A4iii
Coordinates	54°45'30'' W, 63°38'09'' S
Area	63 ha
Altitude	< 250 m
Protection	None



Site description

Danger Islands lie ~19 km southeast of Joinville Island, in the Erebus and Terror Gulf. Brash Island is ice-free and of low elevation, is around 1 km in length, and is the most westerly of the Danger Islands. The IBA qualifies on the basis of the Pygoscelid penguin colony present and the concentration of seabirds.

The nearest permanent scientific station is Petrel (ARG), a summer-only facility for up to ~55 people (COMNAP, Antarctic Facilities, accessed 06/08/2010) located ~70 km to the east on Dundee Island.

Birds

A large number of Pygoscelid penguins are likely to breed on Brash Island. Lynch & Schwaller (2014) identified from satellite imagery a large penguin colony on Brash Island and estimated ~166 078 breeding pairs (95% CI 123 666, 228 268). The penguin species present has yet to be determined, although it is likely to be predominantly either Adélie (*Pygoscelis adeliae*) or Chinstrap (*Pygoscelis antarctica*) penguin.

Other birds thought to breed at Danger Islands include the Cape Petrel (*Daption capense*), Snowy Sheathbill (*Chionis albus*), Kelp Gull (*Larus dominicanus*), Brown Skua (*Catharacta antarctica*), Wilson's Storm-petrel (*Oceanites oceanicus*) and Antarctic Tern (*Sterna vittata*). Occasional visitors include Chinstrap Penguin (*Pygoscelis antarctica*), Southern Giant Petrel (*Macronectes giganteus*), Snow Petrel (*Pagodroma nivea*), Imperial Shag (*Phalacrocorax* [*atriceps*] *bransfieldensis*) and South Polar Skua (*Catharacta maccormicki*) (Naveen & Lynch 2011).

Other threatened / endemic wildlife

None known.

Conservation issues

Only a small number of tour vessels appear to frequent the Danger Islands, with an annual average of 237 visitors (passengers, staff and crew) to Heroína Island (IAATO Tourism Statistics 2005-10, accessed: 06/08/2010).

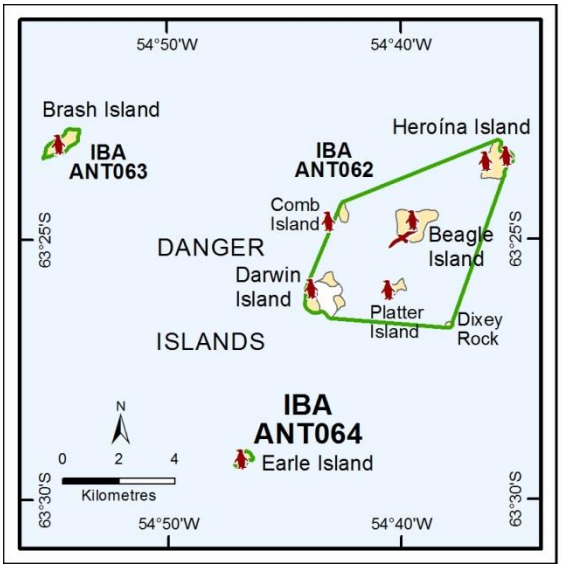
Further reading

Lynch, H.J. & Schwaller, M.R. 2014. Mapping the abundance and distribution of Adélie Penguins using Landsat-7 : first steps towards an integrated multi-sensor pipeline for tracking populations at the continental scale. *PLoS ONE* **9**(11): 5-12. doi:10.1371/journal.pone.0113301

Naveen, R. & Lynch, H. 2011. *Compendium of Antarctic Peninsula visitor sites (3rd edition): A Report to the United States Environmental Protection Agency*. Oceanites, Chevy Chase, MD.

ANT064: Earle Island, Danger Islands

IBA criteria	A4iii
Coordinates	54°46'46'' W, 63°29'14'' S
Area	20 ha
Altitude	< 250 m
Protection	None



Site description

Danger Islands lie ~19 km southeast of Joinville Island, in the Erebus and Terror Gulf. Earle Island is ice-free and of low elevation, is around 0.5 km across, and is the most southerly of the Danger Islands. The IBA qualifies on the basis of the concentration of seabirds present (in particular Pygoscelid penguins) and comprises all of Earle Island.

The nearest permanent scientific station is Petrel (ARG, a summer-only facility for up to ~55 people (COMNAP, Antarctic Facilities, accessed 06/08/2010) located ~70 km to the east on Dundee Island.

Birds

A large number of Pygoscelid penguins are likely to breed on Earle Island. Lynch & Schwaller (2014) identified from satellite imagery a large penguin colony on Earle Island and estimated ~23 649 breeding pairs (95% CI 17 361, 32 163). The species present has yet to be determined, although it is likely to be predominantly either Adélie (*Pygoscelis adeliae*) or Chinstrap (*Pygoscelis antarctica*) penguin.

Other birds thought to breed at Danger Islands include the Cape Petrel (*Daption capense*), Snowy Sheathbill (*Chionis albus*), Kelp Gull (*Larus dominicanus*), Brown Skua (*Catharacta antarctica*), Wilson's Storm-petrel (*Oceanites oceanicus*) and Antarctic Tern (*Sterna vittata*). Occasional visitors include Chinstrap Penguin (*Pygoscelis antarctica*), Southern Giant Petrel (*Macronectes giganteus*), Snow Petrel (*Pagodroma nivea*), Imperial Shag (*Phalacrocorax* [*atriceps*] *bransfieldensis*) and South Polar Skua (*Catharacta maccormicki*) (Naveen & Lynch 2011).

Other threatened / endemic wildlife

None known.

Conservation issues

Only a small number of tour vessels appear to frequent the Danger Islands, with an annual average of 237 visitors (passengers, staff and crew) to Heroína Island (IAATO Tourism Statistics 2005-10, accessed: 06/08/2010).

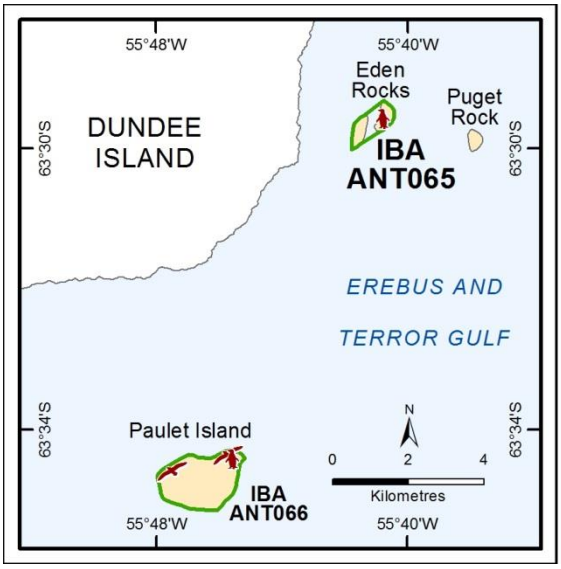
Further reading

Lynch, H.J. & Schwaller, M.R. 2014. Mapping the abundance and distribution of Adélie Penguins using Landsat-7 : first steps towards an integrated multi-sensor pipeline for tracking populations at the continental scale. *PLoS ONE* **9**(11): 5-12. doi:10.1371/journal.pone.0113301

Naveen, R. & Lynch, H. 2011. *Compendium of Antarctic Peninsula visitor sites (3rd edition): A Report to the United States Environmental Protection Agency*. Oceanites, Chevy Chase, MD.

ANT065: Eden Rocks

IBA criteria	A1, A4ii, A4iii
Coordinates	55°41' W, 63°30' S
Area	73 ha
Altitude	≤ c.90 m
Protection	None



Site description

Eden Rocks lie 1.5 km from the eastern coast of Dundee Island, in the Erebus and Terror Gulf. The rocks were first charted in 1842 by James Clark Ross. IBA ANT066: Paulet Island lies ~9 km to the southwest. The IBA qualifies on the basis of the Adélie Penguin (*Pygoscelis adeliae*) colony present and comprises two rocks rising to around 90 m and the intervening sea.

The nearest permanent scientific station is Petrel (ARG), a summer-only facility for up to ~55 people (COMNAP, Antarctic Facilities, accessed 06/08/2010) located ~30 km to the west on Dundee Island.

Birds

Two large colonies of Adélie Penguin were recorded breeding on Eden Rocks in 1996, with approximately 20 000 pairs in the west colony and 26 750 pairs in the east colony (total between 44 249 and 49 460 pairs) (Naveen *et al*. 2000). Other confirmed breeders in the area include Cape Petrel (*Daption capense*) and skua (*Catharacta* spp.). Occasional visitors include Southern Giant Petrel (*Macronectes giganteus*), Snowy Sheathbill (*Chionis albus*), Wilson's Storm-petrel (*Oceanites oceanicus*) and Kelp Gull (*Larus dominicanus*) (Naveen & Lynch 2011).

Other threatened / endemic wildlife

None known.

Conservation issues

Visitor landings at Eden Rocks are difficult due to the surrounding uncharted waters and variable ice conditions (Naveen & Lynch 2011). Visits to the site are infrequent and human disturbance is expected to be minimal.

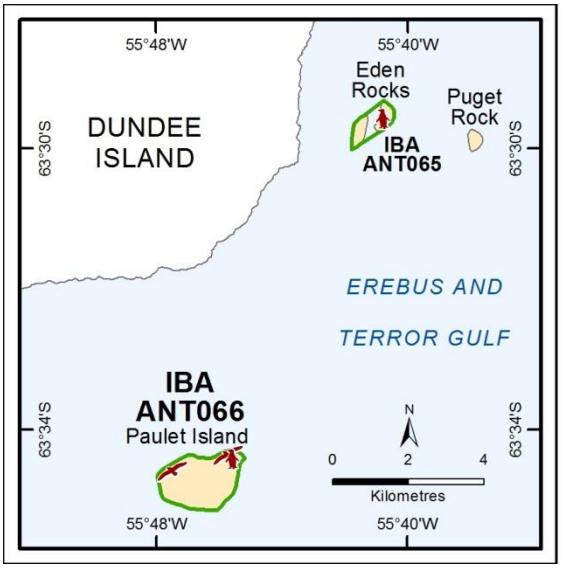
Further reading

Naveen, R., Forrest, S. C., Dagit, R. G., Blight, L. K., Trivelpiece, W. Z. & Trivelpiece, S. G. 2000. Cenus of penguin, blue-eyed shag, and southern giant petrel populations in the Antarctic Peninsula region, 1994-2000. *Polar Record* **36***:* 323-34.

Naveen, R. & Lynch, H. 2011. *Compendium of Antarctic Peninsula visitor sites (3rd edition): A Report to the United States Environmental Protection Agency*. Oceanites, Chevy Chase, MD.

ANT066: Paulet Island

IBA criteria	A1, A4i, A4ii, A4iii
Coordinates	55°46' W, 63°35' S
Area	259 ha
Altitude	0 - ~350 m
Protection	None



Site description

Paulet Island is situated ~5 km southeast of Dundee Island, east of northern Trinity Peninsula, in the Erebus and Terror Gulf. The extinct and ice free volcanic cone is ~1.7 km in diameter and rises to ~350 m in height (ATS Visitor Site Guide: Paulet Island, accessed 06/08/2010). The IBA qualifies on the basis of the Adélie Penguin (*Pygoscelis adeliae*) and Imperial Shag (*Phalacrocorax* [*atriceps*] *bransfieldensis*) colonies present and the large concentration of seabirds, and comprises the whole island.

Scree slopes lie on the southern and western slopes of the island. A flat terrace to the north and northeast, to which visitor access is restricted, is frequently submerged at high tide. Historic Site and Monument No. 41 is located on Paulet Island, and comprises a stone hut, rock cairn and grave originating from the Swedish South Polar Expedition of 1901-04.

The nearest scientific station is Petrel (ARG), a summer-only facility for up to ~55 people (COMNAP, Antarctic Facilities, accessed 06/08/2010) and located on Dundee Island ~25 km to the northwest.

Birds

Approximately 100 000 breeding pairs of Adélie Penguin were recorded breeding around meltwater lakes and on elevated ridges on the northeast of Paulet Island in 1999 (Naveen & Lynch 2011). Approximately 465 breeding pairs of Imperial Shag were recorded breeding amongst the Adélie Penguins in 2007 (Lynch *et al.* 2008). More recently, 548 breeding pairs of Imperial Shag were reported by the Antarctic Site Inventory in January 2012 (R. Naveen and H. Lynch pers. comm. 2014). Previous records indicate most shags nest on a basaltic stack and nearby cliff on the northern shoreline (Naveen & Lynch 2011). Croxall *et al.* (1995) estimated 300 pairs of Snow Petrel (*Pagodroma nivea*) were breeding on Paulet Island in 1992. The Kelp Gull (*Larus dominicanus*) is also a confirmed breeder whilst the Snowy Sheathbill (*Chionis albus*) and Wilson's Storm-petrel (*Oceanites oceanicus*) are frequently observed and may breed in the area (ATS Visitor Site Guidelines: Paulet Island).

Other threatened / endemic wildlife

Weddell Seal (*Leptonychotes weddellii*) and Antarctic Fur Seal (*Arctocephalus gazella*) regularly haul out at Paulet Island, whilst Leopard Seal (*Hydrurga leptonyx*) are frequently observed offshore (ATS Visitor Site Guidelines: Paulet Island).

Conservation issues

Paulet Island is a popular destination for tour vessels. The annual average number of visitors (passengers, staff and crew) landing at Paulet Island from 2005-10 was 6037 (IAATO Tourism Statistics, accessed: 06/08/2010). ATS Visitor Site Guidelines provide guidance for tourist visits, which are generally in organised groups supervised by expedition guides.

Further reading

Antarctic Treaty System Visitor Site Guidelines: Paulet Island:
URL: http://www.ats.aq/siteguidelines/documents/Paulet_e.pdf. Accessed 06/08/2010

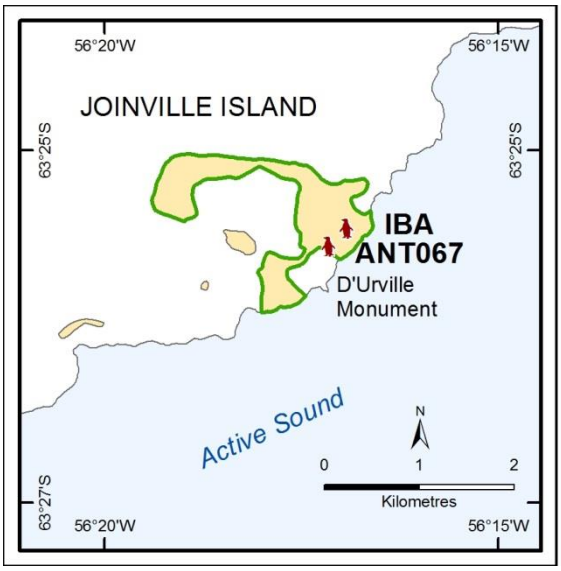
Croxall, J.P., Steele, W.K, McInnes, S.J. & Prince, P.A. 1995. Breeding distribution of the Snow Petrel *Pagodroma nivea. Marine Ornithology* **23**: 69-99.

Lynch, H., Naveen, R. & Fagan, W. 2008. Censuses of Penguin, Blue-eyed Shag *Phalacrocorax atriceps* and Southern Giant Petrel *Macronectes giganteus* populations on the Antarctic Peninsula, 2001-2007. *Marine Ornithology* **36**: 83-97.

Naveen, R. & Lynch, H. 2011. *Compendium of Antarctic Peninsula visitor sites (3rd edition): A Report to the United States Environmental Protection Agency*. Oceanites, Chevy Chase, MD.

ANT067: D'Urville Monument, Joinville Island

IBA criteria	A4iii
Coordinates	56°17' W, 63°25' S
Area	120 ha
Altitude	0 to < 500 m
Protection	None



Site description

D'Urville Monument is a small ice-free area (127 ha) at southwest Joinville Island, on the northern shore of Active Sound and facing Petrel Cove. The IBA qualifies on the basis of the concentration of seabirds present (in particular Adélie Penguin (*Pygoscelis adeliae*)) and covers the ice-free area at the site.

The nearest permanent scientific station is Petrel (ARG), a summer-only facility for up to ~55 people (COMNAP, Antarctic Facilities, accessed 06/08/2010) located ~6 km to the southwest on Dundee Island.

Birds

Approximately 10 000 pairs of Adélie Penguin and over 670 pairs of Gentoo Penguin (*Pygoscelis papua*) breed at D'Urville Monument (Lynch *et al.* 2008).

Other threatened / endemic wildlife

None known.

Conservation issues

Naveen (2003) reported D'Urville Monument was rarely visited at that time. There are no known conservation issues.

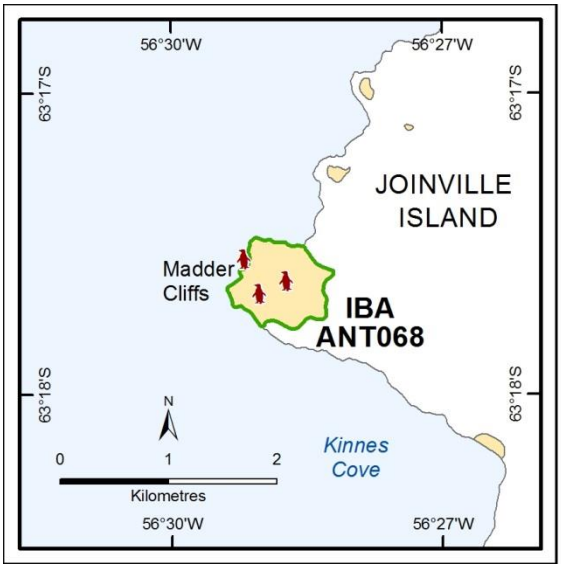
Further reading

Lynch, H., Naveen, R. & Fagan, W. 2008. Censuses of Penguin, Blue-eyed Shag *Phalacrocorax atriceps* and Southern Giant Petrel *Macronectes giganteus* populations on the Antarctic Peninsula, 2001-2007. *Marine Ornithology* **36**: 83-97.

Naveen, R. 2003. *Compendium of Antarctic Peninsula visitor sites (2nd edition): A Report to the United States Environmental Protection Agency*. Oceanites, Chevy Chase, MD.

ANT068: Madder Cliffs, Joinville Island

IBA criteria	A4iii
Coordinates	56°29' W, 63°18' S
Area	55 ha
Altitude	0 to < 250 m
Protection	None



Site description

Madder Cliffs lie at the northern entrance to Kinnes Cove at the western extremity of Joinville Island, Erebus and Terror Gulf. A rocky beach lies below scree and tuff ridges and cliffs, with the distinctive red rocks that give the site its name. The IBA qualifies on the basis of the concentration of seabirds present (in particular Adélie Penguin (*Pygoscelis adeliae*)) and comprises the ice-free area at Madder Cliffs.

Snow algae and *Prasiola crispa* have been reported at the site (Naveen 2003).

The nearest permanent scientific research stations are Petrel (ARG), Esperanza (ARG) and Teniente de Navio Ruperto Elichiribehety (URY), more information on which can be found under IBAs ANT067 and ANT074.

Birds

A rough estimate made in 2003 indicated around 20 000 – 25 000 pairs of Adélie Penguin breed at Madder Cliffs, located along exposed ridges and knolls above the beach (Naveen & Lynch 2011). Gentoo Penguins (*Pygoscelis papua*) also breed at the site and around 450 chicks were counted in 2005 (Lynch *et al.* 2008). Kelp Gull (*Larus dominicanus*) and Snowy Sheathbill (*Chionis albus*) are also confirmed breeders at the site (Naveen & Lynch 2011).

Other threatened / endemic wildlife

None known.

Conservation issues

None known.

Further reading

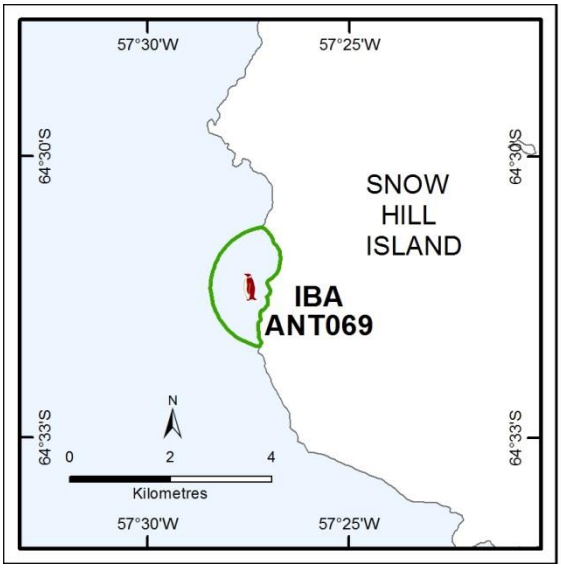
Lynch, H., Naveen, R. & Fagan, W. 2008. Censuses of Penguin, Blue-eyed Shag *Phalacrocorax atriceps* and Southern Giant Petrel *Macronectes giganteus* populations on the Antarctic Peninsula, 2001-2007. *Marine Ornithology* **36**: 83-97.

Naveen, R. 2003. *Compendium of Antarctic Peninsula visitor sites (2nd edition): A Report to the United States Environmental Protection Agency*. Oceanites, Chevy Chase, MD.

Naveen, R. & Lynch, H. 2011. *Compendium of Antarctic Peninsula visitor sites (3rd edition): A Report to the United States Environmental Protection Agency*. Oceanites, Chevy Chase, MD.

ANT069: Snow Hill Island

IBA criteria	A1, A4ii
Coordinates	57°27' W, 64°31' S
Area	214 ha
Altitude	0 to < 200 m
Protection	None



Site description

Snow Hill Island lies 5 km to the southeast of James Ross Island and less than 2 km to the southwest of Seymour Island, off the eastern coast of Trinity Peninsula. Snow Hill Island is nearly entirely covered by snow and ice. The IBA qualifies on the basis of the Emperor Penguin (*Aptenodytes forsteri*) colony present at the southwest extremity of the island and comprises 263 ha of sea ice adjacent to the coast.

The nearest permanent scientific station is Marambio (ARG), which operates year-round ~53 km to the northeast on Seymour Island and has capacity for ~150 people (COMNAP, Antarctic Facilities, accessed 19/08/2010).

Birds

A visual ground count made in November 2004 recorded ~3885 downy Emperor Penguin chicks on fast ice ~400 m from ice cliffs on the southern coast of Snow Hill Island (Todd *et al.* 2004). While a recent count based on analysis of a satellite image acquired 26 Oct 2009 (Fretwell *et al.* 2012) indicated 2164 penguins present, which would not qualify under the IBA population criteria, in view of the historical size of the colony and uncertainty over current numbers, the IBA has been retained.

Other threatened / endemic wildlife

None known.

Conservation issues

Todd *et al.* (2004) noted over 100 dead Emperor Penguin chicks in the November 2004 census, although the majority of chicks were healthy. The cause of the deaths is unknown.

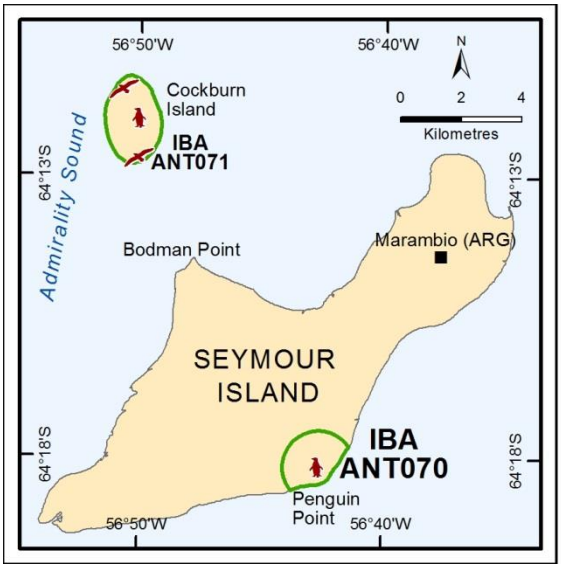
Further reading

Fretwell, P.T., LaRue, M.A., Morin P., Kooyman, G.L., Wienecke, B., Ratcliffe, N., Fox, A.J., Fleming, A.H., Porter, C. & Trathan, P.N. 2012. An Emperor Penguin population estimate: The first global, synoptic survey of a species from space. *PLoS ONE* **7**(4): e33751. doi:10.1371/journal.pone.0033751

Todd, F.S., Adie, S. & Splettstoesser, J.F. 2004. First ground visit to the Emperor Penguin *Aptenodytes forsteri* colony at Snow Hill Island, Weddell Sea, Antarctica. *Marine Ornithology* **32**: 193-94.

ANT070: Penguin Point, Seymour Island

IBA criteria	A4iii
Coordinates	56°43' W, 64°18' S
Area	294 ha
Altitude	0 to < 100 m
Protection	None



Site description

Penguin Point lies on the southeastern coastline of Seymour Island, east of James Ross Island. The IBA qualifies on the basis of the large concentration of seabirds present (in particular Adélie Penguin (*Pygoscelis adeliae*)) and comprises an area of 326 ha extending 1260 m inland from Penguin Point.

Penguin Point is a sparsely vegetated area of ice-free ground with a gently sloping cobble beach that is frequently obstructed by ice (Naveen & Lynch 2011).

The nearest permanent scientific station is Marambio (ARG), which lies ~8 km to the northeast. Marambio operates year-round with peak capacity for ~150 people and a winter complement of ~55 (COMNAP, Antarctic Facilities, accessed 19/08/2010).

Birds

Based on a rough count, approximately 26 400 breeding pairs of Adélie Penguin were present at Penguin Point in 2006 (Naveen & Lynch 2011). More recently, Lynch *et al*. (2013) estimated ~16 015 pairs were present in 2009/10. Other confirmed breeders include South Polar Skua (*Catharacta maccormicki*), Brown Skua (*Catharacta antarctica*), Kelp Gulls (*Larus dominicanus*) and Antarctic Tern (*Sterna vittata*) (Naveen & Lynch 2011).

Other threatened / endemic wildlife

Weddell (*Leptonychotes weddellii*) and Antarctic Fur (*Arctocephalus gazella*) seals regularly haul out at Penguin Point (Naveen 2003).

Conservation issues

None known.

Further reading

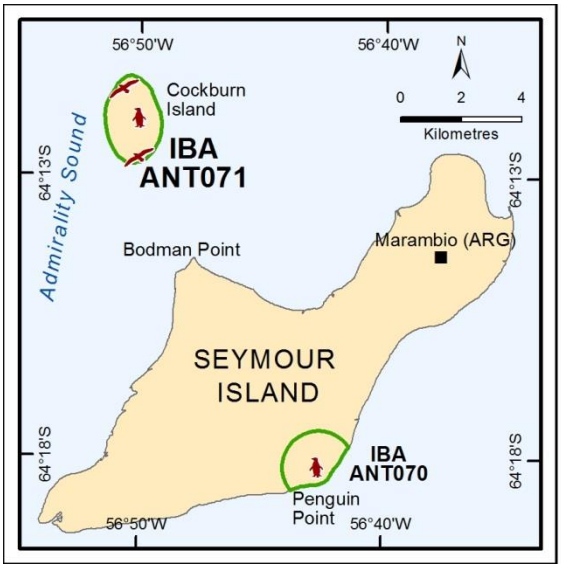
Lynch, H.J., Naveen, R. & Casanovas, P.V. 2013. Antarctic Site Inventory breeding bird survey data 1994 – 2013. *Ecology* (Data Paper) **94**(11): 2653. doi: 10.1890/13-1108.1

Naveen, R. 2003. *Compendium of Antarctic Peninsula visitor sites (2nd edition): A Report to the United States Environmental Protection Agency*. Oceanites, Chevy Chase, MD.

Naveen, R. & Lynch, H. 2011. *Compendium of Antarctic Peninsula visitor sites (3rd edition): A Report to the United States Environmental Protection Agency*. Oceanites, Chevy Chase, MD.

ANT071: Cockburn Island

IBA criteria	A4i, A4iii
Coordinates	56°51' W, 64°12' S
Area	409 ha
Altitude	0 – c.450 m
Protection	None



Site description

Cockburn Island is a small, oval-shaped, ice-free island rising to around 450 m and lying 5 km northwest of Seymour Island. The IBA qualifies on the basis of the Imperial Shag (*Phalacrocorax* [*atriceps*] *bransfieldensis*) colony present and the large concentration of seabirds (in particular Adélie Penguin (*Pygoscelis adeliae*)), and comprises all of Cockburn Island.

Information on the environment of Cockburn Island is not available. The nearest permanent scientific station is Marambio (ARG) located 10 km to the east, more information on which can be found under IBA ANT070.

Birds

Approximately 800 pairs of Imperial Shag were recorded breeding on Cockburn Island in 2006 (Lynch *et al.* 2008). Approximately 15 721 breeding pairs (95% CI: 9489, 25 987) of Adélie Penguin were present in 2010/11, as estimated from February 2011 satellite imagery (Lynch & LaRue 2014). Snow Petrel (*Pagodroma nivea*) nests were reported on the island in 1901 (Croxall *et al.* 1995), although it is not known whether this species continues to breed in the area.

Other threatened / endemic wildlife

None known.

Conservation issues

None known. There are no records of tourist landings at Cockburn Island and visits to the site appear to be infrequent.

Further reading

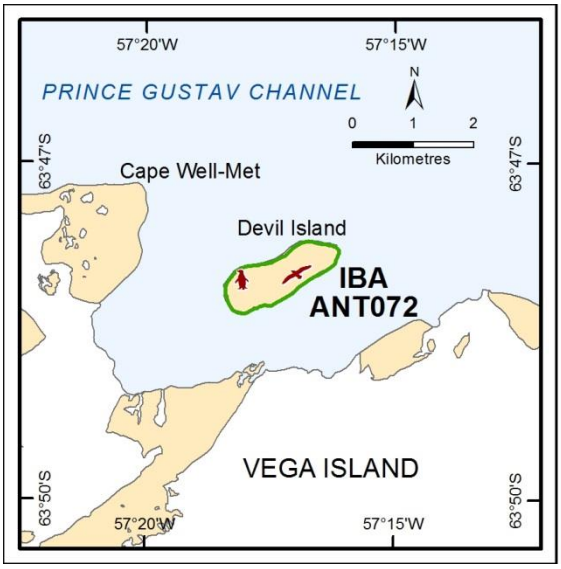
Croxall, J.P., Steele, W.K, McInnes, S.J. & Prince, P.A. 1995. Breeding distribution of the Snow Petrel *Pagodroma nivea. Marine Ornithology* **23**: 69-99.

Lynch, H., Naveen, R. & Fagan, W. 2008. Censuses of Penguin, Blue-eyed Shag *Phalacrocorax atriceps* and Southern Giant Petrel *Macronectes giganteus* populations on the Antarctic Peninsula, 2001-2007. *Marine Ornithology* **36**: 83-97.

Lynch, H.J. & LaRue, M.A. 2014. First global census of the Adélie Penguin. *The Auk* **131**(4): 457-66. doi:10.1642/AUK-14-31.1

ANT072: Devil Island

IBA criteria	A4iii
Coordinates	57°17' W, 63°48' S
Area	115 ha
Altitude	0 to < 150 m
Protection	None



Site description

Devil Island is a low, ice-free island of ~2 km in length lying in a small cove ~1 km north of Vega Island, east of Trinity Peninsula. Several low hills rise to ~100 m. The IBA qualifies on the basis of the large concentration of seabirds (in particular Adélie Penguin (*Pygoscelis adeliae*)) and comprises the entire island.

Flora is dominated by the lichen *Xanthoria* spp. on seaward-facing slopes, interspersed with patches of *Caloplaca* spp. Mosses and the alga *Prasiola* have also been observed (ATS Visitor Site Guidelines, *Devil Island*).

The nearest permanent scientific station is Gregor Mendel (CZE), located on Vega Island ~30 km to the west and operated summer-only.

Birds

Approximately 14 681 pairs of Adélie Penguin were counted from photographs acquired in December 2008 (Lynch *et al*. 2013). While the Antarctic Site Inventory (Lynch *et al*. 2013) counted only 7108 chicks in the 2010/11 season, in view of the size of the colony and interseasonal fluctuations in numbers, the IBA has been retained. South Polar Skuas (*Catharacta maccormicki*), Brown Skuas (*C. antarctica*), Kelp Gulls (*Larus dominicanus*) and Antarctic Tern (*Sterna vittata*) also breed on Devil Island (Naveen & Lynch 2011). While Snow Petrel (*Pagodroma nivea*) nests were recorded on the island in 1945/46 (Croxall *et al.* 1995), their continued presence on the island is unknown.

Non-breeding species frequenting the site include Cape Petrel (*Daption capense*), Snowy Sheathbill (*Chionis albus*) and Wilson's Storm-petrel (*Oceanites oceanicus*) (Naveen & Lynch 2011).

Other threatened / endemic wildlife

None known.

Conservation issues

Devil Island is a popular tourist destination, and an average of 2541 visitors (passengers, staff and crew) landed at the site annually from 2005-10 (IAATO Tourism Statistics, accessed: 06/08/2010). ATS Visitor Site Guidelines provide guidance for tourist visits, which are generally in organised groups supervised by expedition guides.

Further reading

Antarctic Treaty System Visitor Site Guidelines, *Devil Island*:
URL http://www.ats.aq/siteguidelines/documents/Devil_e.pdf. Accessed: 10/05/2011.

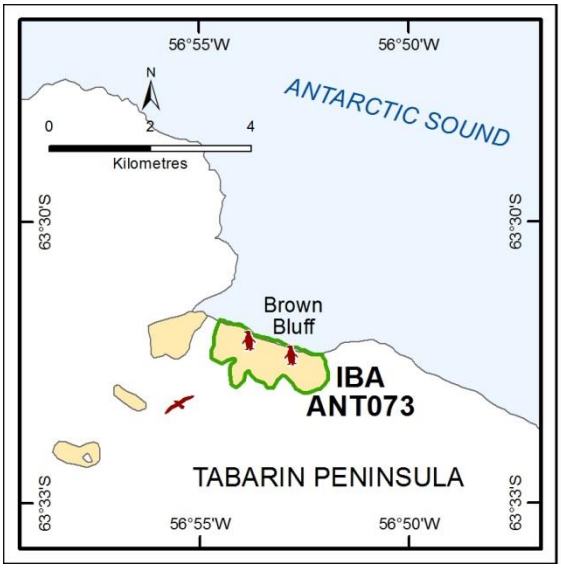
Croxall, J.P., Steele, W.K, McInnes, S.J. & Prince, P.A. 1995. Breeding distribution of the Snow Petrel *Pagodroma nivea. Marine Ornithology* **23**: 69-99.

Naveen, R. & Lynch, H. 2011. *Compendium of Antarctic Peninsula visitor sites (3rd edition): A Report to the United States Environmental Protection Agency*. Oceanites, Chevy Chase, MD.

Trinity Peninsula

ANT073: Brown Bluff

IBA criteria	A4iii
Coordinates	56°54' W, 63°32' S
Area	188 ha
Altitude	0 to < 600 m
Protection	None



Site description

Brown Bluff is a small ice-free section of the northern coastline on Tabarin Peninsula, approximately 13 km southeast of Hope Bay and 8 km west of Jonassen Island. A low-lying rock and ash beach rises steeply to reddish-brown north-facing cliffs of volcanic origin. The IBA qualifies on the basis of the large concentration of seabirds present (in particular Adélie Penguin (*Pygoscelis adeliae*)) and comprises the ice-free area of the bluff.

Erosion of the cliff face causes rock falls and slides along the shoreline, which may affect penguins nesting at the cliff-base. Naveen (2003) reports the lichens *Xanthoria* spp. and *Caloplaca* spp. growing on boulders at the shoreline and up to elevations of 185 m and mosses have been observed at higher altitudes.

The nearest permanent scientific stations are Esperanza (ARG) and Teniente de Navio Ruperto Elichiribehety (URY), situated 14 km to the northwest, more information on which can be found under IBA ANT074.

Birds

Approximately 20 000 pairs of Adélie Penguin nest in tightly packed groups on gentle slopes, terraces and ridges on and above the beach at Brown Bluff (Naveen & Lynch 2011). More recently, 18 630 breeding pairs were reported by the Antarctic Site Inventory in January 2013 (R. Naveen and H. Lynch pers. comm. 2014). Around 550 pairs of Gentoo Penguin (*Pygoscelis papua*) breed on flat terraces and low-lying slopes to the east of the Adélie Penguins (H. Lynch pers. comm. 2010). Kelp Gull (*Larus dominicanus*) nests are found throughout the site, whilst Wilson's Storm-petrels (*Oceanites oceanicus*) breed in rock crevices at higher altitudes. Other confirmed breeders include Cape Petrel (*Daption capense*), Snow Petrel (*Pagodroma nivea*), Imperial Shag (*Phalacrocorax [atriceps] bransfieldensis*), Snowy Sheathbill (*Chionis albus*), South Polar Skua (*Catharacta maccormicki*), Brown Skua (*Catharacta antarctica*) and Antarctic Tern (*Sterna vittata*) (Naveen & Lynch 2011).

Other threatened / endemic wildlife

Weddell Seals (*Leptonychotes weddellii*) have been observed at Brown Bluff (ATS Visitor Site Guidelines, *Brown Bluff*).

Conservation issues

Brown Bluff is a popular tourist destination, and guidance for site visits is provided by the ATS Visitor Site Guidelines: Brown Bluff. Two areas where Kelp Gulls and Adélie Penguins are breeding are 'closed' to tourist access. Organised tour visits are supervised by expedition guides.

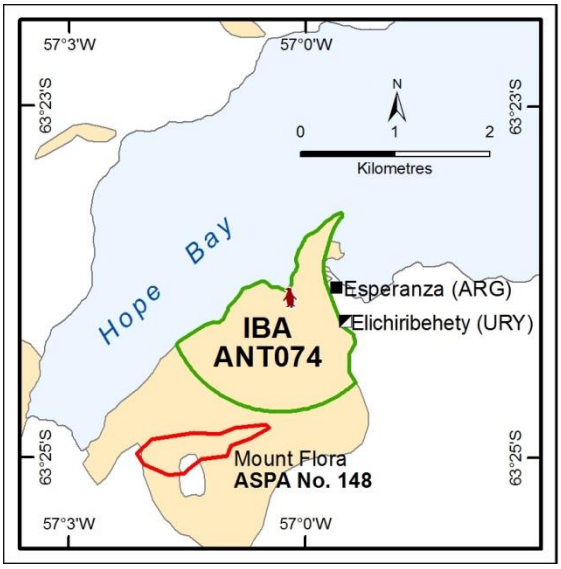
Further reading

Antarctic Treaty System Visitor Site Guidelines, *Brown Bluff*:
URL http://www.ats.aq/siteguidelines/documents/Brown_e.pdf. Accessed: 10/05/2011.

Naveen, R & Lynch, H. 2011. *Compendium of Antarctic Peninsula visitor sites (3rd edition): A Report to the United States Environmental Protection Agency*. Oceanites, Chevy Chase, MD.

ANT074: Hope Bay

IBA criteria	A1, A4ii, A4iii
Coordinates	57°00' W, 63°24' S
Area	203 ha
Altitude	0 to < 200 m
Protection	None



Site description

Hope Bay is located on the northeastern coast of Trinity Peninsula. The IBA qualifies on the basis of the large Adélie Penguin (*Pygoscelis adeliae*) colony present and comprises ice-free ground on the eastern side of Hope Bay.

The terrain comprises moraine with numerous rock outcrops, sloping towards the Scar Hills, which rise to ~200 m and fringe the Hope Bay shoreline. Mount Flora (ASPA No. 148), designated to protect geological features, lies several km to the southwest.

Two permanent scientific stations, Esperanza (ARG) and Teniente de Navio Ruperto Elichiribehety (URY), are located at Hope Bay. Esperanza operates year-round and has capacity for ~90 people, whilst Elichiribehety operates summer-only with a capacity for 10 (COMNAP, Antarctic Facilities, accessed 09/08/2010).

Meteorological records from Esperanza Station over the 1990s indicate January was the warmest month with an average temperature of 1.5°C, and August the coldest with temperatures averaging -11.2°C (ASPA No. 148 Management Plan, 2002).

Birds

Approximately 123 850 breeding pairs of Adélie Penguin were recorded at Hope Bay in 1985 (Myrcha, Tatur & Del Valle 1987). Other species that are confirmed breeders in the Hope Bay area are Gentoo Penguin (*Pygoscelis papua*), Brown Skua (*Catharacta antarctica*), Antarctic Tern (*Sterna vittata*), Wilson's Storm-petrel (*Oceanites oceanicus*), Kelp Gull (*Larus dominicanus*) and Snowy Sheathbill (*Chionis albus*) (ASPA No. 148 Management Plan, 2002).

Other threatened / endemic wildlife

None reported, although various species of marine mammal such as seals are likely to be present in the vicinity.

Conservation issues

The scientific stations at Hope Bay are located in close proximity to the IBA. Because aircraft access to helicopter landing sites represents a potential conservation issue a preferred aircraft approach route avoiding the Adélie colony is indicated in the Management Plan for ASPA No. 148 Mount Flora.

An average of 4502 ship-based tourists visit Hope Bay annually, and an average of 2116 visitors (inclusive of tourists, staff and crew) land annually at Esperanza Station (IAATO Tourism Statistics, 2005-10, accessed: 06/08/2010). Visits are managed by station personnel and tour operators.

A small area ~1 km south of the IBA is designated an Antarctic Specially Protected Area No. 148: Mount Flora, Hope Bay. The site is protected for its geological features and not for birds (ASPA No. 148 Management Plan, 2002).

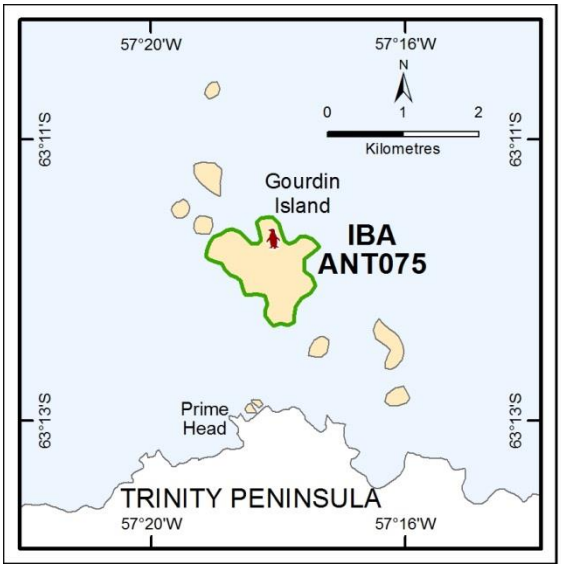
Further reading

ASPA No. 148 Mount Flora, Hope Bay: Management Plan (2002).

Myrcha, A., Tatur, A & Del Valle, R. 1987. Numbers of Adélie Penguins breeding at Hope Bay and Seymour Island rookeries (West Antarctica) in 1985. *Polish Polar Research* **8**: 411-22.

ANT075: Gourdin Island

IBA criteria	A4iii
Coordinates	57°18' W, 63°12' S
Area	111 ha
Altitude	0 to < 250 m
Protection	None



Site description

Gourdin Island is the largest of a group of islands lying 1.2 km north of Prime Head, northern Trinity Peninsula. The IBA qualifies on the basis of the large concentration of seabirds present (in particular Adélie Penguin (*Pygoscelis adeliae*)) and comprises all of Gourdin Island.

The permanent scientific stations Esperanza (ARG) and Teniente de Navio Ruperto Elichiribehety (URY), are both located 28 km southeast in Hope Bay, and General Bernando Higgins (CHL) is situated 34 km southwest at Cape Legoupil, Trinity Peninsula.

Birds

Naveen (2003) estimated the Adélie Penguin colony breeding on the northwestern end of Gourdin Island in 1997 comprised 14 334 pairs, along with 568 pairs of Gentoo Penguin (*Pygoscelis papua*) and 1000 pairs of Chinstrap Penguin (*P. antarctica*). Occasional visitors to the area include Snowy Sheathbill (*Chionis albus*), Brown Skua (*Catharacta antarctica*) and Kelp Gull (*Larus dominicanus*) (Naveen & Lynch 2011).

Other threatened / endemic wildlife

None known.

Conservation issues

Gourdin Island receives an annual average of around 890 visitors (including tourists, staff and crew) (IAATO Tourism Statistics 2005-10, accessed: 06/08/2010).

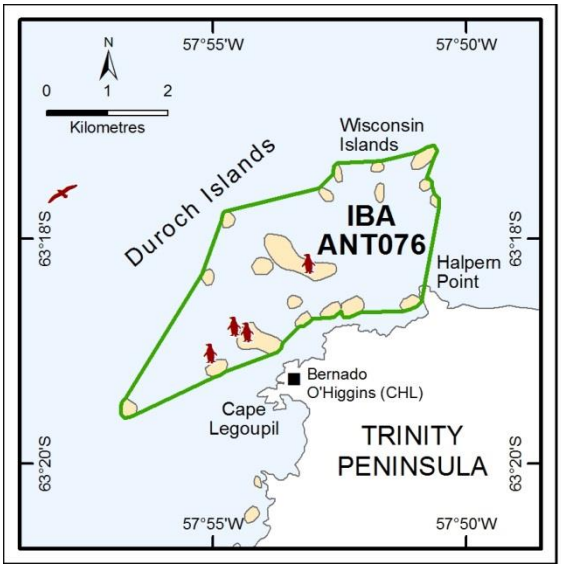
Further reading

Naveen, R. 2003. *Compendium of Antarctic Peninsula visitor sites (2nd edition): A Report to the United States Environmental Protection Agency*. Oceanites, Chevy Chase, MD.

Naveen, R & Lynch, H. 2011. *Compendium of Antarctic Peninsula visitor sites (3rd edition): A Report to the United States Environmental Protection Agency*. Oceanites, Chevy Chase, MD.

ANT076: Duroch Islands

IBA criteria	A4iii
Coordinates	57°54' W, 63°18' S
Area	1068 ha
Altitude	< 250 m
Protection	None



Site description

The Duroch Islands lie several hundred metres offshore from Cape Legoupil, northwestern Trinity Peninsula, northern Antarctic Peninsula. The island group includes Wisconsin Islands in the northeast and extends to Estay Rock in the southwest, and excludes Demas Rocks. The IBA qualifies on the basis of the large concentration of seabirds present (in particular penguins) and comprises all of the Duroch Islands and the intervening marine area.

The nearest permanent scientific station is Bernardo O'Higgins (CHL), which has capacity for ~44 people and operates year-round ~200 m to the south at Cape Legoupil (COMNAP, Antarctic Facilities, accessed 20/08/2010).

Birds

Around 14 000 pairs of several penguin species breed in a number of groups on the Duroch Islands, with approximately 3500 pairs Gentoo (*Pygoscelis papua*), 800 pairs Adélie (*P. adeliae*), and 9400 pairs Chinstrap (*P. antarctica*) penguins recorded in 1990 (S. & J. Poncet pers. comm. cited in Woehler 1993).

Other threatened / endemic wildlife

None known.

Conservation issues

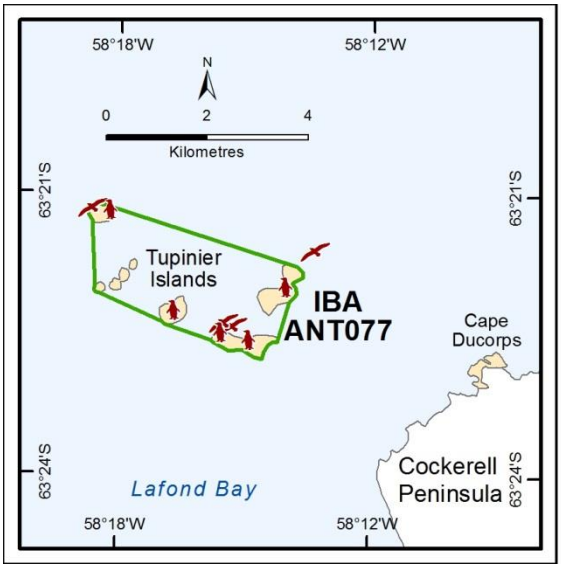
Bernardo O'Higgins (CHL), with associated operational and support activities, is located in close proximity to the IBA.

Further reading

Woehler, E.J. (ed.) 1993. *The distribution and abundance of Antarctic and sub-Antarctic penguins.* Scientific Committee on Antarctic Research. Cambridge, UK.

ANT077: Tupinier Islands

IBA criteria	A4iii
Coordinates	58°16' W, 63°22' S
Area	745 ha
Altitude	< 250 m
Protection	None



Site description

Tupinier Islands lie ~4 km northwest of Cape Ducorps on Cockerell Peninsula, Trinity Peninsula, on the Antarctic Peninsula. This ice-free archipelago was first charted in 1837-40 by the French Antarctic Expedition led by Dumont D'Urville. The IBA qualifies on the basis of the large concentration of seabirds present (in particular Chinstrap Penguin (*Pygoscelis antarctica*)) and comprises all of the Tupinier Islands and the intervening marine area.

The nearest permanent scientific station is Bernardo O'Higgins (CHL), which has capacity for ~44 people and operates year-round ~20 km to the northeast at Cape Legoupil (COMNAP, Antarctic Facilities, accessed 20/08/2010).

Birds

A large Chinstrap Penguin colony, estimated at 14 130 pairs in 1990 (S. & J. Poncet pers. comm. cited in Woehler 1993), is distributed across the island group in five main groups ranging from 800 to 5200 pairs. A small number of Imperial Shags (*Phalacrocorax* [*atriceps*] *bransfieldensis*) breed on three small islets within the island group, with 68 breeding pairs recorded in 1990 (unpublished data S. Poncet pers. comm. 2005).

Other threatened / endemic wildlife

None known.

Conservation issues

None known.

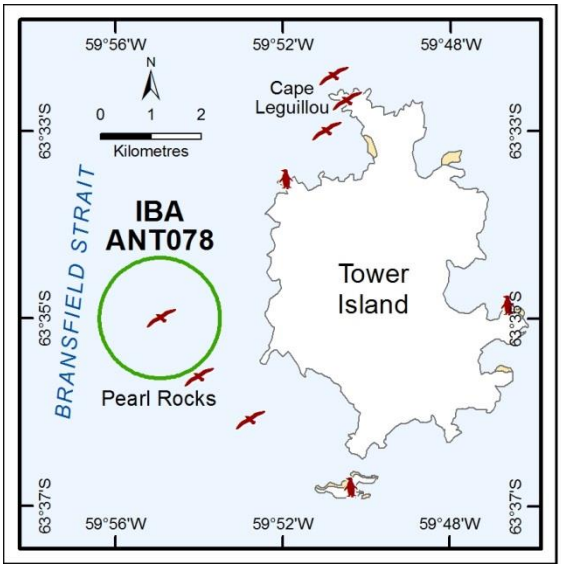
Further reading

Woehler, E.J. (ed.) 1993. *The distribution and abundance of Antarctic and sub-Antarctic penguins.* Scientific Committee on Antarctic Research. Cambridge, UK.

Palmer Archipelago / Danco Coast

ANT078: Pearl Rocks

IBA criteria	A4i
Coordinates	59°55' W, 63°35' S
Area	449 ha
Altitude	Unknown
Protection	None



Site description

Pearl Rocks lie several km offshore from the western coast of Tower Island, Palmer Archipelago, ~25 km from the Davis Coast of the Antarctic Peninsula. The IBA qualifies on the basis of the Imperial Shag (*Phalacrocorax* [*atriceps*] *bransfieldensis*) colony present. The IBA is defined as an elliptical area centered on the approximate position of the northernmost of the three highest islets in the Pearl Rocks group.

The nearest permanent scientific stations are Gabriel de Castilla (ESP) and Decepción (ARG), located ~80 km to the northwest at Port Foster, Deception Island. These summer-only stations have a combined capacity of ~90 people.

Birds

Approximately 170 breeding pairs of Imperial Shag were recorded in 1987 (unpublished data S. Poncet pers. comm. 2005). Smaller numbers of Imperial Shags also breed on the islets of Pearl Rocks further to the south, although not in sufficient numbers to qualify as IBAs in their own right. No other birds are known to breed at Pearl Rocks, although several colonies of Chinstrap Penguins (*Pygoscelis antarctica*), Southern Fulmar (*Fulmarus glacialoides*) and Cape Petrel (*Daption capense*) breed on nearby Tower Island.

Other threatened / endemic wildlife

None known.

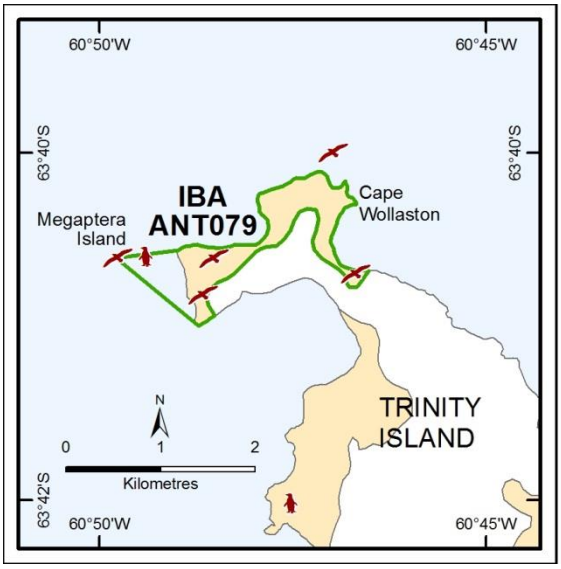
Conservation issues

None known.

Further reading

ANT079: Cape Wollaston, Trinity Island

IBA criteria	A4ii, A4iii
Coordinates	60°48' W, 63°40' S
Area	116 ha
Altitude	0 to < 500 m
Protection	None



Site description

Cape Wollaston rises to ~250 m at the northwestern extremity of Trinity Island, Palmer Archipelago, ~40 km from the Davis Coast of the Antarctic Peninsula. The IBA qualifies on the basis of the Southern Fulmar (*Fulmarus glacialoides*) colony present and comprises the ice-free area of Cape Woolaston, Megaptera Island and the intervening marine area.

The nearest permanent scientific station is Primavera (ARG), located ~53 km to the south.

Birds

An estimated 10 000 pairs of Southern Fulmar breed on the cliffs and offshore islands around Cape Wollaston, Megaptera Island and northwestern Trinity Island (Poncet & Poncet, unpublished data, cited in Creuwels *et al.* 2007). Cape Petrel (*Daption capense*) and Snow Petrel (*Pagodroma nivea*) have also been observed at Cape Wollaston (unpublished data S. Poncet pers. comm. 2005).

Other threatened / endemic wildlife

None known.

Conservation issues

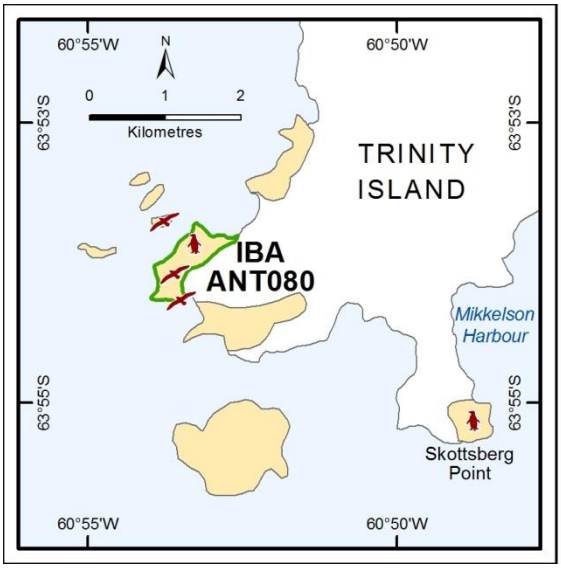
None known.

Further reading

Creuwels, J.C.S., Poncet, S., Hodum, P.J. & van Franeker, J.A. 2007. Distribution and abundance of the Southern Fulmar *Fulmarus glacialoides*. *Polar Biology* **30:** 1083–97.

ANT080: SW Trinity Island

IBA criteria	A4i
Coordinates	60°53' W, 63°54' S
Area	45 ha
Altitude	< 500 m
Protection	None



Site description

Trinity Island is part of the Palmer Archipelago and lies in Orléans Strait, ~15 km from the Davis Coast of the Antarctic Peninsula. The IBA qualifies on the basis of the Imperial Shag (*Phalacrocorax* [*atriceps*] *bransfieldensis*) colony present and comprises a rocky headland rising to ~250 m at the southwestern extremity of Trinity Island.

The nearest permanent station is Primavera (ARG), located 30 km to the south.

Birds

Around 195 pairs of Imperial Shag were recorded breeding in three groups along the rocky headland amongst Chinstrap Penguins (*Pygoscelis antarctica*) on 28 January 1986 (unpublished data S. Poncet pers. comm. 2005). The Chinstrap Penguin colony was recorded as 1600 breeding pairs (Poncet & Poncet 1987).

Other threatened / endemic wildlife

None known.

Conservation issues

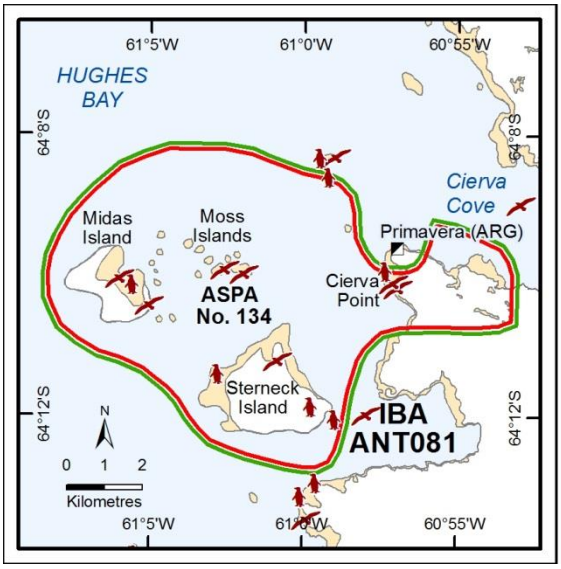
None known.

Further reading

Poncet, S. & Poncet, J. 1987. Censuses of penguin populations of the Antarctic Peninsula, 1983-87. *British Antarctic Survey Bulletin* **77**: 109-29.

ANT081: Cierva Point and offshore islands

IBA criteria	A4ii
Coordinates	61°01' W, 64°10' S
Area	5903 ha
Altitude	<750 m
Protection	ASPA No. 134



Site description

Cierva Point (64°09' S, 60°57' W) lies on the Danco Coast of the Antarctic Peninsula, 50 km east of Brabant Island, and forms the southern entrance to Cierva Cove. The IBA qualifies on the basis of the South Polar Skua (*Catharacta maccormicki*) colony present and is defined by the same boundary of Antarctic Specially Protected Area No. 134, which includes Cierva Point, Sterneck Island, Midas Island, Moss Islands and surrounding offshore islands. The intervening marine area and intertidal zone is included in the IBA.

South-facing slopes at Cierva Point are largely glaciated, whilst the north- and west-facing slopes comprise ice-free scree slopes, rock terraces and gullies. The terrain rises to a height of over 500 m on coastal cliffs. Coastal vegetation is extensive and includes lichens, mosses and grasses. Peat in moss-covered areas reaches ~80 cm in thickness and cover areas of more than 1 ha (Rau *et al.* 2000).

No long-term weather data for the site are available. However, Quintana (2001) recorded weather at Cierva Point during the summer of 1992/93 with mean monthly temperature ranging from 1.8°C to 2.2°C, whilst relative humidity averaged 79 % and mean wind speed was 7.9 kmh^{-1}.

Primavera Station (ARG) is situated ~500 m from the IBA boundary on the northern tip of Cierva Point. The summer only station has capacity for ~18 people and is serviced by ship and a helicopter landing site (COMNAP, Antarctic Facilities, accessed 09/08/2010).

Birds

At least 12 bird species breed within the IBA, with Chinstrap (*Pygoscelis antarctica*) and Gentoo (*P. papua*) penguins, Wilson's Storm-petrel (*Oceanites oceanicus*), South Polar Skua and Kelp Gulls (*Larus dominicanus*) the most abundant of species present (ASPA No. 134 Management Plan, 2006).

Quintana *et al.* (2000) documented 93 breeding pairs of South Polar Skua at Cierva Point in 1995, whilst an estimated 475 pairs of skua (predominantly *Catharacta maccormicki*) are thought to breed over the entire IBA (ASPA No. 134 Management Plan, 2006). S. Poncet (unpublished data, pers. comm. 2005) recorded 70 pairs of Imperial Shag (*Phalacrocorax* [*atriceps*] *bransfieldensis*) breeding on Midas Island in 1987, while Lynch *et al*. (2013) reported only 16 Imperial Shag nests here in 2010/11. A rough estimate was made of ~3100 pairs of Chinstrap Penguin present on Sterneck and Midas Islands in Jan 1987, and 450 breeding pairs Gentoo Penguin were counted on Sterneck Island at the same time (Poncet & Poncet 1987). More recently, 3305 pairs of Gentoo Penguin were recorded on Sterneck Island in 2010/11, and only 16 pairs and 685 pairs of Chinstrap Penguin on Sterneck and Midas islands respectively in the same season (Lynch *et al*. 2013). A further 1041 pairs of Gentoo Penguin were recorded in 1995/96, nesting on snow-free areas of a north-west facing hillside at Cierva Point (Quintana *et al.* 2000). These authors reported the breeding birds at Cierva Point include 1168 pairs of Wilson's Storm-petrel, 62 pairs of Kelp Gull, 24 pairs of Antarctic Tern (*Sterna vittata*), seven pairs of Cape Petrel (*Daption capense*), four pairs of Snowy Sheathbill (*Chionis albus*) and one pair of Snow Petrel (*Pagodroma nivea*). In the late 1980s, 135 breeding pairs of Southern Giant Petrel (*Macronectes giganteus*) were recorded nesting on both Moss and Sterneck islands (Patterson *et al.* 2008).

Penguin, shag and Southern Giant Petrel colonies may have since decreased in size: the ASPA No. 134 Management Plan (2006) noted 2050 pairs of Chinstrap and 1500 pairs of Gentoo penguins breed across the entire IBA, along with around 45 pairs of Southern Giant Petrel and around 30 pairs of Imperial Shag. The Management Plan further noted that ~2300 pairs of Wilson's Storm-petrel breed in the area, along with more than 100 pairs of Antarctic Tern, 375 pairs of Kelp Gull and more than 50 pairs of Cape Petrel.

Other threatened / endemic wildlife

None reported, although various species of marine mammal are likely to be found in the vicinity.

Conservation issues

ASPA No. 134: Cierva Point and offshore islands was originally designated to protect the well-developed vegetation and breeding bird colonies in the region. Access to the ASPA is allowed by permit, and activities are controlled by the Management Plan. Guidance on aircraft access to Primavera Station requires general avoidance of overflight of the protected area unless above 2000 feet (610 m), and landings are restricted to the designated helicopter landing site close to the station.

Human activity in the local area is principally associated with scientific operations and support, with occasional tourist visits to the station. Disturbance to wildlife is minimised by the requirement for a permit to access breeding areas. Perhaps the most significant risks to the bird colonies may come from inadvertent low overflights by aircraft accessing the station, which might occur, for example, as a result of poor weather conditions.

Further reading

ASPA No. 134 Cierva Point and offshore islands, Danco Coast: Management Plan (2006)

Lynch, H.J., Naveen, R. & Casanovas, P.V. 2013. Antarctic Site Inventory breeding bird survey data 1994 – 2013. *Ecology* (Data Paper) **94**(11): 2653. doi: 10.1890/13-1108.1

Patterson, D.L., Woehler, E.J., Croxall, J.P., Cooper, J., Poncet, S., Peter, H.-U., Hunter, S. & Fraser, W.R. 2008. Breeding distribution and population status of the Northern Giant Petrel *Macronectes halli* and the Southern Giant Petrel *M. giganteus*. *Marine Ornithology* **36**: 115-24.

Poncet, S. & Poncet, J. 1987. Censuses of penguin populations of the Antarctic Peninsula, 1983-87. *British Antarctic Survey Bulletin* **77**: 109-29.

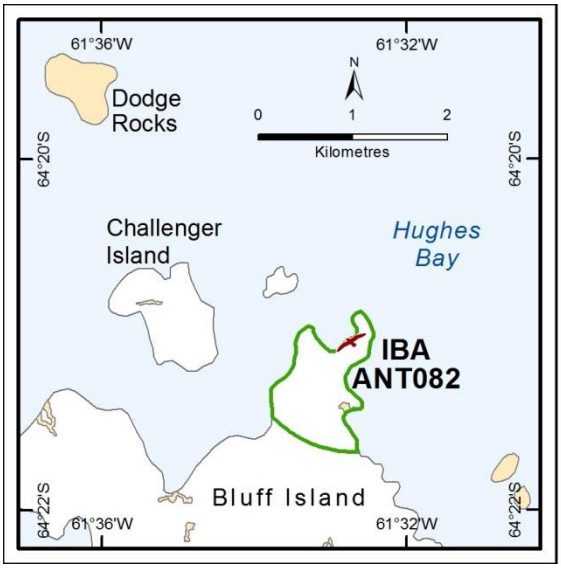
Quintana, R.D. 2001. Nest-site characteristics of a Gentoo Penguin *Pygoscelis papua* colony at Cierva Point, Antarctic Peninsula. *Marine Ornithology* **29:** 109-12.

Quintana, R.D., Cirelli, V. & Orgeira, J.L. 2000. Abundance and spatial distribution of bird populations at Cierva Point, Antarctic Peninsula. *Marine Ornithology* **28:** 21-27.

Rau, F., Betgen, T., Beppler, D. & Agraz, J.L. 2000. A new topographic map 1:7500 of Cierva Point (Danco Coast, Antarctic Peninsula). *Polarforschung* **67** (1/2): 87-90.

ANT082: Bluff Island

IBA criteria	A4i
Coordinates	61°33' W, 62°21' S
Area	89 ha
Altitude	0 to < 250 m
Protection	None



Site description

Bluff Island (also known as Murray Island) is located in Hughes Bay, Gerlache Strait, 500 m from the Danco Coast on the western Antarctic Peninsula. The IBA qualifies on the basis of the Imperial Shag (*Phalacrocorax* [*atriceps*] *bransfieldensis*) colony present and comprises the ice free area on a peninsula on the northern coast of Bluff Island.

The nearest permanent station is Primavera (ARG), located ~36 km to the northeast.

Birds

Approximately 180 breeding pairs of Imperial Shag were recorded on the western coast of a small peninsula at the north of Bluff Island in 1989 (unpublished data S. Poncet pers. comm. 2005). Information on other bird species present at the site is not available.

Other threatened / endemic wildlife

None known.

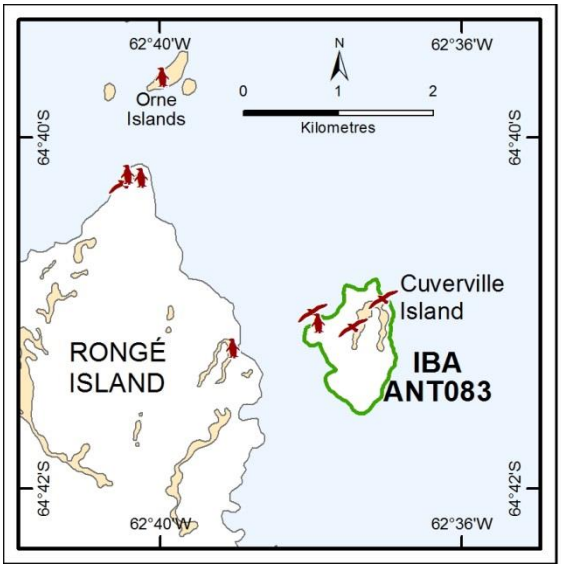
Conservation issues

None known.

Further reading

ANT083: Cuverville Island

IBA criteria	A1, A4ii
Coordinates	62°38' W, 64°41' S
Area	81 ha
Altitude	0 to < 250 m
Protection	None



Site description

Cuverville Island is a small island lying in the Errera Channel between Rongé Island and Arctowski Peninsula (Graham Land). A permanent ice-cap extends over much of the island, although on the northern slopes there is a series of broad, rocky beaches below steep cliffs. The rocky areas provide suitable breeding sites for penguins. The IBA qualifies on the basis of the Gentoo Penguin (*Pygoscelis papua*) colony present and is defined by the island coastline.

Vegetation consists of a range of moss and lichen species as well as the native Antarctic Hairgrass (*Deschampsia antarctica)* and Antarctic Pearlwort (*Colobanthus quitensis*) (ATS Visitor Site Guidelines: Cuverville Island).

The nearest scientific station is Gabriel Gonzáles Videla station (CHL), a summer-only facility in Paradise Cove with capacity for up to nine people (COMNAP, Antarctic Facilities, accessed 16/08/2010).

Birds

Gentoo Penguins breed along the north and northwest shoreline of Cuverville Island, with 6468 pairs recorded in December 2009 (H. Lynch pers. comm. 2010). More recently, 5950 breeding pairs of Gentoo Penguin were reported by the Antarctic Site Inventory in December 2012 (Lynch *et al*. 2013). The colony is the largest for this species on the Antarctic Peninsula. Imperial Shag (*Phalacrocorax* [*atriceps*] *bransfieldensis*) breed on the island with 29 pairs recorded on the northeast coast of the island in 2006 (Lynch *et al.* 2008). More recently, 49 breeding pairs of Imperial Shag were reported by the Antarctic Site Inventory in February 2013 (R. Naveen and H. Lynch pers. comm. 2014). Other confirmed breeders include Snowy Sheathbill (*Chionis albus*), South Polar Skua (*Catharacta maccormicki*), Brown Skua (*C. antarctica*), Wilson's Storm-petrel (*Oceanites oceanicus*), Kelp Gull (*Larus dominicanus*) and Antarctic tern (*Sterna vittata*) (Naveen & Lynch 2011).

Other threatened / endemic wildlife

Weddell Seals (*Leptonychotes weddellii*) and Antarctic Fur Seals (*Arctocephalus gazella*) are common at Cuverville Island, while Leopard Seals (*Hydrurga leptonyx*) have been observed off-shore (ATS Visitor Site Guidelines: Cuverville Island).

Conservation issues

Cuverville Island is a popular tourist destination, and IBA ANT083 lies within the area on the Antarctic Peninsula that is visited most intensively by tour vessels (Lynch *et al.* 2009). ATS Visitor Site Guidelines provide guidance for tour visits.

Further reading

Antarctic Treaty System Visitor Site Guidelines, *Cuverville Island*:
URL: http://www.ats.aq/siteguidelines/documents/Cuverville_e.pdf. Accessed: 10/08/2010.

Lynch, H.J., Crosbie, K., Fagan, W.F. & Naveen, R. 2009. Spatial patterns of tour ship traffic in the Antarctic Peninsula region. *Antarctic Science* **22** (2): 123-30.

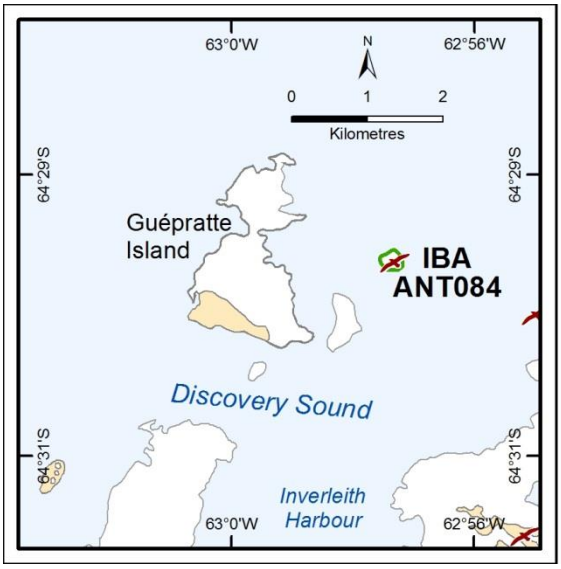
Lynch, H., Naveen, R. & Fagan, W. 2008. Censuses of Penguin, Blue-eyed Shag *Phalacrocorax atriceps* and Southern Giant Petrel *Macronectes giganteus* populations on the Antarctic Peninsula, 2001-2007. *Marine Ornithology* **36**: 83-97.

Lynch, H.J., Naveen, R. & Casanovas, P.V. 2013. Antarctic Site Inventory breeding bird survey data 1994 – 2013. *Ecology* (Data Paper) **94**(11): 2653. doi: 10.1890/13-1108.1

Naveen, R. & Lynch, H. 2011. *Compendium of Antarctic Peninsula visitor sites (3rd edition): A Report to the United States Environmental Protection Agency*. Oceanites, Chevy Chase, MD.

ANT084: Islet E of Guépratte Island

IBA criteria	A4i
Coordinates	62°57' W, 64°30' S
Area	6 ha
Altitude	0 to < 250 m
Protection	None



Site description

A large colony of Imperial Shags (*Phalacrocorax* [*atriceps*] *bransfieldensis*) is located on a small islet ~1.5 km east of Guépratte Island, Fournier Bay, ~1 km north of Parker Peninsula on the northeastern coast of Anvers Island, Palmer Archipelago. The IBA qualifies on the basis of the Imperial Shag colony present and is defined by the coastline of the islet on which the birds breed.

The nearest scientific station is Melchior (ARG), located on Melchior Island ~20 km to the north.

Birds

Approximately 220 breeding pairs of Imperial Shag were recorded at this site in 1987 (unpublished data S. Poncet pers. comm. 2005).

Other threatened / endemic wildlife

None known.

Conservation issues

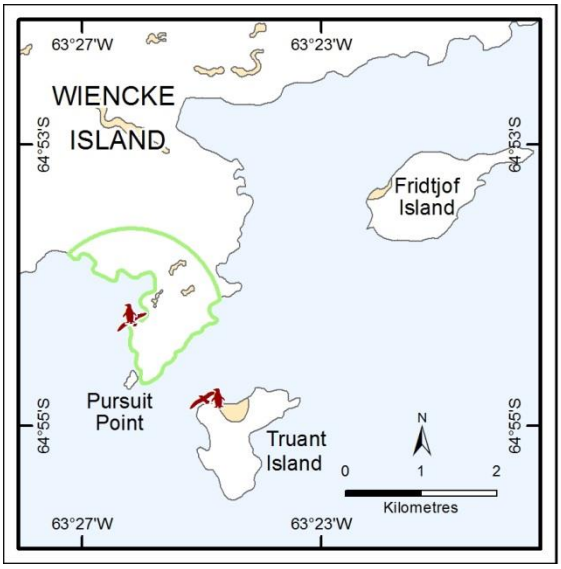
Gerlache Strait is one of the areas on the Antarctic Peninsula that is most intensively visited by tour vessels (Lynch *et al.* 2009), although the extent of landings and zodiac cruising at IBA ANT084 is unknown.

Further reading

Lynch, H.J., Crosbie, K., Fagan, W.F. & Naveen, R. 2009. Spatial patterns of tour ship traffic in the Antarctic Peninsula region. *Antarctic Science* **22** (2): 123-30.

Pursuit Point, Wiencke Island – Delisted (ex ANT011)

IBA criteria	Originally A4i; Does not qualify (2015)
Coordinates	63°27' W, 64°55' S
Area	183 ha
Altitude	0 to < 500 m
Protection	None



Site description

Pursuit Point is a largely ice-covered peninsula located on southeastern Wiencke Island, one of the larger islands in the Palmer Archipelago, which lies west of Gerlache Strait and ~9 km from the Antarctic Peninsula. The IBA originally qualified on the basis of the Imperial Shag (*Phalacrocorax* [*atriceps*] *bransfieldensis*) colony present and included all land and permanent ice within a 1 km radius of the breeding locality.

The nearest scientific station is Yelcho (CHL), a summer-only facility located 8 km to the northwest on southern Doumer Island that is temporarily closed (COMNAP, Antarctic Facilities, accessed 19/08/2010).

Birds

Colonies of around 140 breeding pairs of Imperial Shag and 200 breeding pairs of Gentoo Penguin (*Pygoscelis papua*) were reported breeding at Pursuit Point in the mid-1980s (Poncet & Poncet 1987; unpublished data S. Poncet pers. comm. 2005). However, recent nest count surveys undertaken in 2012/13 by Casanovas *et al*. (in press) recorded only 21 breeding pairs of Imperial Shag and 567 pairs of Gentoo Penguin. As a result, the site at Pursuit Point no longer qualifies as an IBA and has been delisted.

Other threatened / endemic wildlife

None known.

Conservation issues

None known.

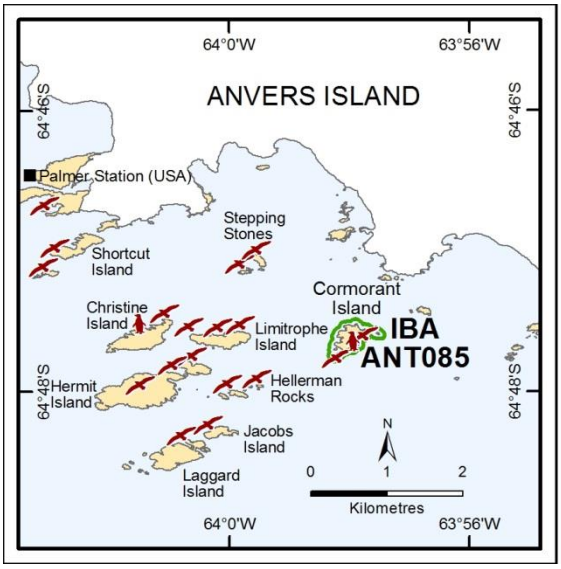
Further reading

Casanovas, P., Naveen, R., Forrest, S., Poncet, J. & Lynch, H.J. in press. A comprehensive coastal seabird survey maps out the front lines of ecological change on the western Antarctic Peninsula. *Polar Biology*.

Poncet, S. & Poncet, J. 1987. Censuses of penguin populations of the Antarctic Peninsula, 1983-87. *British Antarctic Survey Bulletin* **77**: 109-29.

ANT085: Cormorant Island

IBA criteria	A4i
Coordinates	63°59' W, 64°48' S
Area	22 ha
Altitude	0 – 32 m
Protection	Restricted Zone within ASMA No.7



Site description

Cormorant Island is a small, ice-free island located in Bismarck Strait, ~1 km south of Anvers Island and ~5 km from Arthur Harbour and Palmer Station (USA). The island is named for the large number of Imperial Shags (*Phalacrocorax* [*atriceps*] *bransfieldensis*) observed on the island.

Cormorant Island and the nearshore marine area up to 50 m surrounding the island is now designated a Restricted Zone under the Management Plan for Antarctic Specially Managed Area No. 7: Southwest Anvers Island and Palmer Basin. The IBA qualifies on the basis of the Imperial Shag colony present and is defined by the boundary of the Restricted Zone.

Anvers Island and surrounding islands are dominated by granitic and volcanic rocks. Vegetation comprises a wide range of mosses, lichens and algae and includes the two native flowering plants Antarctic Hairgrass (*Deschampsia antarctica)* and Antarctic Pearlwort (*Colobanthus quitensis*) (ASMA No.7 Management Plan, 2009).

Climate data are not available specifically for Cormorant Island, although good records exist for nearby Palmer Station, where the average annual air temperature for the period 1989-2009 was –1.7°C. The minimum and maximum temperatures recorded at Palmer Station over the same period were –26.0°C and 11.6°C respectively. January is typically the warmest month and August the coldest (CLIMDB/HYDRODB, accessed 16/08/2010). Average annual precipitation has been 655 mm since 1989. Storms in the region are relatively frequent, whilst prevailing winds are generally light to moderate and from the northeast (ASMA No.7 Management Plan, 2009).

The nearest permanent scientific station is Palmer (USA), situated ~5 km to the northwest in Arthur Harbour. Palmer Station operates year-round, with summer occupancy of ~43 people (COMNAP, Antarctic Facilities, accessed 16/08/2010).

Birds

Cormorant Island is one of the largest colonies of Imperial Shag in the Antarctic Peninsula region, with 729 breeding pairs recorded in 1985 (unpublished data S. Poncet pers. comm. 2005). Adélie Penguins (*Pygoscelis adeliae*) also breed on Cormorant Island, with 872 pairs recorded in the last published count (Parmelee & Parmelee 1987). Southern Giant Petrels (*Macronectes giganteus*) breed on the island, numbering around 13 breeding pairs (W. Fraser, pers. comm. 2006).

Other threatened / endemic wildlife

Fin Whale (*Balaenoptera physalus*) and Sei Whale (*Balaenoptera borealis*) have previously been observed near southern Anvers Island (ASMA No.7 Management Plan, 2009). Other species observed in the area include Minke Whale (*Balaenoptera bonaerensis*), Killer Whale (*Orcinus orca*), Humpback Whale (*Megaptera novaeangliae*), Southern Right Whale (*Eubalaena australis*) and Hourglass Dolphin (*Lagenorhynchus cruciger*).

Seal species common to the Anvers Island area include the Weddell Seal (*Leptonychotes weddellii*), Southern Elephant Seal (*Mirounga leonina*), Crabeater Seal (*Lobodon carcinophagus*), Leopard Seal (*Hydrurga leptonyx*) and Antarctic Fur Seal (*Arctocephalus gazella*). However, there are no records of seals breeding in the area (ASMA No. 7 Management Plan, 2009).

Conservation issues

One of the largest marine oil spills in Antarctica occurred ~5 km from Cormorant Island with the sinking of the ship *Bahia Paraiso* in 1989 in Arthur Habour. The spill of ~600 000 litres of diesel oil affected bird breeding performance and the nearshore marine environment for several years. It has been estimated that ~16 % of Adélie Penguins exposed to the spill may have been killed (Penhale *et al.* 1997). Populations have now recovered, and the impacts are not considered to have been as long-term as initially feared. The event, however, raised significant conservation and marine planning concerns. With large colonies of breeding wildlife in the local area, and a substantial programme of science being carried out, ASMA No. 7 Southwest Anvers Island and Palmer Basin was designated in 2007 to coordinate national program activities and protect the outstanding environment of the region and science being conducted in the area.

Restricted Zones such as Cormorant Island have been designated under ASMA No. 7 because of their ecological and scientific value and their sensitivity to disturbance. Access to Cormorant Island between 1 October and 15 April is not permitted except by those conducting 'essential scientific research, monitoring or maintenance' (ASMA No. 7 Management Plan, 2009). Specific guidelines aim to minimise disturbance to birds during the breeding season.

Arthur Harbour and Palmer Station are popular destinations for tourist cruise ships and yachts. However, under the ASMA No. 7 Management Plan tour visits are directed to Palmer Station itself and to the Torgersen Island Visitor Zone, and all visits are strictly controlled. Thus, whilst the annual number of tourists visiting the vicinity are relatively high (e.g. 8637 at Palmer Station in the 2009/10 summer), the Restricted Zone ensures that human activity and disturbance at Cormorant Island is kept to a minimum.

Further reading

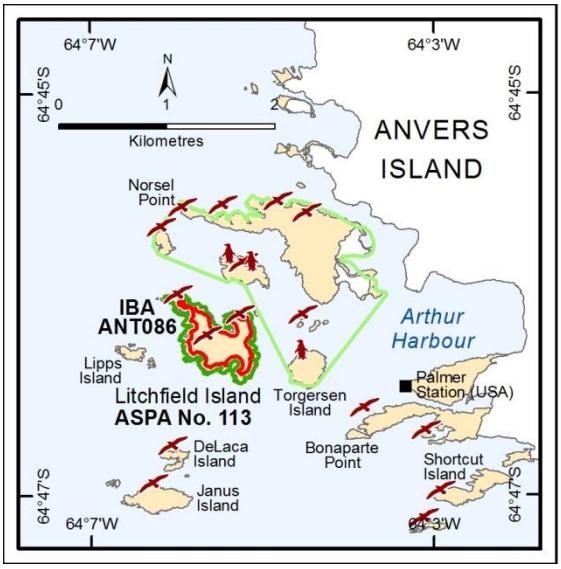
ASMA No. 7 Palmer Basin and Southwest Anvers Island: Management Plan (2009), Appendix A.
See also: Palmer LTER project site at http://pal.lternet.edu/

Parmelee, D.F. & Parmelee, J.M. 1987. Revised penguin numbers and distribution for Anvers Island, Antarctica. *British Antarctic Survey Bulletin* **76**: 65-73.

Penhale, P.A., Coosen, J. & Marschoff, E.R. 1997. The *Bahia Paraiso*: a case study in environmental impact, remediation and monitoring. In Battaglia, B., Valencia, J. & Walton, D.W.H. (eds) *Antarctic Communities: species, structure and survival.* Cambridge University Press, Cambridge: 437-44.

Arthur Harbour North – Delisted (ex ANT013)

IBA criteria	Originally A4iii; Does not qualify (2015)
Coordinates	64°05' W, 64°46' S
Area	194 ha
Altitude	< 50 m
Protection	Within ASMA No.7



Site description

Arthur Harbour lies on the southern coast of Anvers Island. A number of islands in northern Arthur Harbour host large colonies of breeding birds, and these include Norsel Point, Breaker Island, Humble Island, Elephant Rocks and Torgersen Island. Some of these are designated as Restricted Zones under Antarctic Specially Managed Area (ASMA) No. 7: Southwest Anvers Island and Palmer Basin. The IBA was originally designated for the large concentration of seabirds present and comprised all of these islands and the intervening marine area lying ~1 km to the northwest of Palmer Station (USA).

The nearest scientific station is Palmer (USA), situated on Gamage Point, eastern shore of Arthur Harbour. A description of the station is provided in IBA ANT085.

Birds

The site originally qualified as an IBA because it supported ~11 500 breeding pairs of Adélie Penguin (*Pygoscelis adeliae*) in 1983-84 (Parmelee & Parmelee 1987). However, the Humble Island colony had decreased to ~587 breeding pairs in Dec 2011 (Antarctic Site Inventory data, R. Naveen and H. Lynch pers. comm. 2014), while Lynch & LaRue (2014) reported numbers at Torgersen Island were ~1157 breeding pairs (95% CI: 554, 2111) in 2008. The combined total is now insufficient for the site to qualify as an IBA.

One pair of Macaroni Penguin (*Eudyptes chrysolophus*) was observed nesting on Humble Island in 1985. Southern Giant Petrel (*Macronectes giganteus*) breed on Humble Island (48 pairs), Breaker Island (3 pairs), Norsel Point (133 pairs) and Elephant Rocks (1 pair) (W. Fraser pers. comm. 2006). The Imperial Shag (*Phalacrocorax* [*atriceps*] *bransfieldensis*) is a confirmed breeder on Elephant Rocks and a wide range of non-breeding bird species also frequent the area (ASMA No. 7 Management Plan, 2009).

Other threatened / endemic wildlife

See ANT085.

Conservation issues

See ANT085 for more information on regional conservation issues.

Further reading

ASMA No.7 Palmer Basin and Southwest Anvers Island: Management Plan (2009).

Lewis-Smith, R.I. 1982. Plant Succession and re-exposed moss banks on a deglaciated headland in Arthur Harbour, Anvers Island. *British Antarctic Survey Bulletin* **51**: 193-99.

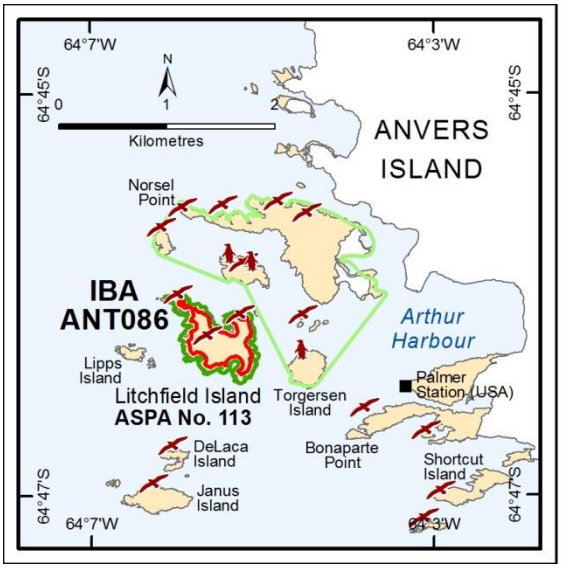
Lynch, H.J. & LaRue, M.A. 2014. First global census of the Adélie Penguin. *The Auk* **131**(4): 457-66. doi:10.1642/AUK-14-31.1

Palmer LTER project URL: http://pal.lternet.edu/, accessed: 04/08/2010.

Parmelee, D.F. & Parmelee, J.M. 1987. Revised penguin numbers and distribution for Anvers Island, Antarctica. *British Antarctic Survey Bulletin* **76**: 65-73.

ANT086: Litchfield Island

IBA criteria	A4ii
Coordinates	64°06' W, 64°46' S
Area	36 ha
Altitude	0 – 48 m
Protection	ASPA No.113, within ASMA No. 7



Site description

Litchfield Island lies ~1 km to the south of Norsel Point, Anvers Island, at the western limit of Arthur Harbour. The IBA qualifies on the basis of the South Polar Skua (*Catharacta maccormicki*) colony present and is defined by the boundary of ASPA No. 113 Litchfield Island, which was designated to protect an unusually rich and diverse terrestrial habitat, with a wide range of wildlife (ASPA No. 113 Management Plan, 2014).

The geology of Litchfield Island comprises tonalites, granites and other volcanics (ASPA No. 113 Management Plan, 2014). Relief is varied with numerous low summits, the highest of which is 48 m, and there are several small ponds on the island. In the 1960s, one finest examples of maritime Antarctic vegetation existed on Litchfield Island, including extensive moss carpets (ASPA No. 113 Management Plan, 2014). By 2001, Antarctic Fur Seals (*Arctocephalus gazella*) had severely impacted the vegetation on Litchfield Island's lower slopes. However, on higher slopes, vegetation remains intact.

The nearest scientific station is Palmer (US), ~1.5 km to the east. See ANT085 for more information on Palmer Station and local climate.

Birds

At least six bird species breed on Litchfield Island, making it one of the most ornithologically diverse sites in Arthur Harbour. Census records for the South Polar Skua indicate up to 50 breeding pairs breed on Litchfield Island, although the number fluctuates widely from year to year (ASPA No. 113 Management Plan, 2014). Breeding pairs of Brown Skua (*Catharacta antarctica*) and hybrid skua have also been observed in the past. However, an outbreak of fowl cholera in 1979 is thought to have killed many of the Brown Skua and only two pairs were recorded in 1980/81 (ASPA No. 113 Management Plan, 2014). There were 57 breeding pairs of Southern Giant Petrel (*Macronectes giganteus*) on Litchfield Island in the 2008/09 season (W. Fraser pers. comm. 2014) and a few Antarctic Tern (*Sterna vittata*) nests are recorded each year. Kelp Gulls (*Larus dominicanus*) breed in low numbers in this IBA, whilst Wilson's Storm-petrels (*Oceanites oceanicus*) are also a confirmed breeder at the site.

Around 1000 pairs of Adélie Penguin (*Pygoscelis adeliae*) were nesting on Litchfield Island in the early 1970's (Parmelee & Parmelee, 1987), although by 2006/07 all nests had been vacated (W. Fraser pers. comm. 2014). Population decline of Adélie breeding sites in the Palmer area has been linked to regional changes in sea ice extent and snow accumulation rates (Emslie *et al.* 1998; McClintock *et al.* 2008).

Other non-breeding bird species frequenting the site include the Imperial Shag (*Phalacrocorax* [*atriceps*] *bransfieldensis*), Chinstrap Penguin (*Pygoscelis antarctica*) and Gentoo Penguin (*P. papua*). Occasional observations are made of Snow Petrel (*Pagodroma nivea*), Cape Petrel (*Daption capense*), Antarctic Petrel (*Thalassoica antarctica*) and Southern Fulmar (*Fulmarus glacialoides*).

Other threatened / endemic wildlife

Antarctic Fur Seals (*Arctocephalus gazella*) commonly haul out on Litchfield Island from February onwards each year, although numbers have reportedly decreased in the Arthur Harbour area in recent years (Siniff *et al.* 2008). Southern Elephant Seals (*Mirounga leonina*) haul out along the shoreline of Litchfield Island for much of the year and Weddell Seals (*Leptonychotes weddellii*) are also occasionally observed. Crabeater Seals (*Lobodon carcinophagus*) and Leopard

Seals (*Hydrurga leptonyx*) are regularly observed on ice floes nearby (ASPA No. 113 Management Plan, 2014). See ANT085 for information on other species observed nearby.

Conservation issues

While Palmer Station (USA) is nearby, access to Litchfield Island is strictly by permit under ASPA No. 113. Visitors are not permitted except for 'compelling scientific reasons that cannot be served elsewhere, or for essential management purposes'. The Management Plan imposes strict conditions on activities, and overflight restrictions are also in place. As such, the impacts of visitors to Litchfield Island on the breeding avifauna are minimal. However, see ANT085 for information on conservation issues that arose as a result of the sinking of the *Bahia Paraiso* in 1989 and arising from global climate change.

Further reading

ASPA No. 113 Litchfield Island: Management Plan (2009).

ASMA No. 7 Palmer Basin and Southwest Anvers Island: Management Plan (2014).

Palmer LTER project URL: http://pal.lternet.edu/, accessed: 04/08/2010.

Emslie, S. D., Fraser, W., Smith, R.C. & Walker, W. 1998. Abandoned penguin colonies and environmental change in the Palmer Station area, Anvers Island, Antarctic Peninsula. *Antarctic Science* **10** (3): 257-68.

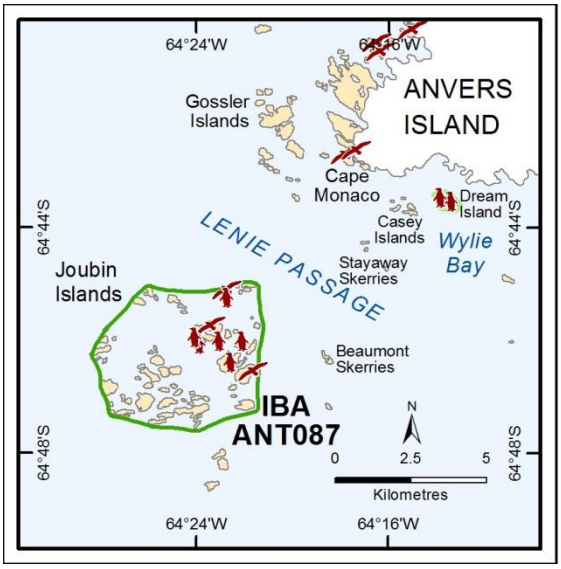
McClintock, J., Ducklow, H. & Fraser, W. 2008. Ecological responses to climate change on the Antarctic Peninsula. *American Scientist* **96**: 302-10.

Parmelee, D.F. & Parmelee, J.M. 1987. Revised penguin numbers and distribution for Anvers Island, Antarctica. *British Antarctic Survey Bulletin* **76**: 65-73.

Siniff, D.B., Garrott, R.A., Rotella, J.J., Fraser, W.R. & Ainley, D.G. 2008. Opinion: Projecting the effects of environmental change on Antarctic seals. *Antarctic Science* **20**: 425-35.

ANT087: Joubin Islands

IBA criteria	A4i
Coordinates	64°26' W, 64°47' S
Area	2217 ha
Altitude	< 70 m
Protection	Restricted Zone within ASMA No.7



Site description

The Joubin Islands are an archipelago comprising numerous small islands, islets and offshore rocks situated ~5 km from Cape Monaco, southwestern Anvers Island.

The Joubin Islands are designated as a Restricted Zone under Antarctic Specially Managed Area No. 7: Southwest Anvers Island and Palmer Basin, which includes the marine area extending to a 50 m buffer around the outer shorelines. The IBA qualifies on the basis of the Imperial Shag (*Phalacrocorax* [*atriceps*] *bransfieldensis*) colony present and covers the area defined by the boundary of the Restricted Zone.

The geology of the Joubin Islands shares a granitic and volcanic origin with Anvers Island. Vegetation is typical of the region, and consists of a wide range of mosses, lichens and algae, as well as the native vascular plants (ASMA No. 7 Management Plan, 2009).

The nearest permanent scientific station is Palmer (USA), situated ~15 km to the east at Arthur Harbour, southern Anvers Island. Climate data specifically for the Joubin Islands are not available. See ANT085 for more information on Palmer Station and local climate.

Birds

Several bird species breed on the Joubin Islands, including the Imperial Shag, Adélie Penguin (*Pygoscelis adeliae*), Gentoo Penguin (*P. papua*), Chinstrap Penguin (*P. antarctica*) and Southern Giant Petrel (*Macronectes giganteus*). More than 250 pairs of Imperial Shag were recorded in the north of the Joubin Islands in 1987 (unpublished data S. Poncet pers. comm. 2005). Around 30 pairs of Southern Giant Petrel were recorded in 1999 (Patterson *et al.* 2008), typically breeding on the northeast aspect of high ridges on most islands (W. Fraser pers. comm. 2006). Penguins observed breeding at the site in 1990 comprised 1261 pairs Adélie, 33 pairs Chinstrap and 104 pairs Gentoo (S. & J. Poncet pers. comm. cited in Woehler 1993).

Other threatened / endemic wildlife

See ANT085 for information on other species observed in the region.

Conservation issues

Designation of the Joubin Islands as a Restricted Zone under ASMA No. 7 provides controls and guidelines on visitor access. More information on these conditions, regional scientific programmes, and the broad conservation issues can be found under ANT085 and in the Management Plan for ASMA No. 7.

Further reading

ASMA No. 7 Palmer Basin and Southwest Anvers Island: Management Plan (2009).

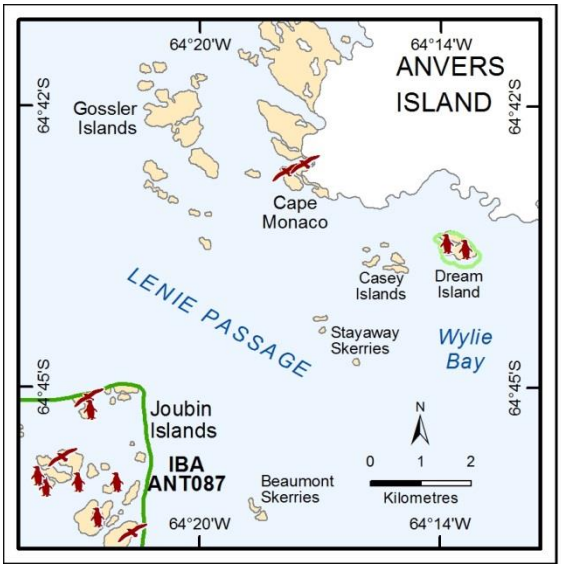
Palmer LTER project URL: http://pal.lternet.edu/, accessed: 04/08/2010.

Patterson, D.L., Woehler, E.J., Croxall, J.P., Cooper, J., Poncet, S., Peter, H.-U., Hunter, S. & Fraser, W.R. 2008. Breeding distribution and population status of the Northern Giant Petrel *Macronectes halli* and the Southern Giant Petrel *M. giganteus*. *Marine Ornithology* **36**: 115-24.

Woehler, E.J. (ed.) 1993. *The distribution and abundance of Antarctic and sub-Antarctic penguins.* Scientific Committee on Antarctic Research. Cambridge, UK.

Dream Island – Delisted (ex ANT016)

IBA criteria	Originally A4iii; Does not qualify (2015)
Coordinates	64°14' W, 64°43' S
Area	40 ha
Altitude	0 – 35 m
Protection	Restricted Zone within ASMA No.7



Site description

Dream Island lies ~800 m south of Anvers Island in the west of Wylie Bay, ~10 km to the northwest of Palmer Station (USA) in Arthur Harbour. Dream Island is designated under Antarctic Specially Managed Area No. 7: Southwest Anvers Island and Palmer Basin as a Restricted Zone, which includes the marine area extending to a 50 m buffer around the outer shoreline. The original IBA was designated for the large concentration of seabirds present and covered the area defined by the boundary of the Dream Island Restricted Zone.

The geology of Dream Island shares a granitic and volcanic origin with Anvers Island. Vegetation is typical of the region, and consists of a wide range of mosses, lichens and algae, as well as Antarctic Hairgrass (*Deschampsia antarctica)*.

The nearest permanent scientific station is Palmer (USA), situated ~10 km to the east at Arthur Harbour, southern Anvers Island. See ANT085 for more information on Palmer Station and local climate.

Birds

The site originally qualified as an IBA because in 1985 it supported a large Adélie Penguin (*Pygoscelis adeliae*) colony of 11 263 pairs occupying the central and northwestern areas of the island (Parmelee & Parmelee, 1987). However, recent analysis of January 2013 satellite imagery by Lynch & LaRue (2014) indicated a significant decrease in the colony to ~1887 breeding pairs (95% CI: 989, 3331), which is lower than the threshold required to qualify as an IBA so the site has been delisted. Small numbers of Chinstrap Penguins (*Pygoscelis antarctica*) also breed on Dream Island, although a recent count is not available.

Other threatened / endemic wildlife

See ANT085 for information on other species observed in the region.

Conservation issues

Designation of Dream Island as a Restricted Zone under ASMA No. 7 provides controls and guidelines on visitor access. More information on these conditions, regional scientific programmes, and the broad conservation issues can be found under ANT085 and in the Management Plan for ASMA No. 7.

Further reading

ASMA No. 7 Palmer Basin and Southwest Anvers Island: Management Plan (2009).

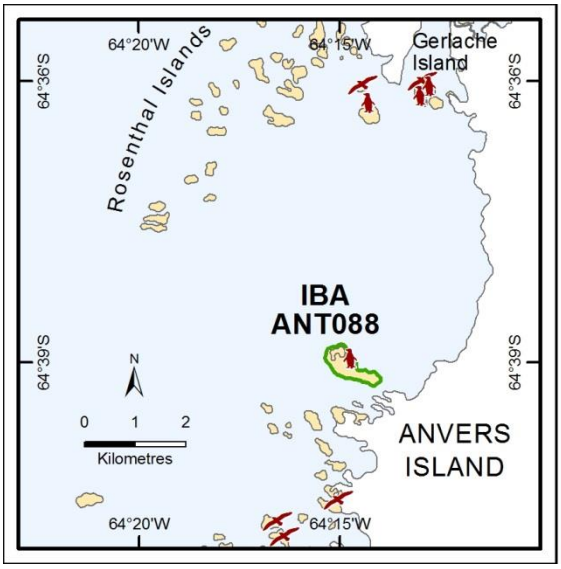
Lynch, H.J. & LaRue, M.A. 2014. First global census of the Adélie Penguin. *The Auk* **131**(4): 457-66. doi:10.1642/AUK-14-31.1

Palmer LTER project URL: http://pal.lternet.edu/, accessed: 04/08/2010.

Parmelee, D.F. & Parmelee, J.M. 1987. Revised penguin numbers and distribution for Anvers Island, Antarctica. *British Antarctic Survey Bulletin* **76**: 65-73.

ANT088: Islet S of Gerlache Island

IBA criteria	A1, A4ii
Coordinates	64°15' W, 64°39' S
Area	39 ha
Altitude	0 to < 250 m
Protection	ASMA No.7



Site description

A small ice free islet of low relief lies 0.5 km from the west coast of Anvers Island, and ~4.5 km to the south of Gerlache Island in the Rosenthal Islands, Palmer Archipelago. The IBA qualifies on the basis of the Gentoo Penguin (*Pygoscelis papua*) colony present and is defined by the island coastline.

Information on the environment at this island is not available, although the geology is likely to be similar to that on Anvers Island, which has granitic and volcanic origins.

The nearest permanent scientific station is Palmer (USA), situated ~20 km to the east at Arthur Harbour, southern Anvers Island. See ANT085 for more information on Palmer Station and local climate.

Birds

A Gentoo Penguin colony of ~3000 pairs was recorded on the islet in 1987 (Poncet & Poncet 1987). While the qualifying threshold for Gentoo Penguins was raised to 3900 in 2014, in view of the size of the colony and uncertainty over current numbers at this site, the IBA has been retained. There is no information on other birds breeding at this site.

Other threatened / endemic wildlife

Southern Giant Petrels (*Macronectes giganteus*) are known to breed on the west coast of Anvers Island (W. Fraser pers. comm. 2006). See ANT085 for information on other species observed in the region.

Conservation issues

None known. The IBA lies within Antarctic Specially Managed Area (ASMA) No. 7, which provides a Management Plan to coordinate activities in the region. Guidelines on visitor access to this island are not presently specified. More information on the regional environment and scientific programmes, and the broad conservation issues can be found under ANT085 and in the Management Plan for ASMA No. 7.

Further reading

ASMA No. 7 Palmer Basin and Southwest Anvers Island: Management Plan (2009).

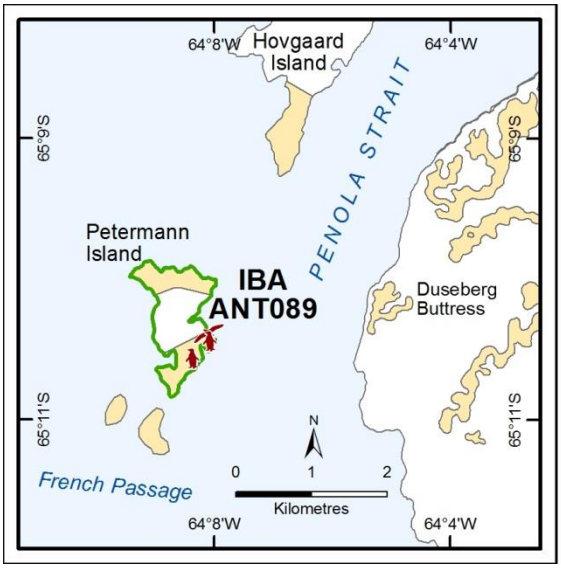
Palmer LTER project URL: http://pal.lternet.edu/ accessed: 04/08/2010.

Poncet, S. & Poncet, J. 1987. Censuses of penguin populations of the Antarctic Peninsula, 1983-87. *British Antarctic Survey Bulletin* **77**: 109-29.

Graham Coast

ANT089: Petermann Island

IBA criteria	A1, A4ii
Coordinates	64°10' W, 65°10' S
Area	99 ha
Altitude	0 to < 250 m
Protection	None



Site description

Petermann Island is located in Penola Strait, in the Wilhelm Archipelago, ~2 km west of the Antarctic Peninsula. The island extends ~1.8 km from north to south and is about 1.2 km across. The IBA qualifies on the basis of the Gentoo Penguin (*Pygoscelis papua*) colony present and includes all of Petermann Island and its surrounding coastal rocks.

Petermann Island has a rocky coastline interspersed by raised pebble beaches and rises fairly steeply to elevations of ~150–250 m. The island has volcanic origins, and about half is covered by a permanent and crevassed icecap, and mosses and lichens are present in ice free areas. Antarctic Historic Site and Monument No. 27 is on Megalestris Hill and an abandoned refuge is present on the eastern coast of the island.

The nearest scientific station is Vernadsky (UKR), a year-round facility located ~9 km to the southwest on Galindez Island. Vernadsky Station has capacity for ~24 people (COMNAP, Antarctic Facilities, accessed 19/08/2010).

Birds

An estimated 3020 pairs of Gentoo Penguin were breeding on Petermann Island in December 2009 (H. Lynch, pers. comm. 2010). More recently, 3300 breeding pairs were reported by the Antarctic Site Inventory in January 2013 (Lynch *et al*. 2013; Casanovas *et al*. in press). While the global population of Gentoo Penguins was revised in 2014, the IBA has been retained in view of the uncertainty related to annual fluctuations in Gentoo numbers. Around 296 Adélie Penguin (*P. adeliae*) and 43 Imperial Shag (*Phalacrocorax* [*atriceps*] *bransfieldensis*) nests were counted in 2012/2013 (Lynch *et al*. 2013). One breeding pair of Chinstrap Penguin (*Pygoscelis antarctica*) was observed in December 2010 (Naveen & Lynch 2011).

Wilson's Storm-petrel (*Oceanites oceanicus*), Snowy Sheathbill (*Chionis albus*), South Polar Skua (*Catharacta maccormicki*), Kelp Gull (*Larus dominicanus*) and Antarctic Tern (*Sterna vittata*) are also confirmed breeders (Naveen & Lynch 2011). South Polar Skuas typically nest on high ground in the northern part of the island.

Other threatened / endemic wildlife

None known.

Conservation issues

Petermann Island is a popular tourist destination with an average of ~11 650 visitors (inclusive of tourists, staff and crew) landing at the site each year from 2005-10 (IAATO Tourism Statistics, accessed: 10/05/2011). Naveen (2003) reported yachts also frequent the site. ATS Visitor Site Guidelines provide guidance for visitors.

Further reading

Antarctic Treaty System Visitor Site Guidelines, *Petermann Island*:
URL http://www.ats.aq/siteguidelines/documents/Petermann_e.pdf. Accessed: 10/05/2011.

Casanovas, P., Naveen, R., Forrest, S., Poncet, J. & Lynch, H.J. in press. A comprehensive coastal seabird survey maps out the front lines of ecological change on the western Antarctic Peninsula. *Polar Biology*.

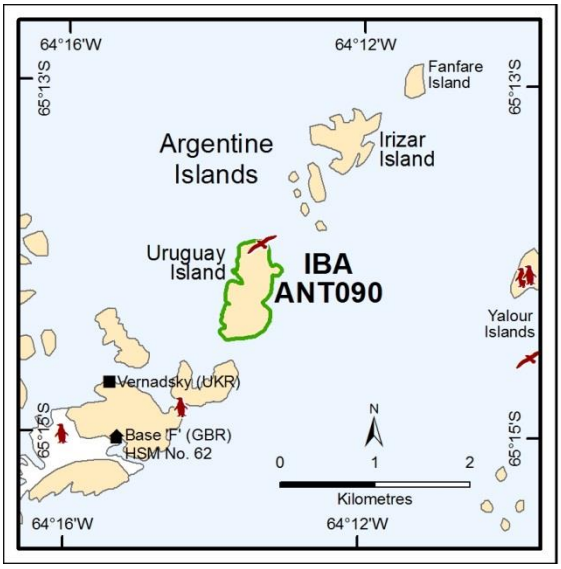
Lynch, H., Naveen, R. & Fagan, W. 2008. Censuses of Penguin, Blue-eyed Shag *Phalacrocorax atriceps* and Southern Giant Petrel *Macronectes giganteus* populations on the Antarctic Peninsula, 2001-2007. *Marine Ornithology* **36**: 83-97.

Lynch, H.J., Naveen, R. & Casanovas, P.V. 2013. Antarctic Site Inventory breeding bird survey data 1994 – 2013. *Ecology* (Data Paper) **94**(11): 2653. doi: 10.1890/13-1108.1

Naveen, R. & Lynch, H. 2011. *Compendium of Antarctic Peninsula visitor sites (3rd edition): A Report to the United States Environmental Protection Agency*. Oceanites, Chevy Chase, MD.

ANT090: Uruguay Island

IBA criteria	A4i
Coordinates	64°14' W, 65°14' S
Area	42 ha
Altitude	0 to < 250 m
Protection	None



Site description

Uruguay Island is part of the Argentine Island group in the Wilhelm Archipelago, ~6 km from the Graham Coast of the Antarctic Peninsula. The island is ~1 km from north to south and ~500 m across. The IBA qualifies on the basis of the Imperial Shag (*Phalacrocorax* [*atriceps*] *bransfieldensis*) colony present and includes all of Uruguay Island.

Information on the environment of Uruguay Island is not available. The nearest scientific station is Vernadsky (UKR), located on Galindez Island ~1 km to the southwest. Vernadsky Station operates year-round and accommodates ~24 people in the summer (COMNAP, Antarctic Facilities, accessed 19/08/2010).

Birds

Approximately 203 pairs of Imperial Shag were breeding on Uruguay Island in 1986 (unpublished data S. Poncet pers. comm. 2005).

Other threatened / endemic wildlife

None known.

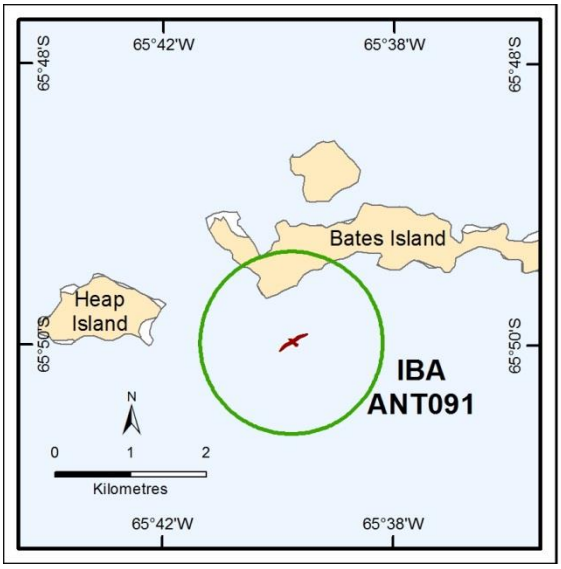
Conservation issues

Vernadsky Station (UKR), with associated operational and support activities, is located in close proximity to the IBA. Tourist vessels are also common in the region and often visit Vernadsky Station, although available data indicates that visits to Uruguay Island are infrequent.

Further reading

ANT091: Islet S of Bates Island

IBA criteria	A4i
Coordinates	65°40' W, 65°50' S
Area	457 ha
Altitude	Unknown
Protection	None



Site description

A small uncharted islet is located ~700 m south of Bates Island, Biscoe Islands, ~20 km off the Graham Coast of the Antarctic Peninsula. The IBA qualifies on the basis of the Imperial Shag (*Phalacrocorax* [*atriceps*] *bransfieldensis*) colony present and is defined as a circular area of 500 ha centered on the approximate position of this islet. The site is 12 km southwest from IBA ANT092 which lies north of Dodman Island.

The nearest scientific station is Vernadsky (UKR), 97 km to the northeast.

Birds

Approximately 150 breeding pairs of Imperial Shag were observed at this site in 1986 (unpublished data S. Poncet pers. comm. 2005). No other bird species have been recorded breeding in the area.

Other threatened / endemic wildlife

None known.

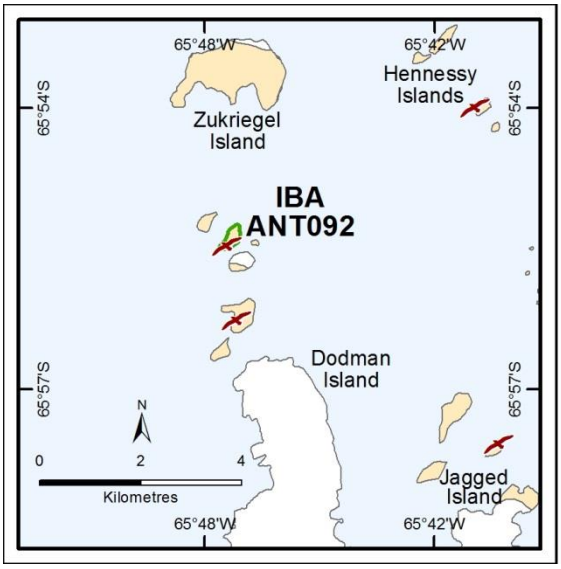
Conservation issues

None known.

Further reading

ANT092: Island N of Dodman Island

IBA criteria	A4i
Coordinates	65°47' W, 65°55' S
Area	11 ha
Altitude	0 to < 250 m
Protection	None



Site description

Dodman Island is situated to the northwest of Holtedahl Bay, Graham Coast, and to the southeast of Renaud Island in the central Antarctic Peninsula region. The IBA qualifies on the basis of the Imperial Shag (*Phalacrocorax* [*atriceps*] *bransfieldensis*) colony present and comprises a small island of ~11 ha situated 2.5 km north of Dodman Island.

IBA ANT091 Bates Island lies 12 km to the northeast; IBA ANT093 Armstrong Reef lies ~20 km to the west; and IBA ANT094 Cape Evensen lies 25 km to the southeast. The nearest permanent scientific station is Vernadsky (UKR), which operates year-round and is located ~108 km to the northeast.

Birds

A colony of 163 pairs of Imperial Shag was recorded breeding on the western coast of the island in 1984 (unpublished data S. Poncet pers. comm. 2005). No other birds are known to breed at the site, although another smaller Imperial Shag colony was recorded at the same time on an island ~1.5 km to the south.

Other threatened / endemic wildlife

None known.

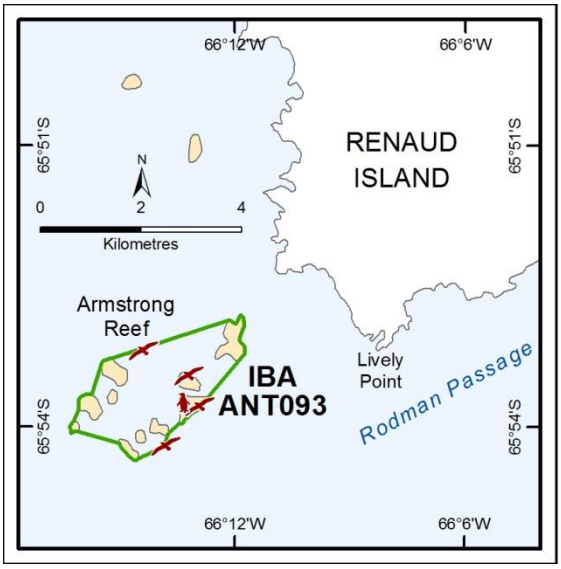
Conservation issues

None known.

Further reading

ANT093: Armstrong Reef

IBA criteria	A4i
Coordinates	66°14' W, 65°53' S
Area	510 ha
Altitude	< 250 m
Protection	None



Site description

Armstrong Reef is a small island group situated ~2 km southwest of Renaud Island, part of the Biscoe Islands, lying off the Graham Coast of the central Antarctic Peninsula. Armstrong Reef extends over 4.3 km in a southwest-northeast orientation and consists of a number of small ice-free islands each with areas of < 100 ha. The IBA qualifies on the basis of the Imperial Shag (*Phalacrocorax* [*atriceps*] *bransfieldensis*) colony present and comprises the islands of the reef and the intervening marine area.

Plutonic rocks dominate the geology of the island group (Smellie *et al.* 1985).

The nearest scientific station is Vernadsky (UKR), which is located ~121 km to the northeast. The area is remote from the most popular tour ship routes and thus receives few visitors.

Birds

Poncet & Poncet (1987) reported a large Adélie Penguin (*Pygoscelis adeliae*) colony on Armstrong Reef, with approximately 12 800 breeding pairs recorded in 1984, which originally qualified the site as an IBA. However, a recent ground nest count made in January 2013 (Casanovas *et al*. in press) indicated a decrease in the colony to ~2813 breeding pairs and the site therefore no longer qualifies as an IBA on account of the penguin colony.

However, a large colony of 525 pairs of Imperial Shag was also recorded breeding amongst the Adélies and on islets within the island group (unpublished data S. Poncet pers. comm. 2005). More recently, Casanovas *et al*. (in press) reported 114 pairs at the site based on an accurate nest count. A sizeable colony of 126 pairs of Southern Giant Petrel (*Macronectes giganteus*) was documented breeding on Armstrong Reef in 1983 (Patterson *et al.* 2008). In view of the interseasonal variability in breeding numbers, the IBA has been retained based on the criteria for Imperial Shags.

Other threatened / endemic wildlife

None known.

Conservation issues

None known.

Further reading

Casanovas, P., Naveen, R., Forrest, S., Poncet, J. & Lynch, H.J. in press. A comprehensive coastal seabird survey maps out the front lines of ecological change on the western Antarctic Peninsula. *Polar Biology*.

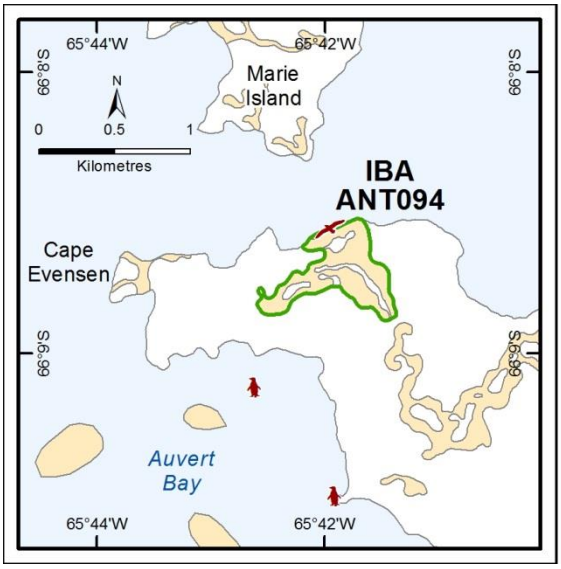
Patterson, D.L., Woehler, E.J., Croxall, J.P., Cooper, J., Poncet, S., Peter, H.-U., Hunter, S. & Fraser, W.R. 2008. Breeding distribution and population status of the Northern Giant Petrel *Macronectes halli* and the Southern Giant Petrel *M. giganteus*. *Marine Ornithology* **36**: 115-24.

Poncet, S. & Poncet, J. 1987. Censuses of penguin populations of the Antarctic Peninsula, 1983-87. *British Antarctic Survey Bulletin* **77**: 109-29.

Smellie, J.L., Moyes, A.B., Marsh, P.D. & Thomson, J.W. 1985. Geology of Hugo Island, Quintana Island, Sooty Rock, Betbeder Islands and parts of Biscoe and outcast islands. *British Antarctic Survey Bulletin* **68**: 91-100.

ANT094: Cape Evensen

IBA criteria	A4i
Coordinates	65°44' W, 66°09' S
Area	28 ha
Altitude	0 to < 750 m
Protection	None



Site description

Cape Evensen is located below Miller Heights on the Graham Coast of the central Antarctic Peninsula, in the region of Crystal Sound. The IBA qualifies on the basis of the Imperial Shag (*Phalacrocorax* [*atriceps*] *bransfieldensis*) colony present and comprises the ice-free ground ~1 km to the east of Cape Evensen. The IBA is 34 km southeast of ANT092 near Dodman Island, and 36 km southeast of ANT093: Armstrong Reef.

Steep slopes rise from the northern coastline to heights of up 750 m at the southern extent of this IBA. Information on the vegetation, soils or geology of the site is not available.

The nearest permanent scientific station is Vernadsky (UKR), which is located 125 km northeast of Cape Evensen and operated year-round.

Birds

A colony of ~180 pairs of Imperial Shag was recorded as breeding on north-facing slopes ~1 km east of Cape Evensen alongside colonies of Kelp Gull (*Larus dominicanus*) and skua (*Catharacta* sp.) (unpublished data S. Poncet pers. comm. 2005).

Other threatened / endemic wildlife

None known.

Conservation issues

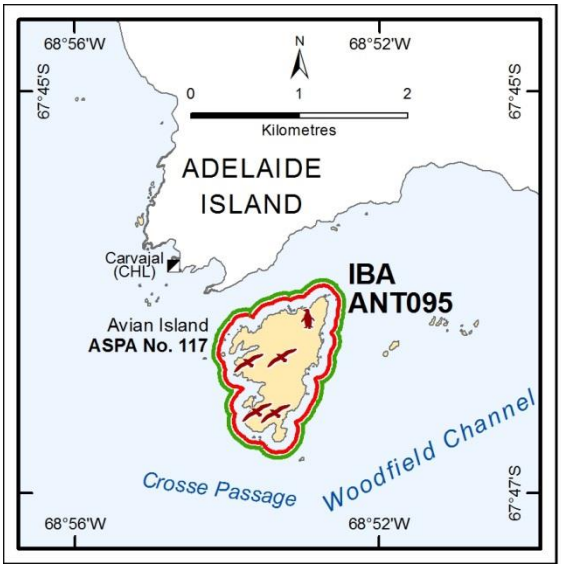
None known.

Further Reading

Marguerite Bay

ANT095: Avian Island

IBA criteria	A1, A4i, A4ii, A4iii
Coordinates	68°54' W, 67°46' S
Area	112 ha
Altitude	≤ 40 m
Protection	ASPA No. 117



Site description

Avian Island is a small island lying ~0.5 km south of Adelaide Island in Marguerite Bay, on the western side of the Antarctic Peninsula. Avian Island is one of the most ornithologically important sites in the Antarctic Peninsula region, and is designated as ASPA No. 117. The IBA qualifies on the basis of the Adélie Penguin (*Pygoscelis adeliae*), Imperial Shag (*Phalacrocorax* [*atriceps*] *bransfieldensis*), and South Polar Skua (*Catharacta maccormicki*) colonies present, and is defined by the boundary of the ASPA. The ASPA includes the littoral zone, offshore islets and rocks and a 100 m buffer zone around the shoreline.

Avian Island is of rocky, low relief rising to 40 m, with an irregular coastline. The southern coastline features steep cliffs with rocky ledges, suitable for small nesting birds. Other bird habitats include scattered rocks and boulders, ice-free ground, and a gently sloping, well-drained northern shoreline. Several ephemeral freshwater ponds, meltwater channels and small streams are present. Strong tidal currents are common in the surrounding sea, helping to keep coastal waters ice-free. In addition, strong winds reduce snow accumulation, resulting in more favourable conditions for bird colonisation (ASPA No. 117 Management Plan, 2013). Vegetation is sparse across Avian Island and dominated by lichens and mosses.

The nearest permanent scientific station is Teniente Luis Carvajal (CHL), a summer-only station lying ~1 km from Avian Island on the southern shore of Adelaide Island. No long-term meteorological records are available for Avian Island. However, at Carvajal Station the mean daily maximum temperature was 3°C in February for the period 1962-74, whilst the mean daily minimum was –8°C in August for the same period (ASPA No. 117 Management Plan, 2013). Most snowfall occurs between August and October, with light precipitation occurring through the austral summer.

Birds

Seven bird species are known to breed on the island, more than at most other sites in the region. An Adélie Penguin colony occupies much of the northern half of the island with 35 600 breeding pairs estimated in 1979, representing one of the largest breeding colonies on the Antarctic Peninsula. Two recent censuses in 2013 estimated 77 515 pairs (Sailley *et al*. 2013) and 47 146 pairs (Casanovas *et al*. in press), although the reasons for the discrepancy between the counts is unclear. A large Imperial Shag colony has been recorded on the southwestern coast of the island, totalling 670 pairs in 1989 (unpublished data S. Poncet pers. comm. 2005), and 302 breeding pairs were observed in 2013 (W. Fraser pers. comm. 2013, cited in ASPA No. 117 Management Plan, 2013). Avian Island holds the largest breeding colony of Southern Giant Petrel south of the South Shetland Islands, with 250 breeding pairs recorded in 1990 (Poncet & Poncet 1990), 237 chicks estimated in 2001 (Harris 2001), and 470 breeding pairs recorded in 2013 (W. Fraser pers. comm. 2013, as previous). A colony of around 60 pairs of Kelp Gull (*Larus dominicanus*) breed near the southern extent of their range on Avian island (Poncet & Poncet 1979). Approximately 195 pairs of South Polar Skua were breeding in the central and eastern parts of the island in 2004 (W. Fraser pers. comm. 2015), with 880 non-breeding individuals also counted on the island (W. Fraser pers. comm. 2015, in correction of data reported in Ritz *et al.* 2006). The southernmost record of breeding Brown Skua (*Catharacta antarctica*) has also been documented on Avian Island

and several hundred pairs of Wilson's Storm-petrel (*Oceanites oceanicus*) breed in rocky outcrops around the island (Poncet & Poncet 1979).

Non-breeding species observed on Avian Island include the Antarctic Tern (*Sterna vittata*), Southern Fulmar (*Fulmarus glacialoides*), Antarctic Petrel (*Thalassoica antarctica*), Cape Petrel (*Daption capense*), King (*Aptenodytes patagonicus*) and Chinstrap (*Pygoscelis antarctica*) penguins.

Other threatened / endemic wildlife

Weddell Seals (*Leptonychotes weddellii*) and Southern Elephant Seals (*Mirounga leonina*) commonly haul out and breed on Avian Island (ASPA No. 117 Management Plan, 2013). Non-breeding Antarctic Fur Seals (*Arctocephalus gazella)* also frequent the island with several hundred present on low-lying ground and beaches in February 2001 (Harris 2001). Leopard Seals (*Hydrurga leptonyx*) are also occasionally observed on Avian Island.

Conservation issues

The principal reason for designation of Avian Island as a protected area in 1989 was to protect the unusually large and diverse colonies of breeding birds. The Management Plan for ASPA No. 117 is designed to allow scientific research in the area but ensure visitor impacts are low. Entry to the ASPA is allowed only by permit and aircraft overflight is restricted year-round. The boundaries of the protected area were designed to include the surrounding marine area as a buffer to help protect nesting birds. Visits to the island are infrequent, and disturbance to breeding birds by visitors remains low.

The past impacts of visitors to Avian Island are believed to have been minor although these are not well documented (ASPA No. 117 Management Plan, 2013). The Management Plan notes that a few human visits have caused loss of eggs and chicks through nest abandonment or predation. Two refuges and beacon structures are in poor repair, and some birds were observed amongst debris in February 2001; further deterioration to these facilities was reported in January 2011 (ASPA No. 117 Management Plan, 2013). A large beacon was installed in 1998 in the Southern Giant Petrel breeding area, and the level of disturbance to breeding birds is unknown. Southern Giant Petrels and Kelp Gulls are particularly vulnerable to disturbance.

Carvajal Station (CHL), with associated operational and support activities, is located in close proximity to the IBA. Activities at the station have included use of small boats and aircraft. A snow runway once existed on southern Adelaide Island, the access route to which crossed the general area of Avian Island, although the status and use of this runway is currently unknown.

Further reading

ASPA No. 117 Avian Island: Management Plan (2013).

Casanovas, P., Naveen, R., Forrest, S., Poncet, J. & Lynch, H.J. in press. A comprehensive coastal seabird survey maps out the front lines of ecological change on the western Antarctic Peninsula. *Polar Biology*.

Harris, C.M. 2001. Revision of Management Plans for Antarctic protected areas originally proposed by the United States of America and the United Kingdom: Field visit report. Unpublished report for the National Science Foundation, US, and the Foreign & Commonwealth Office, UK. Environmental Research & Assessment, Cambridge.

Poncet, S. 1982. *Le Grand Hiver: Damien II Base Antarctique*. Les Éditions Arthaud, Paris

Poncet, S. 1990. Avian Island, Marguerite Bay, Antarctic Peninsula, SPA Proposal. Unpublished report to the SCAR Group of Specialist on Environmental Affairs & Conservation 1990.

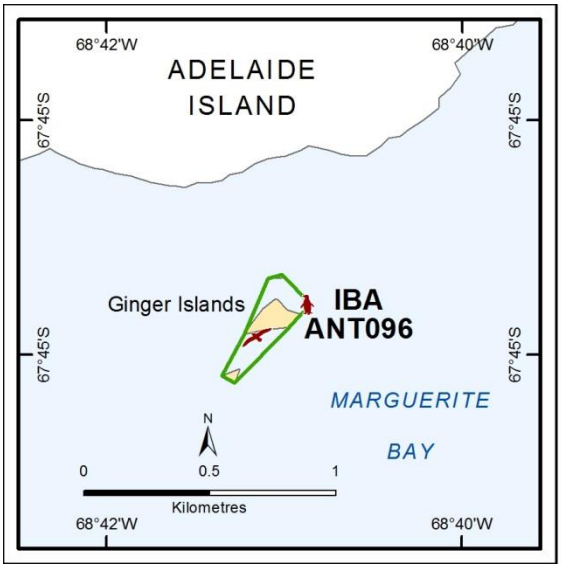
Poncet, S. & Poncet, J. 1979. Ornithological report, Avian Island, 1978-79. Unpublished report for the British Antarctic Survey. BAS Archives Ref. AD6/2R/1978/Q.

Ritz, M.S., Hahn, S., Janicke, T. & Peter, H.-U. 2006. Hybridisation between South polar skua (*Catharacta maccormicki*) and Brown skua (*C. antarctica lonnbergi*) in the Antarctic Peninsula region. *Polar Biology* **29***:* 153-59. doi:10.1007/s00300-005-0034-0

Sailley, S.F., Ducklow, H.W., Moeller, H.V., Fraser, W.R., Schofield, O.M., Steinberg, D.K., Garzio, L.M. & Doney, S.C. 2013. Carbon fluxes and pelagic ecosystem dynamics near two western Antarctic Peninsula Adélie penguin colonies: an inverse model approach. *Marine Ecology Progress Series* **492**: 253-72.

ANT096: Ginger Islands

IBA criteria	A4i
Coordinates	68°42' W, 67°45' S
Area	5.6 ha
Altitude	< 250 m
Protection	None



Site description

Ginger Islands are located in Marguerite Bay, approximately 0.5 km southeast of Adelaide Island, on the western side of the Antarctic Peninsula. The IBA qualifies on the basis of the Imperial Shag (*Phalacrocorax* [*atriceps*] *bransfieldensis*) colony present and comprises the island group and the intervening marine area.

Detailed information on the environment of the Ginger Islands is not available, and meteorological records do not exist for the site. However, at Teniente Luis Carvajal Station (CHL), located ~10 km to the southwest, the mean daily maximum temperature was 3°C in February for the period 1962-74, whilst the mean daily minimum temperature was –8°C in August for the same period. Most snowfall occurs between August and October, with light precipitation occurring through the austral summer.

Birds

Approximately 275 breeding pairs of Imperial Shag along with 2790 pairs of Adélie Penguin (*Pygoscelis adeliae*) were estimated to breed on Ginger Islands in 1983 (unpublished data S. Poncet pers. comm. 2005; Poncet & Poncet 1987). More recently, Casanovas *et al*. (in press) reported 504 pairs of Imperial Shag and 3334 pairs of Adélie Penguin in 2012. Information on other bird species breeding at the site is not available.

Other threatened / endemic wildlife

None known.

Conservation issues

There is no known record of recent visits to the Ginger Islands. The nearest stations to Ginger Islands are Teniente Luis Carvajal Station (CHL) and Rothera Station (GBR), although access to the islands is difficult and few visits are made.

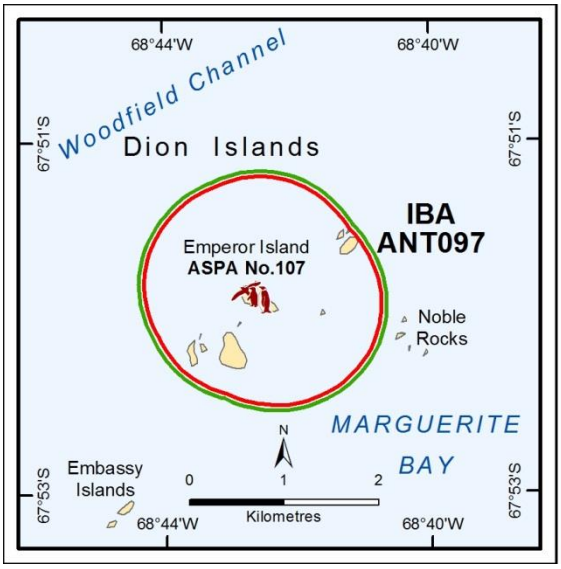
Further reading

Casanovas, P., Naveen, R., Forrest, S., Poncet, J. & Lynch, H.J. in press. A comprehensive coastal seabird survey maps out the front lines of ecological change on the western Antarctic Peninsula. *Polar Biology*.

Poncet, S. & Poncet, J. 1987. Censuses of penguin populations of the Antarctic Peninsula, 1983-87. *British Antarctic Survey Bulletin* **77**: 109-29.

ANT097: Emperor Island, Dion Islands

IBA criteria	A4i
Coordinates	68°42' W, 67°52' S
Area	467 ha
Altitude	≤ 46 m
Protection	ASPA No. 107



Site description

The Dion Islands are located in Marguerite Bay, ~14 km south of Adelaide Island, western Antarctic Peninsula, and lie around 12 km from IBA ANT101: Avian Island. The group comprises several islands of less than 0.5 km across, with numerous islets, shoals and reefs. The IBA qualifies on the basis of the Imperial Shag (*Phalacrocorax* [*atriceps*] *bransfieldensis*) colony present and is defined by the boundary of ASPA No. 107: Emperor Island, Dion Islands.

The Dion Islands have several patches of permanent ice though are generally ice-free in summer. The geology consists of fine-grained lavas and tuffs, with shales, sandstones, grits and conglomerates also present (ASPA No. 107 Management Plan, 2002). Emperor Island, the second largest of the Dion Islands, is rocky and precipitous and less than 0.5 km across at its widest point. Vegetation comprises cryptograms and at least 19 species of lichen.

The nearest permanent scientific stations are Teniente Luis Carvajal Station (CHL, summer-only), situated ~14 km to the northwest on Adelaide Island and with capacity for ~30 personnel, and Rothera Station (GBR, year-round) also located on Adelaide Island 41 km to the northeast and with capacity for ~100 personnel.

No long-term meteorological records are available for the Dion Islands, although at Carvajal Station the mean daily maximum temperature was 3°C in February for the period 1962-74, with the mean daily minimum temperature being –8°C in August over the same period (ASPA No.107 Management Plan, 2002). This is similar to data recorded in 1949 by Stonehouse (1953, cited in ASPA No.107 Management Plan, 2002) at the Dion Islands. Winds prevail from a northerly direction, and most snowfall occurs between August and October, with light precipitation continuing through the summer. More recent analyses for nearby Rothera Station (GBR) have shown a distinct warming trend in the region, with an increase in annual average temperature of from -5°C in 1980 to -4°C in 2010 (Trathan *et al.* 2011).

Birds

All birds known to breed within the IBA have been recorded on Emperor Island. Approximately 500 pairs of Imperial Shag were recorded breeding on Emperor Island in the 1980's (S. Poncet pers. comm. 2005), and 810 pairs were recorded in a nest count in 2012 (Casanovas *et al.* in press). An Adélie Penguin (*Pygoscelis adeliae*) colony on Emperor Island was estimated at 700 pairs in 1987 (Poncet & Poncet 1987) and 1420 pairs in 2012 (Casanovas *et al.* in press).

A small Emperor Penguin (*Aptenodytes forsteri*) colony that formerly occupied a low-lying beach and rocky promontory in the southeast of Emperor Island is probably no longer present. First discovered on the island in 1948 (Stonehouse, 1953 cited in ASPA No.107 Management Plan, 2002), this was one of the most northerly Emperor Penguin colonies in Antarctica and one of only three sites where this species had been found breeding on land (Trathan *et al.* 2011). Stonehouse (1953) recorded around 150 breeding pairs on the island in the winter of 1949 and numbers are thought to have fluctuated around this level until 1968, after which they may have increased. However, only 14 males with eggs were present on the island in winter of 1999 (ASPA No. 107 Management Plan, 2002), whilst a count made from 1998 and 2005 aerial imagery indicated less than 20 Emperor Penguins remained breeding on the island (Fretwell & Trathan 2009). Further analysis of imagery acquired on 28 November 2009 showed no Emperor Penguins present (Trathan *et al.* 2011), and the birds probably no longer breed at the site.

Other confirmed breeders on Emperor Island include the Wilson's Storm-petrel (*Oceanites oceanicus*), Kelp Gull (*Larus dominicanus*) and Brown Skua (*Catharacta antarctica*) nesting on the larger islands (data cited in ASPA No.107 Management Plan, 2002). However, these species have not been censused owing to the difficult access.

Other threatened / endemic wildlife

Leopard Seals (*Hydrurga leptonyx*) are occasionally observed in the Dion Islands, whilst Crabeater Seals (*Lobodon carcinophagus*) are commonly found on local ice floes. Weddell Seals (*Leptonychotes weddellii*) have also been recorded hauled out at Emperor Island (ASPA No. 107 Management Plan, 2002).

Conservation issues

The principal reason for designation of the Dion Islands protected area in 1966 was the unusual situation of Emperor Penguins breeding on land. Because the Dion Islands are both inaccessible and designated as protected, disturbance to breeding birds by visitors remains very low. Entry to the ASPA is allowed only by permit and aircraft overflight is restricted from April to December each year. The boundaries of the protected area were designed to include the surrounding marine area to ensure protection of the Emperor Penguins when at-sea or on nearby sea ice.

Visitor impacts on the island are believed to be minor. The principal threat to the birdlife on the island probably arises from regional changes to the ocean-ice ecosystem as a result of shifts in the patterns of global climate (Trathan *et al*. 2011), and this probably lies behind the decline in the local Emperor Penguin colony.

Further reading

ASPA No. 107 Emperor Island, Dion Islands: Management Plan (2002).

Casanovas, P., Naveen, R., Forrest, S., Poncet, J. & Lynch, H.J. in press. A comprehensive coastal seabird survey maps out the front lines of ecological change on the western Antarctic Peninsula. *Polar Biology*.

Poncet, S. 1982. *Le Grand Hiver: Damien II Base Antarctique*. Les Éditions Arthaud, Paris.

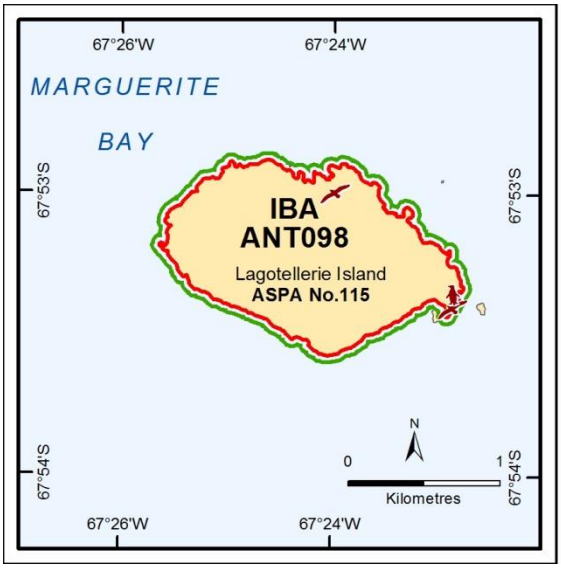
Fretwell, P. & Trathan, P. 2009. Penguins from space: faecal stains reveal the location of emperor penguin colonies. *Global Ecology and Biogeography* **18** (5): 543-52.

Poncet, S. & Poncet, J. 1987. Censuses of penguin populations of the Antarctic Peninsula, 1983-87. *British Antarctic Survey Bulletin* **77**: 109-29.

Trathan, P.N., Fretwell, P.T. & Stonehouse, B. 2011. First recorded loss of an Emperor Penguin colony in the recent period of Antarctic regional warming: Implications for other colonies. *PLoS ONE* **6** (2): e14738. doi:10.1371/journal.pone.0014738.

ANT098: Lagotellerie Island

IBA criteria	A4i
Coordinates	67°25'30" W, 67°53'20" S
Area	168 ha
Altitude	288 m
Protection	ASPA No. 115



Site description

Lagotellerie Island lies in eastern Marguerite Bay ~3.5 km west of Horseshoe Island. The steeply sloping island is ice-free in summer, is ~2 km in length and rises to a maximum elevation of 288 m. The IBA qualifies on the basis of the Imperial Shag (*Phalacrocorax* [*atriceps*] *bransfieldensis*) colony present and is defined by the boundary of ASPA No. 115: Lagotellerie Island, which is designated partly for the avifauna present.

The nearest permanent scientific station is San Martín (ARG) located approximately 30 km to the southeast.

Birds

Approximately 270 breeding pairs of Imperial Shag were recorded in a nest count in 2012 (Casanovas *et al*. in press). Approximately 250 Imperial Shag adults and chicks were recorded in Feb 2011 (ASPA No. 115 Management Plan, 2012). The colony is located at the eastern extremity of the island close to breeding Adélie Penguins (*Pygoscelis adeliae*). The Adélie Penguin colony comprised ~1720 pairs in 1982 (Poncet & Poncet 1987). A survey carried out in late Feb 2001 reported 547 live Adélie Penguin chicks (although ~1474 chicks had recently died) (Harris 2001). More recently, a substantial increase has been reported, with 7482 breeding pairs recorded in an accurate count in 2012/13 (Casanovas *et al*. in press).

In Feb 2001 Harris (2001) recorded 81 breeding pairs of South Polar Skua (*Catharacta maccormicki*) on the northern coast of Lagotellerie Island (plus ~60 non-breeders), 10 Kelp Gull (*Larus dominicanus*) chicks, and several Snow Petrels (*Pagodroma nivea*) and Wilson's Storm-petrels (*Oceanites oceanicus*) were seen (one nest of the latter was confirmed). Old records reported Brown Skua (*Catharacta antarctica*) present on Lagotellerie Island, although this observation was made in 1956 (ASPA No. 115 Management Plan, 2012).

Other threatened / endemic wildlife

A survey carried out in Feb 2001 recorded 44 Weddell Seals (*Leptonychotes weddellii*) hauled out on the northern coast, three Southern Elephant Seals (*Mirounga leonina*) and two Antarctic Fur Seals (*Arctocephalus gazella*) (Harris 2001). More recently, ~200 Antarctic Fur Seals and 20 Weddell Seals were observed on the island in Feb 2011 (ASPA No. 115 Management Plan, 2012).

Conservation issues

The island is rarely visited and human impacts on the island are believed to be minor.

Further reading

ASPA No. 115 Lagotellerie Island: Management Plan (2012).

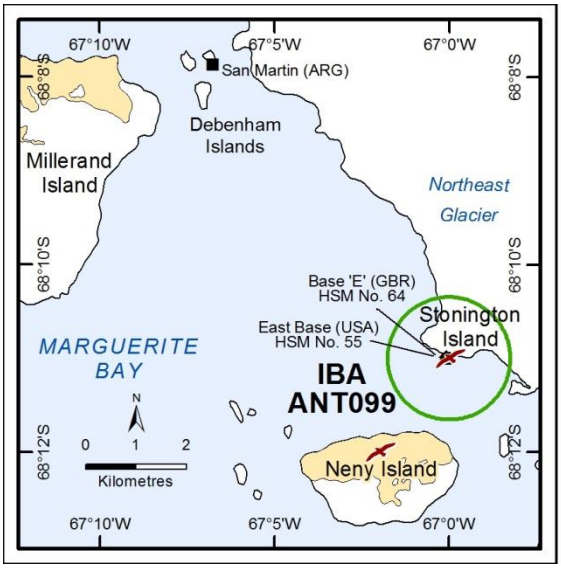
Casanovas, P., Naveen, R., Forrest, S., Poncet, J. & Lynch, H.J. in press. A comprehensive coastal seabird survey maps out the front lines of ecological change on the western Antarctic Peninsula. *Polar Biology*.

Harris, C.M. 2001. Revision of Management Plans for Antarctic protected areas originally proposed by the United States of America and the United Kingdom: Field visit report. Unpublished report for the US and the UK. Environmental Research & Assessment, Cambridge.

Poncet, S. & Poncet, J. 1987. Censuses of penguin populations of the Antarctic Peninsula, 1983-87. *British Antarctic Survey Bulletin* **77**: 109-29.

ANT099: Stonington Island

IBA criteria	A4i
Coordinates	67°00' W, 68°11' S
Area	500 ha
Altitude	Unknown
Protection	None



Site description

Stonington Island is located approximately 2 km north of Neny Island, Neny Fjord, on the Fallièrs Coast of the Antarctic Peninsula. The IBA qualifies on the basis of the Imperial Shag (*Phalacrocorax* [*atriceps*] *bransfieldensis*) colony present and comprises a 500 ha circular area centred on the geographic position of the nesting site as reported in Lynch *et al.* (2008) (68°11' S, 67°0' W).

Stonington Island is small with relatively flat areas of boulders interspersed with rocky outcrops (ATS Visitor Site Guidelines: Stonington Island). The site supports at least seven lichen species and two moss species. Two former stations are located on Stonington Island: Base E (GBR) built in 1946, and East Base (USA) established in 1940. Base E was closed in 1975 and is now designated as Historic Site No. 64 under the Antarctic Treaty for its historical value in early exploration of the region. East Base is designated as Historic Site No.55 to protect buildings and artefacts in the area.

The nearest permanent scientific station is San Martín (ARG) located approximately 7 km to the northwest on Barry Island in the Debenham Islands.

Birds

Imperial Shags breed on Stonington Island and 135 chicks were recorded in February 2007 (Lynch *et al.* 2008). IBA qualification is based on an assumption of ~1 chick per pair, although since clutch sizes may often be larger, more data are desirable. South Polar Skuas (*Catharacta maccormicki*), Kelp Gulls (*Larus dominicanus*) and Antarctic Terns (*Sterna vittata*) are also confirmed breeders at the site, with Adélie Penguins occasional visitors (Naveen & Lynch 2011).

Other threatened / endemic wildlife

None known

Conservation issues

ATS Visitor Site Guidelines provide guidance for visitors to Stonington Island. Visitors numbered from a minimum of 389 to a maximum of 1136 (inclusive of tourists, staff and crew) between 2006/07 and 2009/10 (IAATO Tourism Statistics, accessed: 06/08/2010).

Further reading

Antarctic Treaty System Visitor Site Guidelines: Stonington Island.
URL: http://www.ats.aq/siteguidelines/documents/Stonington_island_e.pdf. Accessed 06/08/2010.

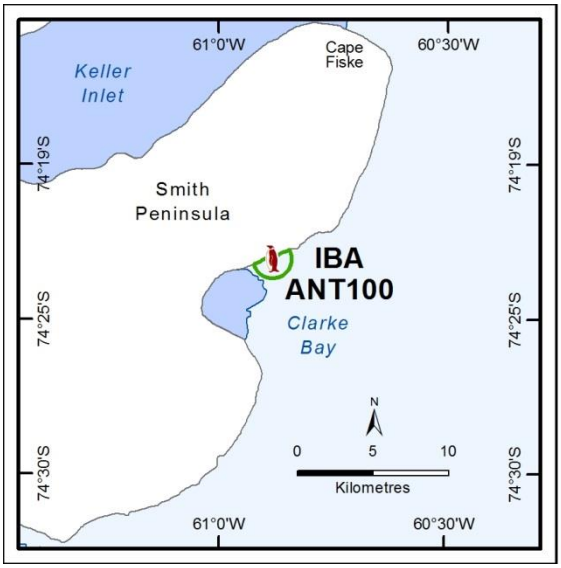
Lynch, H., Naveen, R. & Fagan, W. 2008. Censuses of Penguin, Blue-eyed Shag *Phalacrocorax atriceps* and Southern Giant Petrel *Macronectes giganteus* populations on the Antarctic Peninsula, 2001-2007. *Marine Ornithology* **36**: 83-97.

Naveen, R & Lynch, H. 2011. *Compendium of Antarctic Peninsula visitor sites (3rd edition): A Report to the United States Environmental Protection Agency*. Oceanites, Chevy Chase, MD.

Weddell Sea / Coats Land

ANT100: Smith Peninsula

IBA criteria	A1, A4ii
Coordinates	60°52'34" W, 74°23'8" S
Area	292 ha
Altitude	0 m
Protection	None



Site description

Smith Peninsula lies between Keller Inlet and Nantucket Inlet, on the Lassiter Coast, southeastern Antarctic Peninsula, in the southwestern Weddell Sea. The IBA qualifies on the basis of the Emperor Penguin (*Aptenodytes forsteri*) colony present on fast ice that forms in the northern part of Clarke Bay, and is entirely marine.

There are no research stations nearby. The closest permanent station is San Martín (ARG), ~730 km to the northwest in Marguerite Bay, Antarctic Peninsula.

Birds

Analysis of a satellite image acquired 30 Oct 2009 (Fretwell *et al.* 2012) indicated 4018 Emperor Penguins were present at Smith Peninsula. No other birds are known to breed in the area.

Other threatened / endemic wildlife

None known.

Conservation issues

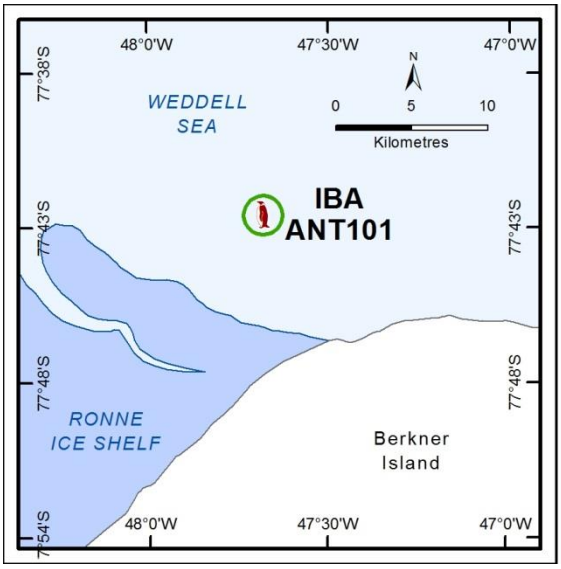
None known.

Further reading

Fretwell, P.T., LaRue, M.A., Morin P., Kooyman, G.L., Wienecke, B., Ratcliffe, N., Fox, A.J., Fleming, A.H., Porter, C. & Trathan, P.N. 2012. An Emperor Penguin population estimate: The first global, synoptic survey of a species from space. *PLoS ONE* **7**(4): e33751. doi:10.1371/journal.pone.0033751

ANT101: NW Berkner Island (Gould Bay)

IBA criteria	A1, A4ii
Coordinates	47°40'48" W, 77°42'36" S
Area	500 ha
Altitude	0 m
Protection	None



Site description

Berkner Island lies between the Ronne and Filchner ice shelves in the southern Weddell Sea. Gould Bay lies east of Berkner Island. An Emperor Penguin (*Aptenodytes forsteri*) colony breeds on fast ice that forms near the northwestern coast of Berkner Island and the Ronne Ice Shelf, ~90 km to the northwest of Gould Bay. The IBA qualifies on the basis of the Emperor Penguin colony present and is entirely marine.

There are no research stations nearby. The closest permanent station is Belgrano II (ARG), ~300 km to the east on the Luitpold Coast.

Birds

Analysis of a satellite image acquired 14 Oct 2009 (Fretwell *et al.* 2012) indicated 8242 Emperor Penguins were present at the colony near Gould Bay. While historically the colony is referred to as located near Gould Bay, more accurately it lies ~5 km north of the area where the Ronne Ice Shelf joins the northwestern coast of Berkner Island, ~90 km northwest of Gould Bay. No other birds are known to breed in the area.

Other threatened / endemic wildlife

None known.

Conservation issues

Tourism statistics compiled by IAATO do not list the colony at northwestern Berkner Island, nor Gould Bay, as a tourist destination. However, in recent years tourist visits to the colony have been conducted regularly by Adventure Network International (ANI) (http://www.adventure-network.com/gould-bay-camp, accessed 18 Dec 2014), with an average of ~18 visitors and 5 staff per year from 2010-15 (D. Rootes pers. comm. 2015). Visits are closely supervised by ANI staff.

Further reading

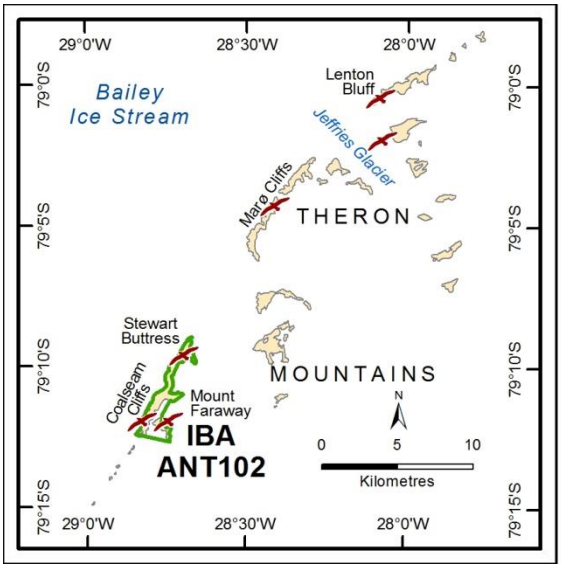
Fretwell, P.T., LaRue, M.A., Morin P., Kooyman, G.L., Wienecke, B., Ratcliffe, N., Fox, A.J., Fleming, A.H., Porter, C. & Trathan, P.N. 2012. An Emperor Penguin population estimate: The first global, synoptic survey of a species from space. *PLoS ONE* **7**(4): e33751. doi:10.1371/journal.pone.0033751

Luna Pérez, J.C. 1963. Visita a la roquerìas de pingüinos emperador de Bahía Austral (Mar de Weddell). *Contribución Instituto Antártico Argentino* **70:** 1-19.

Neuburg, H.A.C., Thiele, E., Walker, P.T., Behrendt, J.C. & Aughenbaugh, N.B. 1959. The Filchner ice shelf. *Annals of the Association of American Geographers* **49**: 110-19.

ANT102: Coalseam Cliffs / Mount Faraway

IBA criteria	A4iii
Coordinates	28°45'30" W, 79°11'16" S
Area	665 ha
Altitude	1180 m
Protection	None



Site description

Coalseam Cliffs extend along the western flank of Mount Faraway (1180 m), in the southwestern Theron Mountains, Coats Land. The Bailey Ice Stream lies to the northwest.

The IBA qualifies on the basis of the Antarctic Petrel (*Thalassoica antarctica*) colony present and includes all of the ice free area of Coalseam Cliffs and Mount Faraway.

The nearest permanent station is Belgrano II (ARG) ~200 km to the northwest in Vahsel Bay.

Birds

Approximately 10 000 pairs of Antarctic Petrel were observed breeding half way up Coalseam Cliffs several km north of Mount Faraway in 1967 (Brook & Beck 1972). The colony is located in a scree-filled hollow between two 60 m high dolerite cliffs. [Note: Brook & Beck (1972) refer to this location as Stewart Buttress, although this feature is located ~3 km to the north by the UK placenaming authority. However, the US placenaming authority places Stewart Buttress 3 km south of Marø Cliffs. As the name Stewart Buttress is ambiguous, we have used Coalseam Cliffs and Mount Faraway to indicate the breeding area].

Other birds observed in the vicinity include ~10-20 breeding pairs of Snow Petrel (*Pagodroma nivea*) at the northeastern extremity of Coalseam Cliffs among large boulders and ledges of dolerite (Brook & Beck 1972). Six pairs of South Polar Skua (*Catharacta maccormicki*) were observed amongst moraines at the foot of Coalseam Cliffs, and one chick was observed (Brook & Beck 1972).

Other threatened / endemic wildlife

None known.

Conservation issues

None known.

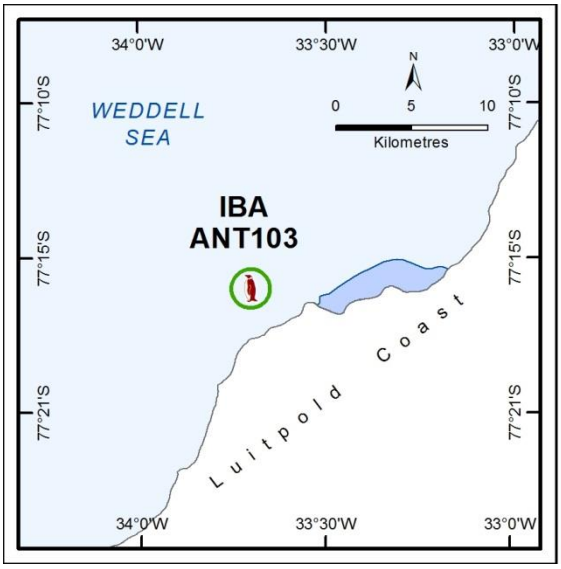
Further reading

Brook, D. & Beck, J.R.1972. Antarctic Petrels, Snow Petrels and South Polar Skuas breeding in the Theron Mountains. *British Antarctic Survey Bulletin* **27***:* 131-37.

van Franeker, J.A., Gavrilo, M., Mehlum, F., Veit, R.R. & Woehler, E.J. 1999. Distribution and abundance of the Antarctic Petrel. *Waterbirds* **22**(1): 14-28.

ANT103: Luitpold Coast

IBA criteria	A1, A4ii
Coordinates	33°42'7" W, 77°16'39" S
Area	500 ha
Altitude	0 m
Protection	None



Site description

The Luitpold Coast extends from the Filchner Ice Shelf in the west to the Brunt Ice Shelf in the east along northwestern Coats Land. An Emperor Penguin (*Aptenodytes forsteri*) colony breeds on fast ice that forms on the Luitpold Coast near an area ~50 km northeast of the Filchner Ice Shelf where icebergs regularly calve from the continental margin.

The IBA qualifies on the basis of the Emperor Penguin colony present and is entirely marine.

The nearest permanent station is Belgrano II (ARG), ~70 km to the southwest in Vahsel Bay.

Birds

Analysis of a satellite image acquired 12 Nov 2009 (Fretwell *et al.* 2012) indicated 6498 Emperor Penguins were present at the colony located near the Luitpold Coast. No other birds are known to breed in the area.

Other threatened / endemic wildlife

None known.

Conservation issues

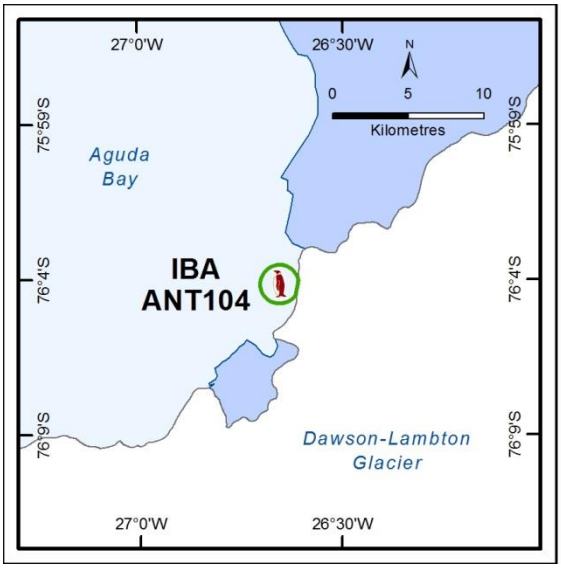
None known.

Further reading

Fretwell, P.T., LaRue, M.A., Morin P., Kooyman, G.L., Wienecke, B., Ratcliffe, N., Fox, A.J., Fleming, A.H., Porter, C. & Trathan, P.N. 2012. An Emperor Penguin population estimate: The first global, synoptic survey of a species from space. *PLoS ONE* **7**(4): e33751. doi:10.1371/journal.pone.0033751

ANT104: Dawson-Lambton Glacier

IBA criteria	A1, A4ii
Coordinates	26°39'17" W, 76°04'12" S
Area	500 ha
Altitude	0 m
Protection	None



Site description

Dawson-Lambton Glacier flows into the southeastern Weddell Sea at the southwestern margin of the Brunt Ice Shelf, on the Caird Coast, Coats Land. An Emperor Penguin (*Aptenodytes forsteri*) colony breeds on fast ice that forms in the Weddell Sea near the Dawson-Lambton-Glacier.

The IBA qualifies on the basis of the Emperor Penguin colony present at the site and is entirely marine.

The nearest permanent station is Halley VI (GBR), ~50 km to the north on Brunt Ice Shelf.

Birds

The colony near the Dawson-Lambton Glacier was discovered in 1987 during an aerial survey by Hempel & Stonehouse (1987), who estimated 11 700 chicks were present. No photographs were taken so the estimate could not be verified. Analysis of a satellite image acquired 13 Oct 2009 (Fretwell *et al.* 2012) indicated 2597 Emperor Penguins were present at the colony. No other birds are known to breed in the area.

Other threatened / endemic wildlife

None known.

Conservation issues

None known.

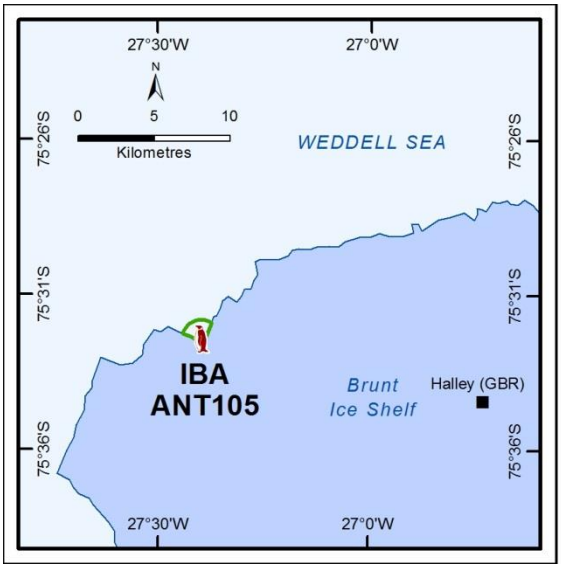
Further reading

Fretwell, P.T., LaRue, M.A., Morin P., Kooyman, G.L., Wienecke, B., Ratcliffe, N., Fox, A.J., Fleming, A.H., Porter, C. & Trathan, P.N. 2012. An Emperor Penguin population estimate: The first global, synoptic survey of a species from space. *PLoS ONE* **7**(4): e33751. doi:10.1371/journal.pone.0033751

Hempel, G. & Stonehouse, B. 1987. Aerial counts of penguins, seals and whales in the eastern Weddell Sea. *Berichte zur Polarforschung* **39**: 227-20.

ANT105: Brunt Ice Shelf ('Halley Bay')

IBA criteria	A1, A4ii, A4iii
Coordinates	27°24'20" W, 75°32'18" S
Area	177 ha
Altitude	0 m
Protection	None



Site description

The Brunt Ice Shelf is situated on the Caird Coast, Coats Land. An Emperor Penguin (*Aptenodytes forsteri*) colony breeds on fast ice that forms along the northwestern margin of the Brunt Ice Shelf, at a location locally known as 'Halley Bay' after the nearby British research station Halley.

The IBA qualifies on the basis of the Emperor Penguin colony present and is entirely marine.

The nearest permanent station is Halley VI (GBR), ~20 km to the east on the Brunt Ice Shelf.

Birds

Hempel & Stonehouse (1987) estimated that 15 400 Emperor Penguin chicks were in this colony in Oct/Nov 1987. Analysis of a satellite image acquired 27 Oct 2009 (Fretwell *et al.* 2012) indicated that approximately 22 510 Emperor Penguins were present at the colony. No other birds are known to breed in the area.

Other threatened / endemic wildlife

None known.

Conservation issues

The close proximity of Halley VI Station (GBR), with accompanying local operational support by ships and aircraft, could pose potential concerns for conservation of the breeding colony of Emperor Penguins. Station procedures take into account the presence of the breeding colony, and appropriate protocols are followed by visitors (R. Clarke pers. comm. 2015).

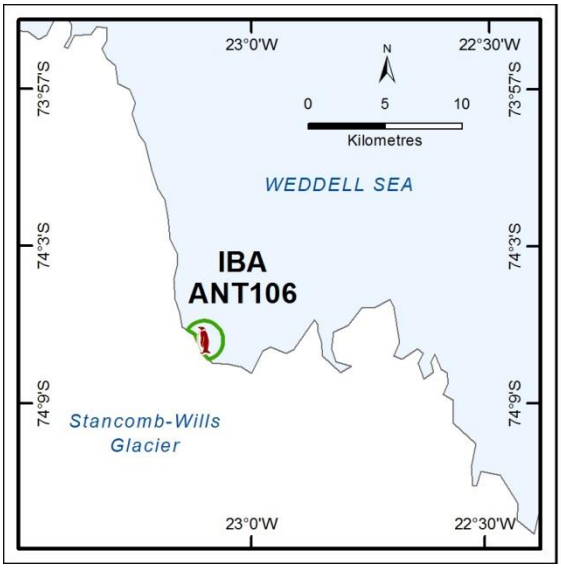
Further reading

Fretwell, P.T., LaRue, M.A., Morin P., Kooyman, G.L., Wienecke, B., Ratcliffe, N., Fox, A.J., Fleming, A.H., Porter, C. & Trathan, P.N. 2012. An Emperor Penguin population estimate: The first global, synoptic survey of a species from space. *PLoS ONE* **7**(4): e33751. doi:10.1371/journal.pone.0033751

Hempel, G. & Stonehouse, B. 1987. Aerial counts of penguins, seals and whales in the eastern Weddell Sea. *Berichte zur Polarforschung* **39**: 227-20.

ANT106: Stancomb-Wills Glacier

IBA criteria	A1, A4ii
Coordinates	23°05'31" W, 74°06'15" S
Area	352 ha
Altitude	0 m
Protection	None



Site description

Stancomb-Wills Glacier flows into the eastern Weddell Sea between Riiser-Larsen Ice Shelf and Brunt Ice Shelf, on the Caird Coast, Dronning Maud Land. An Emperor Penguin (*Aptenodytes forsteri*) colony breeds on fast ice on the northeastern coast of the Stancomb-Wills Glacier Tongue, ~ 60 km west of Lyddan Island.

The IBA qualifies on the basis of the Emperor Penguin colony present and is entirely marine.

There are no research stations nearby. The closest permanent station is Halley (GBR), ~190 km to the southwest on the Brunt Ice Shelf.

Birds

The colony near the Stancomb-Wills Glacier was discovered in 1986 by Hempel & Stonehouse (1987), who estimated ~6000 Emperor penguins were present. Analysis of a satellite image acquired 21 Oct 2009 (Fretwell *et al.* 2012) indicated that approximately 5455 Emperor Penguins were present at the colony. No other birds are known to breed in the area.

Other threatened / endemic wildlife

None known.

Conservation issues

None known.

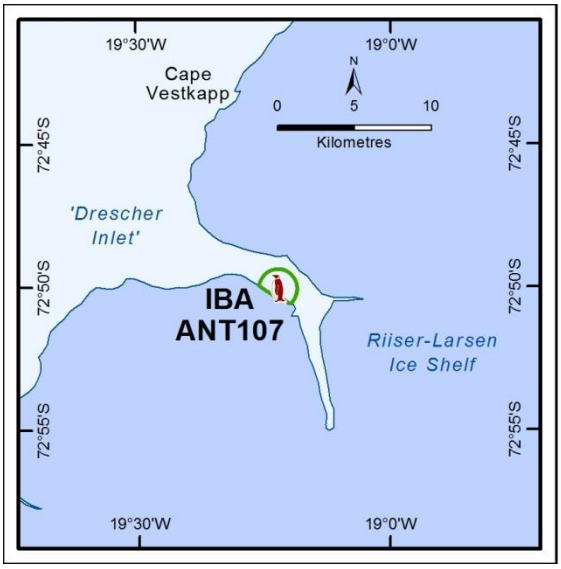
Further reading

Fretwell, P.T., LaRue, M.A., Morin P., Kooyman, G.L., Wienecke, B., Ratcliffe, N., Fox, A.J., Fleming, A.H., Porter, C. & Trathan, P.N. 2012. An Emperor Penguin population estimate: The first global, synoptic survey of a species from space. *PLoS ONE* **7**(4): e33751. doi:10.1371/journal.pone.0033751

Hempel, G. & Stonehouse, B. 1987. Aerial counts of penguins, seals and whales in the eastern Weddell Sea. *Berichte zur Polarforschung* **39**: 227-220.

ANT107: 'Drescher Inlet' (Dreschereisfrontkerbe)

IBA criteria	A1, A4ii
Coordinates	19°13'04" E, 72°49'55" S
Area	368 ha
Altitude	0 m
Protection	None



Site description

The Riiser-Larsen Ice Shelf extends ~400 km between Cape Norvegia and Lyddan Island, on the Princess Martha Coast, Dronning Maud Land. An Emperor Penguin (*Aptenodytes forsteri*) colony breeds on fast ice that forms in cracks along the western coast of the Riiser-Larsen Ice Shelf, immediately south of Cape Vestkapp. The site is formally named by Germany as Dreschereisfrontkerbe, and is often referred to unofficially in English as 'Drescher Inlet'.

The IBA qualifies on the basis of the Emperor Penguin colony present and is entirely marine.

There are no research stations nearby. The summer stations Aboa (FIN) and Wasa (SWE) are situated ~200 km to the southeast at Basen Nunatak in the Vestfjella Mountains.

Birds

Gerdes *et al*. (1987) estimated ~6600 Emperor penguin chicks were present at the colony from a direct census conducted in October 1986. Analysis of a satellite image acquired 04 Oct 2009 (Fretwell *et al.* 2012) indicated that approximately 2305 Emperor Penguins were present at the colony, although image quality was rated as only Fair. No other birds are known to breed in the area.

Other threatened / endemic wildlife

Weddell Seals (*Leptonychotes weddellii*) are known to breed in the vicinity (Gerdes *et al.* 1987).

Conservation issues

None known.

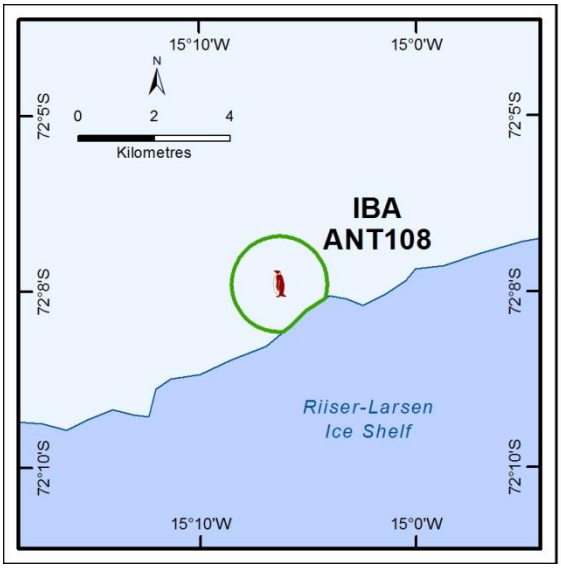
Further reading

Fretwell, P.T., LaRue, M.A., Morin P., Kooyman, G.L., Wienecke, B., Ratcliffe, N., Fox, A.J., Fleming, A.H., Porter, C. & Trathan, P.N. 2012. An Emperor Penguin population estimate: The first global, synoptic survey of a species from space. *PLoS ONE* **7**(4): e33751. doi:10.1371/journal.pone.0033751

Gerdes, D., Gräfe, M., Klages, N., Plötz, J., Reijnders, P., Steinmetz, R. & Zegers, K. 1987. Weddell seals and Emperor penguins in Drescher Inlet. *Berichte zur Polarforschung* **39***:* 222-27.

ANT108: Riiser-Larsen Ice Shelf

IBA criteria	A1, A4ii
Coordinates	15°06'23" W, 72°07'23" S
Area	477 ha
Altitude	0 m
Protection	None



Site description

The Riiser-Larsen Ice Shelf extends ~400 km between Cape Norvegia and Lyddan Island, on the Princess Martha Coast, Dronning Maud Land. An Emperor Penguin (*Aptenodytes forsteri*) colony breeds on fast ice on the northern coast of the Riiser-Larsen Ice Shelf, ~90 km southwest of Seal Bay and ~140 km northeast of Cape Vestkapp.

The IBA qualifies on the basis of the Emperor Penguin colony present and is entirely marine.

There are no research stations nearby. The summer stations Aboa (FIN) and Wasa (SWE) are situated ~120 km to the southeast at Basen Nunatak in the Vestfjella Mountains.

Birds

Hempel & Stonehouse (1987) estimated ~5000 Emperor penguin chicks were present at the colony near the Riiser-Larsen Ice Shelf from an aerial survey conducted in late 1986. Analysis of a satellite image acquired 27 Oct 2009 (Fretwell *et al.* 2012) indicated that approximately 4013 Emperor Penguins were present at the colony, although image quality was rated as only Fair. No other birds are known to breed in the area.

Other threatened / endemic wildlife

None known.

Conservation issues

None known.

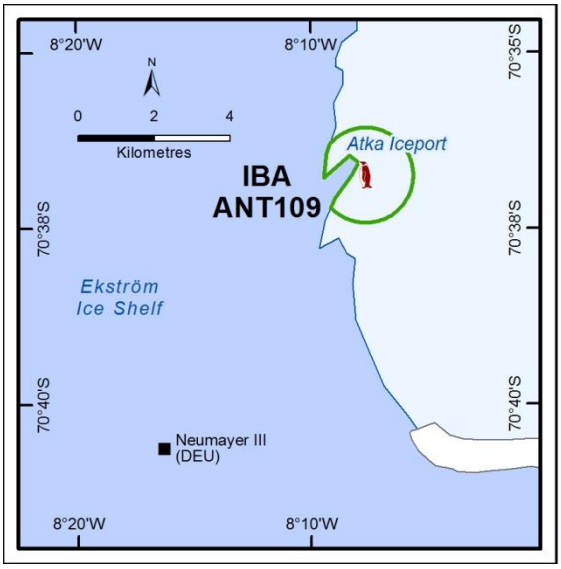
Further reading

Fretwell, P.T., LaRue, M.A., Morin P., Kooyman, G.L., Wienecke, B., Ratcliffe, N., Fox, A.J., Fleming, A.H., Porter, C. & Trathan, P.N. 2012. An Emperor Penguin population estimate: The first global, synoptic survey of a species from space. *PLoS ONE* **7**(4): e33751. doi:10.1371/journal.pone.0033751

Hempel, G. & Stonehouse, B. 1987. Aerial counts of penguins, seals and whales in the eastern Weddell Sea. *Berichte zur Polarforschung* **39**: 227-220.

ANT109: Atka Iceport

IBA criteria	A1, A4ii
Coordinates	8°07'25" W, 70°36'45" S
Area	425 ha
Altitude	0 m
Protection	None



Site description

Atka Iceport is situated on the eastern coast of the Ekström Ice Shelf, Princess Martha Coast, Dronning Maud Land, ~10 km from its northerly terminus. The feature is a dynamic but persistent series of large cracks in the ice shelf that form embayments, and was used as a mooring in 1955 by the USS *Atka*, after which the feature was named. An Emperor Penguin (*Aptenodytes forsteri*) colony breeds along the coast where the cracks in the ice shelf occur and sea ice frequently persists.

The IBA qualifies on the basis of the Emperor Penguin colony present and is entirely marine.

The nearest permanent station is Neumayer III (DEU) ~10 km south on the Ekström Ice Shelf.

Birds

Hempel & Stonehouse (1987) estimated ~8000 Emperor penguin chicks were present at the colony near Atka Iceport from an aerial survey conducted in late 1986. Recently, a photographic count in December 2007 estimated 11,000 chicks present at the colony (van Franeker *et al*. 2010). Analysis of a satellite image acquired 08 Sept 2009 (Fretwell *et al.* 2012) indicated that approximately 9657 Emperor Penguins were present at the colony. No other birds are known to breed in the area.

Other threatened / endemic wildlife

None known.

Conservation issues

Neumayer III Station (DEU), with associated operational and support activities, is located in close proximity to the IBA. Visits by tourists appear to be minimal: only one tourist visit to the Atka Iceport area was reported in the 10 years between 2004-14, with 116 visitors landing in the 2010-11 season (IAATO Tourism Statistics, accessed: 18/12/2014).

Further reading

Drescher, H.-E. 1982. Untersuchungen zur Säugetierbiologie and Ornitologie während der Filchner-Schelfeis-Expedition 1980/81. *Berichte zur Polarforschung* **1**: 33.

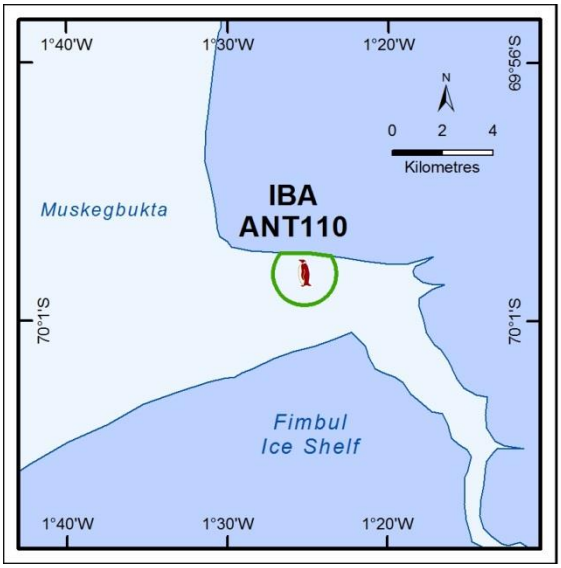
Fretwell, P.T., LaRue, M.A., Morin P., Kooyman, G.L., Wienecke, B., Ratcliffe, N., Fox, A.J., Fleming, A.H., Porter, C. & Trathan, P.N. 2012. An Emperor Penguin population estimate: The first global, synoptic survey of a species from space. *PLoS ONE* **7**(4): e33751. doi:10.1371/journal.pone.0033751

Hempel, G. & Stonehouse, B. 1987. Aerial counts of penguins, seals and whales in the eastern Weddell Sea. *Berichte zur Polarforschung* **39**: 227-220.

Lazarev Sea / Dronning Maud Land

ANT110: Muskegbukta

IBA criteria	A1, A4ii
Coordinates	1°25'13" W, 70°00'05" S
Area	431 ha
Altitude	0 m
Protection	None



Site description

Muskegbukta is a small bay situated to the west of the Fimbul Ice Shelf, Princess Martha Coast, Dronning Maud Land. An Emperor Penguin (*Aptenodytes forsteri*) colony breeds on fast ice that forms in cracks along the western coast of the Fimbul Ice Shelf.

The IBA qualifies on the basis of the Emperor Penguin colony present and is entirely marine.

There are no research stations in the near vicinity. The closest permanent station is Sanae IV (ZAF) situated ~190 km to the southwest.

Birds

Analysis of a satellite image acquired 28 Oct 2009 (Fretwell *et al.* 2012) indicated that approximately 3193 Emperor Penguins were present at the colony. Fretwell *et al*. (2012) referred to this colony as 'Sanae' in reference to the nearest research station. No other birds are known to breed in the area.

Other threatened / endemic wildlife

None known.

Conservation issues

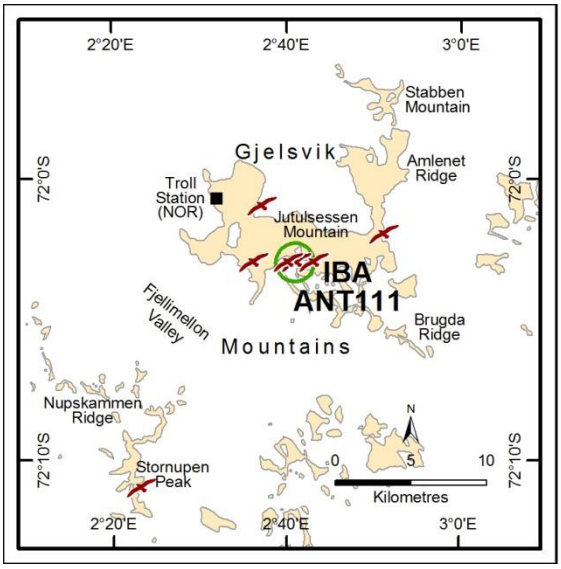
None known.

Further reading

Fretwell, P.T., LaRue, M.A., Morin P., Kooyman, G.L., Wienecke, B., Ratcliffe, N., Fox, A.J., Fleming, A.H., Porter, C. & Trathan, P.N. 2012. An Emperor Penguin population estimate: The first global, synoptic survey of a species from space. *PLoS ONE* **7**(4): e33751. doi:10.1371/journal.pone.0033751

ANT111: Jutulsessen Mountain

IBA criteria	A4ii, A4iii
Coordinates	2°41'00" E, 72°03'00" S
Area	500 ha
Altitude	2370 m
Protection	None



Site description

Jutulsessen Mountain (2370 m) is located in the central Gjelsvik Mountains, Dronning Maud Land. The main ice free area of the massif is ~10 km by ~5 km across.

The IBA qualifies on the basis of the Antarctic Petrel (*Thalassoica antarctica*) colony present at the site.

The nearest permanent station is Troll (NOR) ~6 km to the northwest.

Birds

Approximately 30 000 breeding pairs of Antarctic Petrel occupy a number of elevated north-facing slopes in the Jutulsessen Mountain area (Mehlum *et al*. 1988; van Franeker *et al*. 1999). However, during a site visit made in 2013/14 it was estimated that numbers may be more than double these earlier estimates, although an accurate count has not been made (reported by A. Tarroux, B. Njåstad pers. comm. 2015).

Approximately 2100 breeding pairs of Snow Petrel (*Pagodroma nivea*) were reported at Jutulsessen Mountain in 1991 (Croxall *et al*. 1995). South Polar Skua (*Catharacta maccormicki*) also breed in the vicinity, the principal nesting areas being on the lower slopes and in the main valley to the northwest of Jutulsessen Mountain (Mehlum *et al*. 1988).

Other threatened / endemic wildlife

None known.

Conservation issues

None known.

Further reading

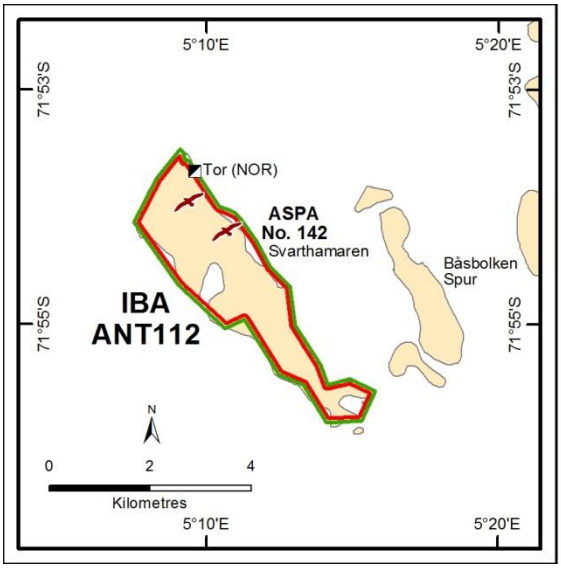
Croxall, J.P., Steele, W.K, McInnes, S.J. & Prince, P.A. 1995. Breeding distribution of the Snow Petrel *Pagodroma nivea*. *Marine Ornithology* **23**: 69-99.

Mehlum, F., Gjessing, Y., Haftorn, S. & Bech, C. 1988: Census of breeding Antarctic Petrels *Thalassoica antarctica* and physical features of the breeding colony at Svarthamaren, Dronning Maud Land, with notes on breeding Snow Petrels *Pagodroma nivea* and South Polar Skuas *Catharacta maccormicki. Polar Research* **6**: 1-9.

van Franeker, J.A., Gavrilo, M., Mehlum, F., Veit, R.R. & Woehler, E.J. 1999. Distribution and abundance of the Antarctic Petrel. *Waterbirds* **22**(1): 14-28.

ANT112: Svarthamaren

IBA criteria	A4ii, A4iii
Coordinates	5°11'02" E, 71°54'33" S
Area	751 ha
Altitude	1600 – 2100 m
Protection	ASPA No.142



Site description

Svarthamaren is a largely ice free mountain ridge lying to the east of the Vestreskorve Glacier, Mühlig-Hofmann Mountains, Dronning Maud Land. The ridge rises from the surrounding glacier at ~1600 m to an elevation of ~2100 m, and together with its associated moraines occupies an area of ~7.5 km^2 and extending ~6 km long and up to 1.5 km wide. Large screes extending up to 240 vertical metres dominate the northeastern slopes of Svarthamaren, and these areas form the primary local nesting habitat for the Antarctic Petrel (*Thalassoica antarctica*).

The area was specially protected in 1987 to avoid disturbance to breeding bird populations and associated research work (ASPA No. 142 Management Plan 2014). The IBA qualifies on the basis of the Antarctic Petrel and South Polar Skua (*Catharacta maccormicki*) colonies present and the area coincides with the boundary of ASPA No. 142.

The nearest station is Tor (NOR), a summer-only research facility located in the north outside the ASPA boundary. The nearest permanent research station is Troll (NOR) ~92 km to the west in the Gjelsvik Mountains.

Birds

The Antarctic Petrel colony at Svarthamaren is the largest known in Antarctica, with approximately 100 000 – 200 000 breeding pairs occupying mainly the northeastern slopes of the ridge, although breeding also occurs at other sites throughout the area. At least 1000 pairs of Snow Petrel (*Pagodroma nivea*) and ~100 pairs of South Polar Skua (*Catharacta maccormicki*) also breed at Svarthamaren (ASPA No. 142 Management Plan 2014; S. Descamps pers. comm. 2015). The number of Snow Petrels may be considerably more, as accurate counts are difficult (S. Descamps pers. comm. 2015). For example, Croxall *et* al. (1995) reported ~10 000 breeding pairs of Snow Petrel at Svarthamaren based on several sources. The South Polar Skuas tend to nest at the foot of the northeastern slopes occupied by Antarctic Petrels (Mehlum *et al*. 1988).

Other threatened / endemic wildlife

None known.

Conservation issues

None known. The area is strictly protected by ASPA No. 142 and is remote and difficult to access.

Further reading

ASPA No. 142 Svarthamaren: Management Plan (2014)

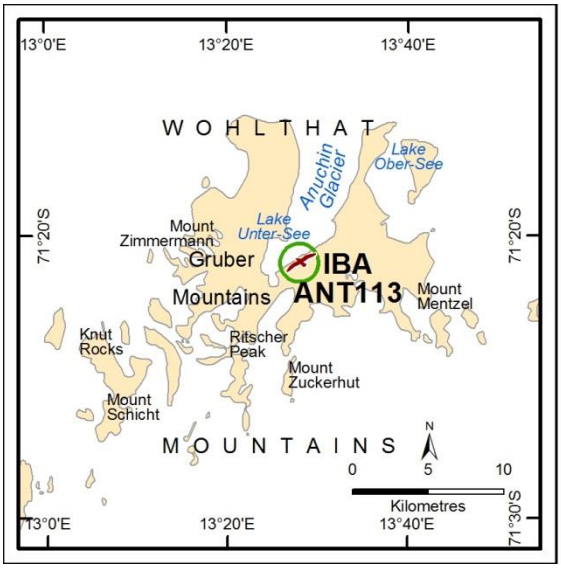
Croxall, J.P., Steele, W.K, McInnes, S.J. & Prince, P.A. 1995. Breeding distribution of the Snow Petrel *Pagodroma nivea*. *Marine Ornithology* **23**: 69-99.

Mehlum, F., Gjessing, Y., Haftorn, S. & Bech, C. 1988: Census of breeding Antarctic Petrels *Thalassoica antarctica* and physical features of the breeding colony at Svarthamaren, Dronning Maud Land, with notes on breeding Snow Petrels *Pagodroma nivea* and South Polar Skuas *Catharacta maccormicki. Polar Research* **6**: 1-9.

van Franeker, J.A., Gavrilo, M., Mehlum, F., Veit, R.R. & Woehler, E.J. 1999. Distribution and abundance of the Antarctic Petrel. *Waterbirds* **22**(1): 14-28.

ANT113: Gruber Mountains

IBA criteria	A4iii
Coordinates	13°28'00" E, 71°21'00" S
Area	500 ha
Altitude	
Protection	None



Site description

The Gruber Mountains form the northeastern part of the Wohlthat Mountains, Dronning Maud Land. Within a large cirque on the northern slopes of the Gruber Mountains lies Lake Unter-See, a meltwater lake of ~4.5 x 2.5 km in size enclosed by the Anuchin Glacier to the north.

The IBA qualifies on the basis of the Snow Petrel (*Pagodroma nivea*) colony present at the site.

The nearest permanent stations are Novolazarevskaja (RUS) and Maitri Station (IND) ~90 km to the northwest on the Princess Astrid Coast.

Birds

Approximately 10 000 pairs of Snow Petrel were reported breeding at several locations near Lake Unter-See in December 1983 (Konovalov 1964, Hiller *et al*. 1988, cited in Croxall *et al*. 1995), although a more modest number of 1000 individuals breeding in the surroundings of Lake Unter-See was reported in Hiller *et al*. (1995). Hiller *et al*. (1988) suggested that Snow Petrels have continuously occupied this area for at least 8000 years, and were also present at glacial maxima 15-18 ka BP and 35 ka BP.

Other threatened / endemic wildlife

None known.

Conservation issues

None known.

Further reading

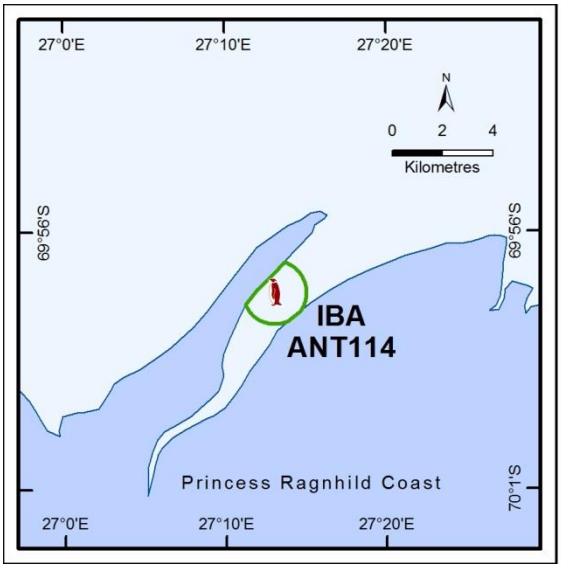
Croxall, J.P., Steele, W.K., McInnes, S.J. & Prince, P.A. 1995. Breeding distribution of the Snow Petrel *Pagodroma nivea*. *Marine Ornithology* **23**: 69-99.

Hiller, A., Wand, U., Kampf, H. & Stackebrandt, W. 1988. Occupation of the Antarctic continent by petrels during the past 35 000 years: Inferences from a ^{14}C study of stomach oil deposits. *Polar Biology* **9**: 69-77.

Hiller, A., Hermichen, W.-D. & Wand, U. 1995. Radiocarbon-dated subfossil stomach oil deposits from petrel nesting sites: novel paleoenvironmental records from continental Antarctica. In G.T. Cook, D.D. Harkness, B.F. Miller and E.M. Scott (eds) Proceedings of the 15th International ^{14}C Conference. *Radiocarbon* **37**(2): 171-80.

ANT114: Princess Ragnhild Coast

IBA criteria	A1, A4ii
Coordinates	27°13'21" E, 69°56'54" S
Area	379 ha
Altitude	0 m
Protection	None



Site description

Princess Ragnhild Coast lies in Dronning Maud Land, south of the Riiser-Larsen Sea. An Emperor Penguin (*Aptenodytes forsteri*) colony has been observed on fast ice that forms within a crack in the ice shelf at Princess Ragnhild Coast ~230 km west of Riiser-Larsen Peninsula.

The IBA qualifies on the basis of the Emperor Penguin colony present and is entirely marine.

There are no research stations nearby. The closest permanent station is Princess Elisabeth Station (BEL) situated 250 km to the southwest at Utsteinen Nunatak, Sør-Rondane Mountains, Dronning Maud Land.

Birds

Analysis of a satellite image acquired 10 Oct 2009 (Fretwell *et al.* 2012) indicated that approximately 6870 Emperor Penguins were present at the colony. The colony was recorded for the first time by Fretwell *et al*. (2012). It was then visited for the first time in December 2012, when ~9000 adults and chicks were counted, and two further visits have subsequently been made in December 2013 (~15 000 adults and chicks) and 2014 (~20 000 adults and chicks) (International Polar Foundation 2015).

Other non-breeding bird species observed at the colony include the Adélie Penguin (*Pygoscelis adeliae*) and South Polar Skua (*Catharacta maccormicki*).

Other threatened / endemic wildlife

Leopard Seals (*Hydrurga leptonyx*) have been observed near the colony.

Conservation issues

None known. The site is very remote, difficult to access and rarely visited.

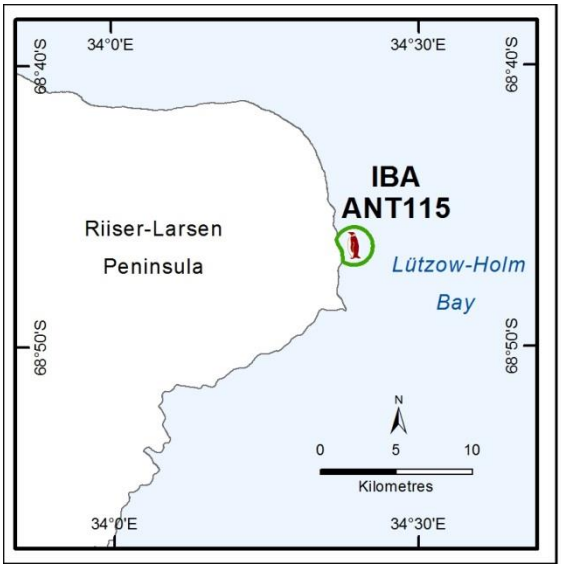
Further reading

Fretwell, P.T., LaRue, M.A., Morin P., Kooyman, G.L., Wienecke, B., Ratcliffe, N., Fox, A.J., Fleming, A.H., Porter, C. & Trathan, P.N. 2012. An Emperor Penguin population estimate: The first global, synoptic survey of a species from space. *PLoS ONE* **7**(4): e33751. doi:10.1371/journal.pone.0033751

International Polar Foundation 2015. URL: http://www.antarcticstation.org/news_press/press_release/newly_discovered_emperor_penguin_colony_receives_first_human_visitors Accessed 25 Jan 2015.

ANT115: Riiser-Larsen Peninsula

IBA criteria	A1, A4ii
Coordinates	34°23'48" E, 68°46'27" S
Area	454 ha
Altitude	0 m
Protection	None



Site description

The Riiser-Larsen Peninsula lies on the Prince Harald Coast, Dronning Maud Land, immediately west of Lützow-Holm Bay. An Emperor Penguin (*Aptenodytes forsteri*) colony breeds on fast ice that forms in northwestern Lützow-Holm Bay, and is typically located within a few km of the Riiser-Larsen Peninsula. The ice shelf formerly adjacent to the breeding site has partially broken up in recent years and has retreated ~5-7 km southward. The colony was discovered in 1975 when it was referred to as 'Riiser-Larsen Peninsula' (Hoshiai & Chujo 1976); this is the same colony that more recently has been referred to as 'Gunnerus' by Fretwell *et al.* (2012).

The IBA qualifies on the basis of the Emperor Penguin colony present and is entirely marine.

There are no research stations nearby. The closest permanent station is Syowa (JPN), ~210 km to the east on the Prince Olav Coast, Enderby Land.

Birds

Hoshiai & Chujo (1976) estimated from aerial photographs that 7200 individuals were present at the Riiser-Larsen Peninsula colony on 24 Oct 1975, including chicks. Kato *et al*. (2004) estimated that between 4000 – 9000 breeding pairs attend this colony based on counts of adults from ground and aerial photographs acquired between 31 August – 25 September over six seasons from 1984–2000. More recently, Fretwell *et al*. (2012) estimated from a satellite image acquired 31 Oct 2009 that approximately 4652 Emperor Penguins were present at the time, although because image quality was 'Fair' and the image originates late in the breeding season, the count may be a poor indicator of the number of breeding pairs present in that season. No other birds are known to breed in the area.

Other threatened / endemic wildlife

None known.

Conservation issues

None known.

Further reading

Fretwell, P.T., LaRue, M.A., Morin P., Kooyman, G.L., Wienecke, B., Ratcliffe, N., Fox, A.J., Fleming, A.H., Porter, C. & Trathan, P.N. 2012. An Emperor Penguin population estimate: The first global, synoptic survey of a species from space. *PLoS ONE* **7**(4): e33751. doi:10.1371/journal.pone.0033751

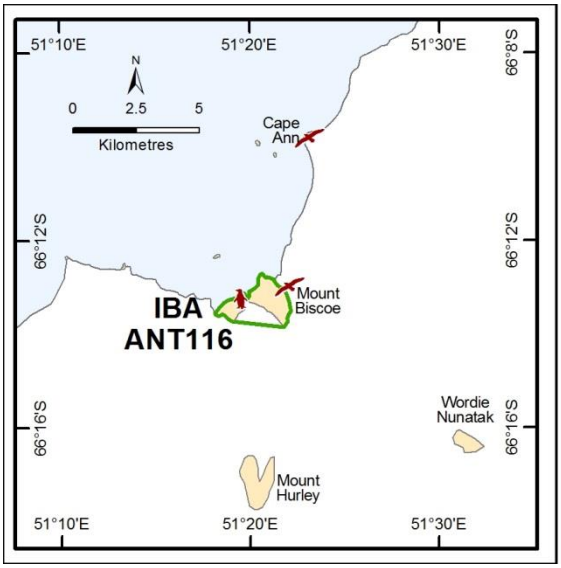
Hoshiai, T. & Chujo, K. 1976. A new emperor penguin rookery of Riiser-Larsen Peninsula, East Antarctica. *Antarctic Record of the Japanese Antarctic Research Expeditions* **57**: 73-79.

Kato, A., Watanabe, K. & Naito, Y. 2004. Population changes of Adélie and emperor penguins along the Prince Olaf Coast and on the Riiser-Larsen Peninsula. *Polar Bioscience* **17**: 117-22.

Enderby Land / Kemp Land

ANT116: Mount Biscoe

IBA criteria	A4iii
Coordinates	51°20'30" E, 66°13'24" S
Area	361 ha
Altitude	0 – 700 m
Protection	None



Site description

Mount Biscoe is the eastern and the larger of two ice free rock massifs located ~6 km southwest of Cape Ann on the coast of Enderby Land. It rises to ~700 m in elevation ~7 km northwest of Wordie Nunatak, and is a similar distance northeast of Mount Hurley.

The IBA qualifies on the basis of the Adélie Penguin (*Pygoscelis adeliae*) colony present and comprises the two rock massifs and the intervening ice area.

There are no research stations nearby. The closest permanent station is Mawson (AUS) ~540 km to the east on the Mawson Coast.

Birds

An Adélie Penguin colony occupies the beaches and lower slopes extending up to ~200 m below Mount Biscoe and at the foot of the western massif (Bassett *et al*. 1989). The colony was considered to comprise at least 5000 breeding pairs in October 1985, although observations were made prior to the arrival of most breeding birds and the authors recommended a later survey to estimate breeding numbers accurately (Bassett *et al*. 1989). More recently, Lynch & LaRue (2014) estimated 28 536 breeding pairs (95% CI 17415, 47225) in the colony in 2011 from satellite imagery.

Antarctic Petrels (*Thalassoica antarctica*) breed on the slopes above the Adélie Penguin colony with the number of breeding pairs estimated in the 1000s (van Franeker *et al*. 1999). Other bird species observed at the site and close offshore include Snow Petrel (*Pagodroma nivea*), Wilson's Storm-petrel (*Oceanites oceanicus*) and South Polar Skua (*Catharacta maccormicki*), although breeding is unconfirmed (Bassett *et al*. 1989).

Other threatened / endemic wildlife

None known.

Conservation issues

None known.

Further reading

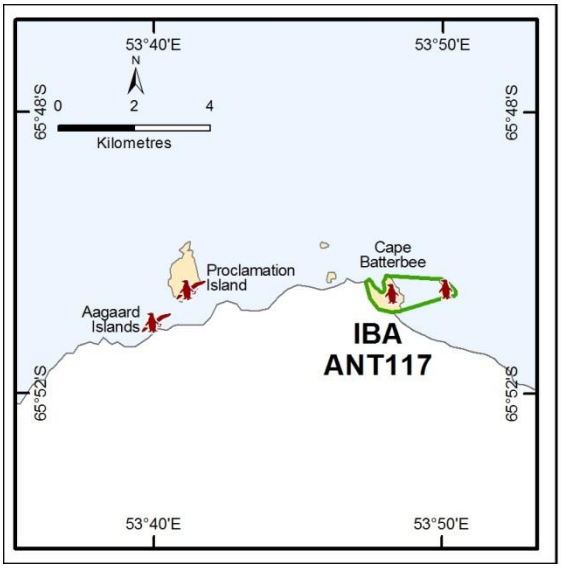
Bassett, J.A., Woehler, E.J., Ensor, P.H., Kerry, K.R. & Johnstone, G.W. 1989. Short Communication: Adélie Penguins and Antarctic Petrels at Mount Biscoe, Western Enderby Land, Antarctica. *Emu* **90**: 58-60.

Lynch, H.J. & LaRue, M.A. 2014. First global census of the Adélie Penguin. *The Auk* **131**(4): 457-66. doi:10.1642/AUK-14-31.1

van Franeker, J.A., Gavrilo, M., Mehlum, F., Veit, R.R. & Woehler, E.J. 1999. Distribution and abundance of the Antarctic Petrel. *Waterbirds* **22**(1): 14-28.

ANT117: Cape Batterbee

IBA criteria	A4iii
Coordinates	53°48'49" E, 65°50'34" S
Area	151 ha
Altitude	
Protection	None



Site description

Cape Batterbee is a low, rocky point situated ~6 km east of Proclamation Island, and forms the most northerly extent of Enderby Land. A small unnamed rocky island (~0.5 km long, ~0.3 km wide) lies several km offshore to the east.

The IBA qualifies on the basis of the Adélie Penguin (*Pygoscelis adeliae*) colony present and comprises Cape Batterbee, the nearby offshore island and the intervening marine area.

There are no research stations nearby. The closest permanent station is Mawson (AUS) ~450 km to the east on the Mawson Coast.

Birds

Approximately 30 746 breeding pairs (95% CI 18839, 50846) of Adélie Penguin were present on Cape Batterbee and the nearby offshore island to the east as estimated from February 2011 satellite imagery (Lynch & LaRue 2014).

No other birds are known to breed at Cape Batterbee. However, Snow Petrels (*Pagodroma nivea*) and Antarctic Petrels (*Thalassoica antarctica*) have been reported on nearby Proclamation Island (Falla 1937).

Other threatened / endemic wildlife

None known.

Conservation issues

None known.

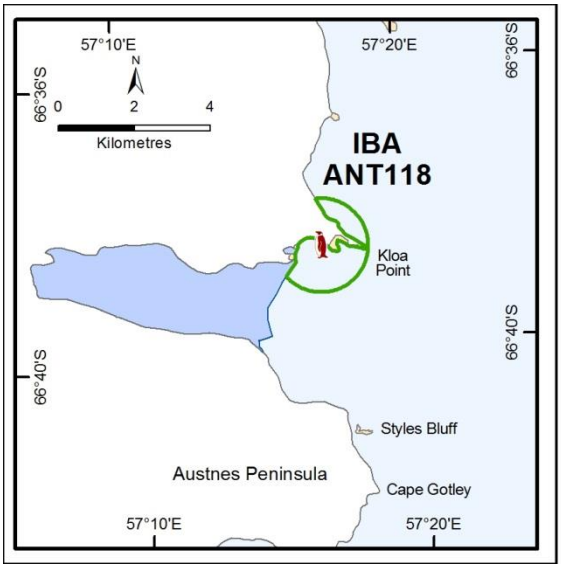
Further reading

Falla, R.A. 1937. Birds. *British and New Zealand Antarctic Research Expeditions Report*, Series B, Vol 2: 1-288.

Lynch, H.J. & LaRue, M.A. 2014. First global census of the Adélie Penguin. *The Auk* **131**(4): 457-66. doi:10.1642/AUK-14-31.1

ANT118: Kloa Point

IBA criteria	A1, A4ii
Coordinates	57°17'12" E, 66°38'38" S
Area	289 ha
Altitude	0 m
Protection	None



Site description

Kloa Point lies ~6 km north of Cape Gotley and ~9 km south of Cape Boothby, both of which lie north of Edward VIII Gulf, Kemp Coast, Kemp Land. The permanent ice cap of the King Edward Plateau lies to the west. An Emperor Penguin (*Aptenodytes forsteri*) colony breeds on fast ice that forms on the southern coast of Kloa Point.

The IBA qualifies on the basis of the Emperor Penguin colony present and is entirely marine.

There are no research stations nearby. The closest permanent station is Mawson (AUS), ~270 km to the east in Holme Bay, Mawson Coast.

Birds

A field party of four members of the Australian National Antarctic Research Expedition visited Kloa Point on 21 September 1985, when each member carried out a ground count of Emperor Penguins present, which were gathered in five distinct groups; the total number of chicks and adults from the four counts were averaged to give 4310 individuals (Unpublished ANARE field report data, reviewed by B. Wienecke pers. comm. 2015). Subsequent analysis of photographs taken of the colony on 21 September 1985 gave a rough count of ~2000 adults present at the time, (B. Wienecke pers. comm. March 2015), highlighting that the earlier count method potentially significantly inflated numbers by including both chicks and adults. This compares with approximately 3283 Emperor Penguins present in 2009, as estimated from satellite imagery acquired 13 November 2009 (Fretwell *et al*. 2012). Uncertainty remains over the size of the Kloa Point colony, although a conservative view has been taken that numbers probably exceed the threshold and therefore the IBA has been retained.

Other birds observed although not breeding in the area include Adélie Penguin (*Pygoscelis adeliae*), South Polar Skua (*Catharacta maccormicki*), Southern Fulmar (*Fulmarus glacialoides*), Snow Petrel (*Pagodroma nivea*), Wilson's Storm-petrel (*Oceanites oceanicus*) and Antarctic Tern (*Sterna vittata*) (Todd *et al.* 1999).

Other threatened / endemic wildlife

Weddell Seals (*Leptonychotes weddellii*) have been reported in the area (Todd *et al.* 1999).

Conservation issues

None known.

Further reading

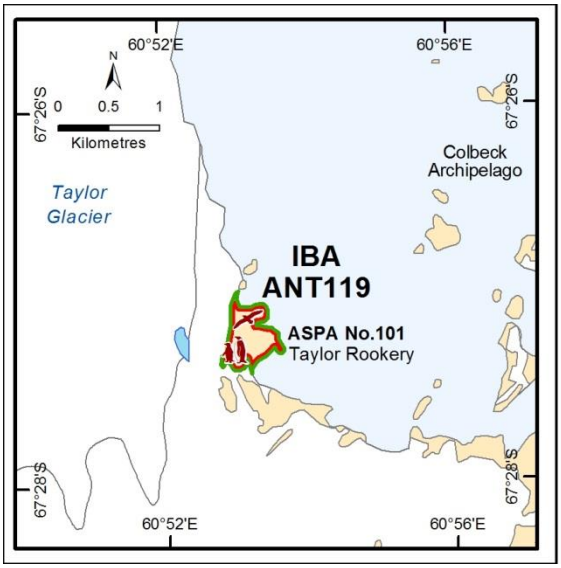
Fretwell, P.T., LaRue, M.A., Morin P., Kooyman, G.L., Wienecke, B., Ratcliffe, N., Fox, A.J., Fleming, A.H., Porter, C. & Trathan, P.N. 2012. An Emperor Penguin population estimate: The first global, synoptic survey of a species from space. *PLoS ONE* **7**(4): e33751. doi:10.1371/journal.pone.0033751

Todd, F.S., Splettstoesser, J.F., Ledingham, R. & Gavrilo, M. 1999. Short Communication: Observations in some Emperor Penguin *Aptenodytes forsteri* colonies in East Antarctica. *Emu* **99:** 142-45. http://dx.doi.org/10.1071/MU99017A

Mac.Robertson Land

ANT119: Taylor Rookery

IBA criteria	A1, A4ii
Coordinates	60°53'10" E, 67°27'13" S
Area	26 ha
Altitude	0 – 60 m
Protection	ASPA No. 101



Site description

Taylor Rookery is an Emperor Penguin (*Aptenodytes forsteri*) colony that breeds on a small headland of predominantly metamorphic rock located on the eastern side of Taylor Glacier, Mawson Coast, Mac.Robertson Land. The headland is located on the southwestern coast of a bay enclosed by the Colbeck Archipelago in the east, Taylor Glacier in the west and permanent continental ice of the Mawson Coast in the south. The headland is ~0.8 km by ~0.4 km in size, with hills rising up to ~60 m in the south, north of which a short valley extends ~400 m to the coast. Several small melt lakes are present in the shallow valley, which in winter are frozen and covered by snow. Taylor Rookery is one of only two known extant sites where Emperor Penguins breed entirely on land (the other is at Amundsen Bay, East Antarctica, and a third site at Dion Islands (IBA ANT103) is no longer occupied). Taylor Rookery was specially protected in 1966 to safeguard the largest known Emperor Penguin colony breeding on land. The IBA qualifies on the basis of the Emperor Penguin colony present and coincides with the boundary of ASPA No. 101.

The nearest permanent station is Mawson (AUS), ~ 85 km to the east in Holme Bay, Mawson Coast.

Birds

The Emperor Penguin colony breeds on level surfaces covered by snow usually in the central valley of the rock headland. Population counts were conducted intermittently from the mid-1950s (Budd 1962) until the mid-1980s (Horne 1983). During the early period, the population averaged 3684 ± 492, while from 1988-2010, the population averaged only 2927 ±320 breeding pairs (Robertson *et al*. 2013). The reasons for this decrease of ~20 % are unknown.

Other bird species noted by Bonner & Smith (1985) as breeding at Taylor Rookery include Snow Petrel (*Pagodroma nivea*), Wilson's Storm-petrel (*Oceanites oceanicus*) and South Polar Skuas (*Catharacta maccormicki*), although the numbers and source of the observations are not known. More recently, South Polar Skua breeding in the area is not confirmed in the ASPA No. 101 management plan, although they remain regularly observed.

Other threatened / endemic wildlife

None known.

Conservation issues

None known. The site has been specially protected for almost 50 years, and visits to this colony have been both infrequent and strictly controlled since designation of the protected area.

Further reading

ASPA No. 101 Taylor Rookery, Mac.Robertson Land: Management Plan (2010).
Bonner, N. & Smith, R.I.L. (eds) 1985. Conservation areas in the Antarctic. SCAR, Cambridge.
Budd, G.M. 1961. The biotopes of emperor penguin rookeries. *Emu* **61**: 171-89.

Budd, G.M. 1962. Population studies in rookeries of the Emperor Penguin *Aptenodytes forsteri*. *Proceedings of the Zoological Society of London* **139**: 365-88.

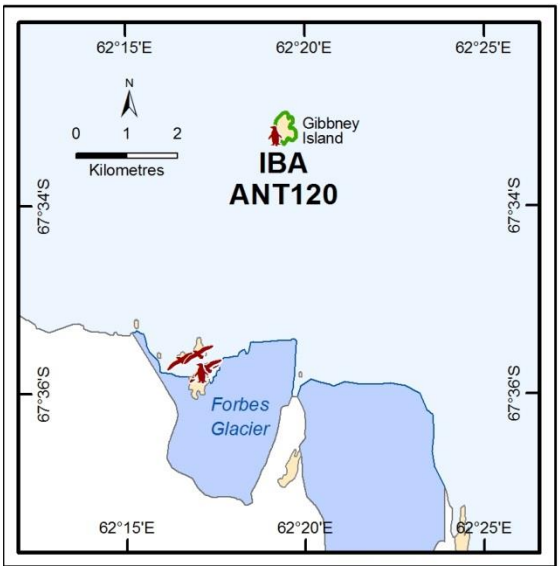
Horne, R.S.C. 1983. The distribution of penguin breeding colonies on the Australian Antarctic Territory, Heard Island, the McDonald Islands and Macquarie Island. *ANARE Research Notes* **9**.

Robertson, G. 1992. Population size and breeding success of Emperor Penguins (*Aptenodytes forsteri*) at the Auster and Taylor Glacier colonies, Mawson Coast, Antarctica. *Emu* **92**: 62-71.

Robertson, G., Wienecke, B., Emmerson, L. & Fraser, A.D. 2013. Long-term trends in the population size and breeding success of Emperor Penguins at the Taylor Glacier colony, Antarctica. *Polar Biology* **37**(2): 251-259. doi:10.1007/s00300-013-1428-z

ANT120: Gibbney Island

IBA criteria	A4iii
Coordinates	62°19'26" E, 67°33'11" S
Area	17 ha
Altitude	
Protection	None



Site description

Gibbney Island lies in western Holme Bay, ~4 km north of the coast at Forbes Glacier, Mac.Robertson Land. The rocky island is ice free in summer, relatively flat, with a line of low cliffs along its western coast, and is ~0.6 km long and up to 0.4 km wide.

The IBA qualifies on the basis of the Adélie Penguin (*Pygoscelis adeliae*) colony present, and comprises all of Gibbney Island and adjacent islets.

The nearest permanent station is Mawson (AUS) ~25 km to the southeast in Holme Bay, Mawson Coast.

Birds

Approximately 12 246 breeding pairs (95% CI 7287, 20 187) of Adélie Penguins were present on Gibbney Island as estimated from February 2011 satellite imagery (Lynch & LaRue 2014). Breeding is mostly concentrated on the western side of the island.

No other birds are known to breed on the island.

Other threatened / endemic wildlife

None known.

Conservation issues

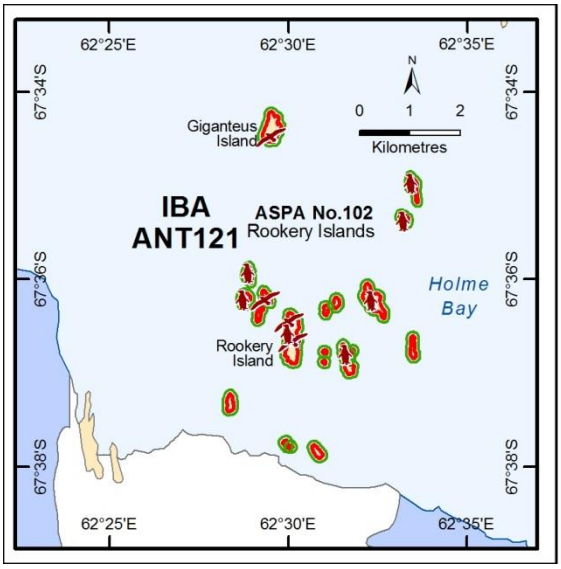
None known.

Further reading

Lynch, H.J. & LaRue, M.A. 2014. First global census of the Adélie Penguin. *The Auk* **131**(4): 457-66. doi:10.1642/AUK-14-31.1

ANT121: Rookery Islands

IBA criteria	A1, A4ii, A4iii
Coordinates	62°30'07" E, 67°36'39" S
Area	89 ha
Altitude	0 – 60 m
Protection	ASPA No. 102



Site description

Rookery Islands comprise around 75 small islands and islets situated in western Holme Bay, Mawson Coast, Mac.Robertson Land. The largest islands of the group are Giganteus Island in the northwest, ~0.6km long by 0.4km wide, and Rookery Island in the south, ~1km long and 0.25km wide. The islands are generally rocky and of low relief, rising to ~60 m on Rookery Island, ~25 m on Giganteus Island, and generally ranging between 10 – 30 m on other smaller islands in the group (Australian Antarctic Data Centre 2001).

The area is designated as ASPA No. 102 to protect resident breeding bird species, including the Southern Giant Petrel (*Macronectes giganteus*) and Cape Petrel (*Daption capense*), which are not found elsewhere in the local region (ASPA No. 102 Management Plan 2010). The IBA qualifies on the basis of the Adélie Penguin (*Pygoscelis adeliae*) colony present and coincides with the boundary of ASPA No. 102.

The nearest permanent station is Mawson (AUS) ~ 15 km to the east in Holme Bay, Mawson Coast.

Birds

Six bird species are known to breed on Rookery Islands (Table 121.1). The following description is drawn mainly from the ASPA No. 102 Management Plan (2010). Adélie Penguins breed on 14 islands, with the largest numbers occurring on Rookery and Giganteus islands. Southern Giant Petrels nest on Giganteus Island only, and while the colony is stable it is considered marginal with typically 2 – 4 pairs breeding each year since the 1960s. Giganteus Island is designated as a Restricted Zone within ASPA No. 102 in order to offer the highest level of protection to resident Southern Giant Petrels.

Table 121.1: Bird species breeding at Rookery Islands.

Common name	Scientific name	Breeding pairs	Year	Source
Adélie Penguin	*Pygoscelis adeliae*	43 620	1988/89	Woehler *et al*. 1989
		90 627 (95% CI 70 685 – 197 832)	2007/08	Southwell *et al*. 2013
		43 989 (95% CI 26 681, 72 222)	2011	Lynch & LaRue 2014
Southern Giant Petrel	*Macronectes giganteus*	16	1958	Bolzer & Fisher unpub. (in Wienecke *et al*. 2009)
		2	2007	Pike & Wilson unpub. (in Wienecke *et al.* 2009)
Cape Petrel	*Daption capense*	123	2007	ASPA No. 102 Management Plan 2010
Snow Petrel	*Pagodroma nivea*	Confirmed		Bonner & Lewis Smith 1985
Wilson's Storm-petrel	*Oceanites oceanicus*	Confirmed		Bonner & Lewis Smith 1985
South Polar Skua	*Catharacta maccormicki*	5	1972	Bonner & Lewis Smith 1985

Cape Petrels breed on Rookery Island and on a smaller island ~300 m to the northwest. Snow Petrels (*Pagodroma nivea*) breed throughout the island group with the highest concentration on Rookery Island. Wilson's Storm-petrels

(*Oceanites oceanicus*) are also frequently observed and are probably breeding on the larger islands, although nests have not been formally observed. South Polar Skua (*Catharacta maccormicki*) breeding locations are not recorded in the published literature.

Other threatened / endemic wildlife

None known.

Conservation issues

Southern Giant Petrels are particularly sensitive to disturbance, and the resident colony of only a few pairs is considered marginal. The Restricted Zone at Giganteus Island designated under ASPA No. 102 helps protect the colony. A sizeable permanent research station is present nearby and relatively minor disturbance to the colony could lead to local extinction. To manage these risks, strict protection has been given to this colony within ASPA No. 102, and pilots operating aircraft locally are instructed to avoid low overflight of the area.

Further reading

ASPA No. 102 Rookery Islands, Holme Bay, Mac.Robertson Land: Management Plan (2010).

Australian Antarctic Data Centre 2001. Rookery Islands (SPA 2). Scale 1:20 000. Edition 1. Catalogue ID 12738.

Bonner, W.N. & Lewis Smith, R.I. (eds) 1985. Conservation areas in the Antarctic. Review prepared by the Sub-Committee of Conservation, Working Group on Biology. Scientific Committee on Antarctic Research, Cambridge.

Lynch, H.J. & LaRue, M.A. 2014. First global census of the Adélie Penguin. *The Auk* **131**(4): 457-66. doi:10.1642/AUK-14-31.1

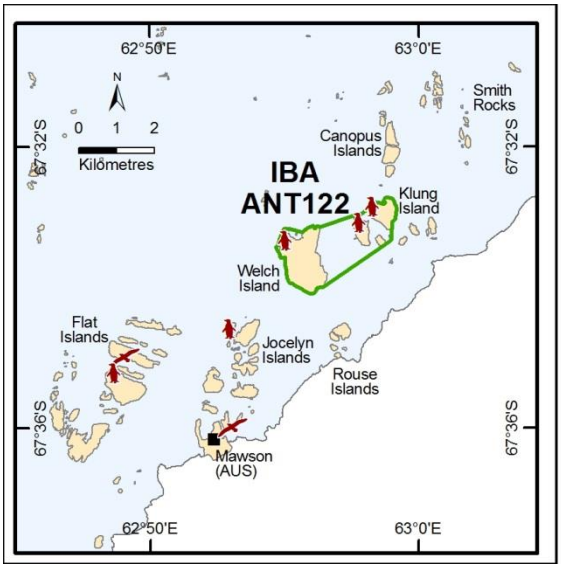
Southwell, C., McKinlay, J., Low, M., Wilson, D., Newbery, K., Lieser, J. & Emmerson, L. 2013. New methods and technologies for regional-scale abundance estimation of land-breeding marine animals: application to Adélie penguin populations in East Antarctica. *Polar Biology* **36**: 843-56.

Wienecke, B., Leaper, R., Hay, I. & van den Hoff, J. 2009. Retrofitting historical data in population studies: Southern Giant Petrels in the Australian Antarctic Territory. *Endangered Species Research* **8**: 157-64.

Woehler, E.J., Johnstone, G.W. & Burton, H.R. 1989. The distribution and abundance of Adélie Penguins in the Mawson area and at the Rookery Islands (Specially Protected Area 2), 1981 and 1988. *ANARE Research Notes* **71**.

ANT122: Klung Island / Welch Island

IBA criteria	A4iii
Coordinates	62°56'54" E, 67°33'25" S
Area	415 ha
Altitude	0 – 130 m
Protection	None



Site description

Klung Island and Welch Island are situated on the eastern side of Holme Bay ~2 km northwest of the Mawson Coast, Mac.Robertson Land. Klung Island is ~0.8 km long and up to 0.7 km wide, rises to 40 m, and is the largest of the Klung Islands group. Welch Island is ~1.8 km long and up to 1 km wide with a prominent narrow ridge rising to ~130 m. Klung and Welch islands are mostly ice free in summer and several lakes are present.

The IBA qualifies on the basis of the Adélie Penguin (*Pygoscelis adeliae*) colony present and comprises Klung Island, Welch Island and includes the intervening smaller islands and marine area.

The nearest permanent station is Mawson (AUS) ~5 km to the southwest in Holme Bay, Mawson Coast.

Birds

Approximately 11 441 breeding pairs of Adélie Penguins were present on Klung Island and on the small unnamed island immediately west, and 24 620 pairs were estimated as breeding on Welch Island, as estimated from February 2011 satellite imagery (unpublished data, H. Lynch & M. LaRue pers. comm. 2014: CI not available). Nests are concentrated along the northern coasts of the three largest islands within the IBA.

Snow Petrels (*Pagodroma nivea*) are known to breed on high ground on the islands, although numbers are not known (Australian Antarctic Data Centre 2014).

Other threatened / endemic wildlife

None known.

Conservation issues

Klung Island and Welch Island lie close to Mawson Station and local operational activities could pose potential concerns for conservation of wildlife. In particular, oil spills and aircraft operations represent potential risks to local breeding birdlife. Mawson Station has comprehensive procedures in place to manage and minimise these risks (see e.g. Australian Antarctic Data Centre 2014), and station management are cognisant of locally sensitive wildlife, so risks are considered low.

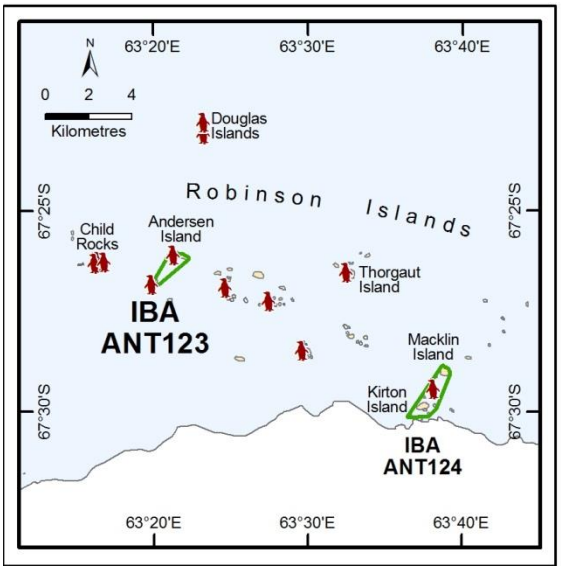
Further reading

Australian Antarctic Data Centre. 2014. Mawson fixed wing suggested flight paths. Scale 1:70 000. Edition 3. Catalogue ID 14308.

Lynch, H.J. & LaRue, M.A. 2014. First global census of the Adélie Penguin. *The Auk* **131**(4): 457-66. doi:10.1642/AUK-14-31.1

ANT123: Andersen Island

IBA criteria	A4iii
Coordinates	63°21'01" E, 67°26'25" S
Area	111 ha
Altitude	
Protection	None



Site description

Andersen Island is part of the Robinson Island group, and is situated ~20 km west of Cape Daly and ~8 km north of the Mawson Coast, Mac.Robertson Land.

The IBA qualifies on the basis of Adélie Penguin (*Pygoscelis adeliae*) colonies on Anderson Island and an unnamed island 1 km to the south west of Andersen Island.

The nearest permanent station is Mawson (AUS) ~30 km to the west in Holme Bay, on the Mawson coast

Birds

The presence of breeding Adélie Penguins at Andersen Island and the nearby unnamed island was first reported in Low *et al*. (2007). Subsequently, a survey of the Adélie Penguin breeding population was undertaken in the entire Robinson Group in 2006/07 (Southwell *et al*. 2014). Data from this survey estimate an Adélie Penguin population in the Andersen IBA of 12 839 (95% CI: 8865, 17 251) pairs (C. Southwell pers. comm. 2015). The confidence interval for this IBA estimate is wider than for the Robinson regional estimate in Southwell *et al.* (2014) because the regional survey was designed to provide a single estimate for the entire Robinson population with a specific precision from sample counts rather than estimate populations at individual islands with specific precision.

Other threatened / endemic wildlife

None known

Conservation issues

None known

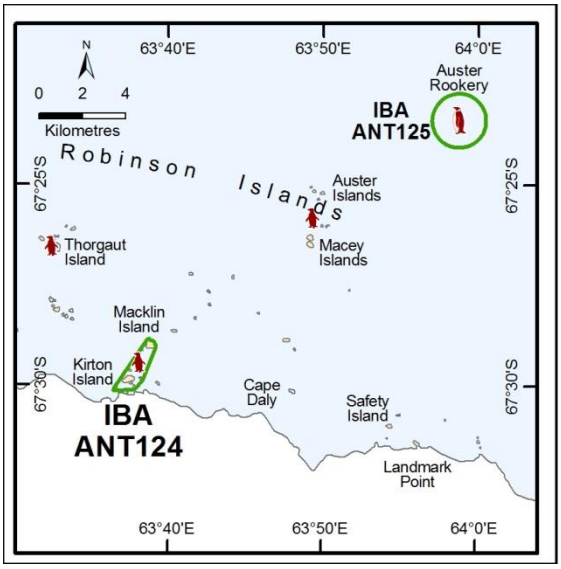
Further reading

Low, M., Meyer, L. & Southwell, C. 2007. Number and distribution of Adélie penguin (*Pygoscelis adeliae*) breeding sites in the Robinson Group of islands, Mac.Robertson Land coast, East Antarctica. *Polar Record* **43**: 225-29.

Southwell, C., Low, M., Newbery, K. & Emmerson, L. 2014. First comprehensive abundance survey of a newly discovered Adélie penguin breeding metapopulation in the Robinson Group of islands, Mac.Robertson Land, east Antarctica. *Antarctic Science* **26**: 265-66.

ANT124: Kirton Island / Macklin Island

IBA criteria	A4iii
Coordinates	63°38'01" E, 67°29'35" S
Area	195 ha
Altitude	0 – 30 m
Protection	None



Site description

Kirton Island and Macklin Island are part of the Robinson Island group, and are situated amongst a number of small largely ice free islands ~6 km west of Cape Daly, Mawson Coast, Mac.Robertson Land. Kirton Island is ~0.6 km long and up to 0.3 km wide and lies ~200 metres north of the Mawson Coast, while Macklin Island lies ~ 2 km further north and is ~0.5 km long and up to 0.4 km wide.

The IBA qualifies on the basis of the Adélie Penguin (*Pygoscelis adeliae*) colony present and comprises Kirton Island, Macklin Island, associated smaller islands and the intervening marine area.

The nearest permanent station is Mawson (AUS) ~35 km to the west in Holme Bay, on the Mawson Coast.

Birds

Approximately 12 955 breeding pairs (95% CI 7737, 21 308) of Adélie Penguin were present at Kirton Island and Macklin Island in December 2006 as estimated from satellite imagery (Lynch & LaRue 2014). Southwell *et al*. (2014) estimated approximately 48 500 breeding pairs of Adélie Penguin present within the Robinson Island group as a whole in a survey conducted from 2-4 December 2006.

No other birds are known to breed on the islands.

Other threatened / endemic wildlife

None known.

Conservation issues

None known.

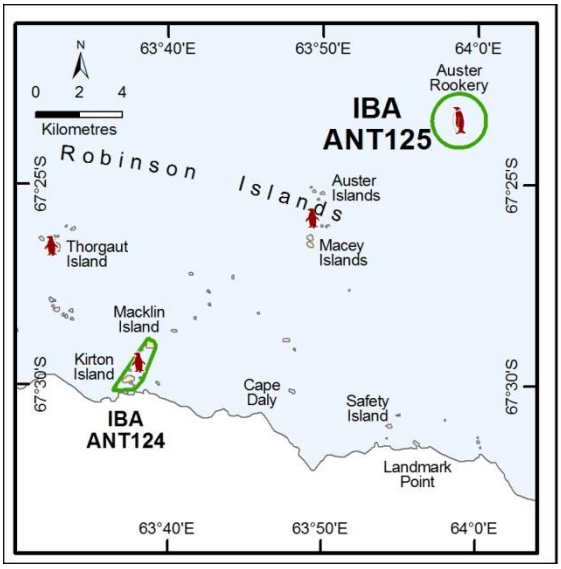
Further reading

Lynch, H.J. & LaRue, M.A. 2014. First global census of the Adélie Penguin. *The Auk* **131**(4): 457-66. doi:10.1642/AUK-14-31.1

Southwell, C., Low, M., Newbery, K. & Emmerson, L. 2014. First comprehensive abundance survey of a newly discovered Adélie penguin breeding metapopulation in the Robinson Group of islands, Mac.Robertson Land, east Antarctica. *Antarctic Science* **26**: 265-66.

ANT125: Auster Rookery

IBA criteria	A1, A4ii
Coordinates	63°58'48" E, 67°23'24" S
Area	500 ha
Altitude	0 m
Protection	None



Site description

Auster Rookery is situated ~6 km northeast of Auster Islands and ~15 km due north of Landmark Point, Mawson Coast, Mac.Robertson Land. The site is characterised by concentrations of icebergs that are typically grounded in the relatively shallow seas found in this area. The IBA qualifies on the basis of the Emperor Penguin (*Aptenodytes forsteri*) colony present on fast ice and is entirely marine.

The nearest permanent station is Mawson (AUS), ~51 km to the west in Holme Bay, on Mawson Coast.

Birds

Robertson's (1995) systematic count at Auster Rookery in the winter of 1988 reported 10 963 breeding pairs present. Analysis of a satellite image acquired on 25 October 2009 (Fretwell *et al.* 2012) indicated that approximately 7855 Emperor Penguins were present at the colony. Other birds observed at Auster Rookery, although not breeding, include the Adélie Penguin (*Pygoscelis adeliae*), South Polar Skua (*Catharacta maccormicki*), Snow Petrel (*Pagodroma nivea*), Wilson's Storm-petrel (*Oceanites oceanicus*), Southern Giant Petrel (*Macronectes giganteus*) and Antarctic Tern (*Sterna vittata*) (Todd *et al.* 1999).

Other threatened / endemic wildlife

Weddell Seals (*Leptonychotes weddellii*) have been reported in the area (Todd *et al.* 1999).

Conservation issues

From 2004-14 one tourist visit was made to Auster Rookery when 68 visitors landed in 2007/08 (IAATO Tourism Statistics, accessed: 18/12/2014).

Further reading

Budd, G.M. 1961. The biotopes of emperor penguin rookeries. *Emu* **61**: 171-89.

Budd, G.M. 1962. Population studies in rookeries of the emperor penguin *Aptenodytes forsteri*. *Proceedings of the Zoological Society of London* **139**: 365-89.

Fretwell, P.T., LaRue, M.A., Morin P., Kooyman, G.L., Wienecke, B., Ratcliffe, N., Fox, A.J., Fleming, A.H., Porter, C. & Trathan, P.N. 2012. An Emperor Penguin population estimate: The first global, synoptic survey of a species from space. *PLoS ONE* **7**(4): e33751. doi:10.1371/journal.pone.0033751

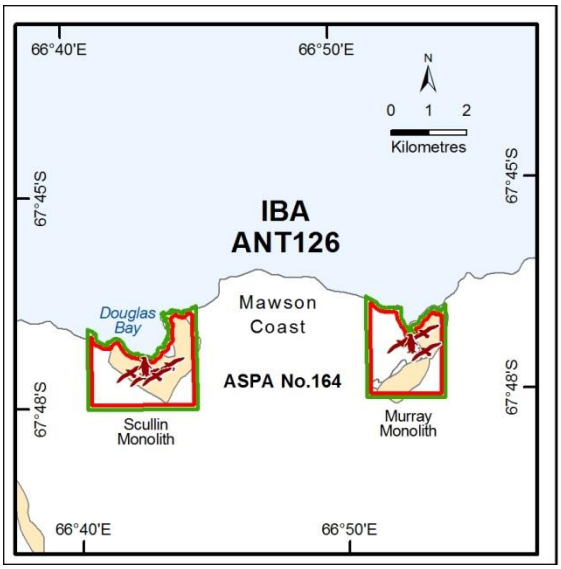
Robertson, G. 1992. Population size and breeding success of Emperor Penguins (*Aptenodytes forsteri*) at the Auster and Taylor Glacier colonies, Mawson Coast, Antarctica. *Emu* **92**: 62-71.

Robertson, G. 1995. The foraging ecology of Emperor Penguins (*Aptenodytes forsteri*) at two Mawson Coast colonies, Antarctica. *ANARE Reports* **138**.

Todd, F.S., Splettstoesser, J.F., Ledingham, R. & Gavrilo, M. 1999. Short Communication: Observations in some Emperor Penguin *Aptenodytes forsteri* colonies in East Antarctica. *Emu* **99:** 142-45. doi:10.1071/MU99017A

ANT126: Scullin Monolith / Murray Monolith

IBA criteria	A1, A4ii, A4iii
Coordinates	66°52'24" E, 67°47'27" S 66°42'40" E, 67°47'32" S
Area	1023 ha
Altitude	0 – 435 m
Protection	ASPA No. 164



Site description

Scullin Monolith and Murray Monolith are imposing steep massifs of metasedimentary gneiss and granitic origin, situated ~5 km apart on the Mawson Coast, Mac.Robertson Land. The adjacent coastline consists of ice cliffs rising up to 40 m in height. Scullin Monolith, in the west, rises steeply to extend from Mikkelsen Peak (435 m) westward in a crescent that encloses Douglas Bay. Murray Monolith is dome-shaped with steep sides and rises to a seaward summit of 339 m and an inland summit of 363 m at Torlyn Mountain.

The area was designated as ASPA No. 164 in 2005 on the basis of its ecological and scientific values, in particular for the largest concentration of seabird breeding colonies in East Antarctica (ASPA No. 164 Management Plan 2010).

The IBA qualifies on the basis of the Adélie Penguin (*Pygoscelis adeliae*) and Antarctic Petrel (*Thalassoica antarctica*) colonies present and coincides with the boundary of ASPA No. 164.

The nearest permanent station is Mawson (AUS), ~170 km to the west in Holme Bay, on Mawson Coast.

Birds

Seven bird species breed at Scullin and Murray monoliths (Tables 126.1 and 126.2). At Scullin Monolith a large colony of Adélie Penguins breeds on the lower slopes up to 200 m along the coast of Douglas Bay, and extends ~500 m along the northern coast below Mikkelsen Peak at elevations of <50 m. Large numbers of Antarctic Petrel and Southern Fulmar (*Fulmarus glacialoides*) breed on the higher slopes around Douglas Bay (Table 126.1). The population of Antarctic Petrel at Scullin Monolith is the second largest in Antarctica after the colony at Svarthamaren (IBA ANT116, ASPA No. 142). South Polar Skua (*Catharacta maccormicki*) also breed on the upper southwestern and southeastern slopes of Scullin Monolith. Adélie penguins at Murray Monolith breed on the lower slopes along the coast below and west of the seaward summit, including on glacial ice covered by moraine (Southwell & Emmerson 2013). The distribution of other breeding birds at Murray Monolith has not yet been described.

Table 126.1: Bird species breeding at Scullin Monolith.

Common name	Scientific name	Breeding pairs	Year	Source
Adélie Penguin	*Pygoscelis adeliae*	42 920[1]	2010/11	Southwell & Emmerson 2013
Adélie Penguin	*Pygoscelis adeliae*	49 500[2]	1986/87	Alonso *et al*. 1987
Southern Fulmar	*Fulmarus glacialoides*	1350		
Antarctic Petrel	*Thalassoica antarctica*	157 000		
Cape Petrel	*Daption capense*	14		
Snow Petrel	*Pagodroma nivea*	1200		
Wilson's Storm-petrel	*Oceanites oceanicus*	Confirmed		
South Polar Skua	*Catharacta maccormicki*	30		

1. Southwell & Emmerson (2013) counted individuals; given that the counts were made on 10 December this was considered a reasonable approximation of breeding pairs.
2. Southwell & Emmerson (2013) considered this estimate highly uncertain because it is based on counts made late in the breeding season.

Table 126.2: Bird species breeding at Murray Monolith.

Common name	Scientific name	Breeding pairs	Year	Source
Adélie Penguin	*Pygoscelis adeliae*	8295[1]	2010/11	Southwell & Emmerson 2013
Adélie Penguin	*Pygoscelis adeliae*	20 000[2]	1986/87	Alonso *et al*. 1987
Southern Fulmar	*Fulmarus glacialoides*	150		
Antarctic Petrel	*Thalassoica antarctica*	3500		
Cape Petrel	*Daption capense*	Confirmed		
Snow Petrel	*Pagodroma nivea*	Confirmed		
Wilson's Storm-petrel	*Oceanites oceanicus*	Confirmed		
South Polar Skua	*Catharacta maccormicki*	Confirmed		

1. Southwell & Emmerson (2013) counted individuals, which was considered a reasonable approximation of breeding pairs.
2. Southwell & Emmerson (2013) recommended this estimate be interpreted with caution owing to lack of detail on its derivation.

Other threatened / endemic wildlife

Weddell Seals (*Leptonychotes weddellii*) and a Leopard Seal (*Hydrurga leptonyx*) have been observed in the vicinity (ASPA No. 164 Management Plan 2010).

Conservation issues

The first visits and landings at Scullin and Murray monoliths occurred in the 1930s (ASPA No. 164 Management Plan 2010). More recently, visits have been for scientific research although are rare and usually for less than a day per visit. One visit of 6 days duration was made in February 1987 to carry out the only detailed bird census of the site yet made. Access may be made by small boat or helicopter. Aircraft operations perhaps pose the most significant local conservation risk, although strict rules governing aircraft operations and overflight are imposed by the ASPA management plan which should ensure breeding sites are adequately protected. The area is considered mostly undisturbed and suitable as a reference site.

A few tourist visits have been made to Scullin Monolith, the first being of 80 people in 1992. Subsequently, 90 visitors landed in 1996/97; 235 in 1997/98; 96 in 1998/99; and in 2007/08 one visit was made to the Murray Monolith area although none landed (IAATO Tourism Statistics, accessed: 23/01/2015). No tourists have visited since the site was designated an ASPA in 2008.

Further reading

Alonso, J.C., Johnstone, G.W., Hindell, M., Osborne, P. & Guard, R. 1987. Las aves del Monolito Scullin, Antartida Oriental. Actas del segundo Syposium Español de Estudios Antárticos: Madrid, 13 – 15 Julio, 1987.

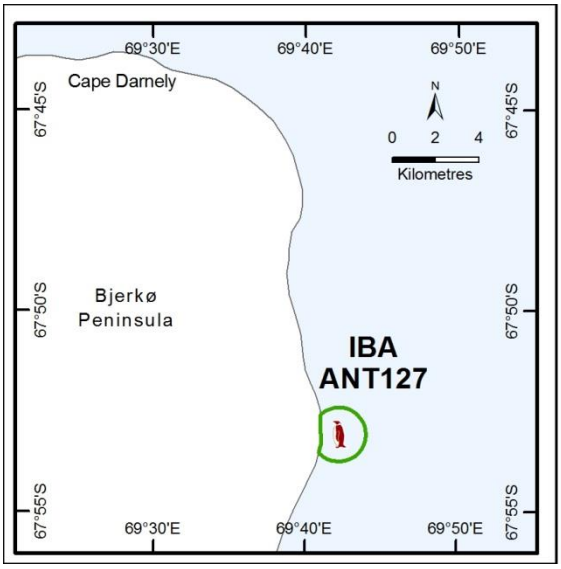
ASPA No. 164 Scullin and Murray Monoliths, Mac.Robertson Land: Management Plan (2010).

Southwell, C. & Emmerson, L.M. 2013. New counts of Adélie Penguin populations at Scullin and Murray monoliths, Mac.Robertson Land, East Antarctica. *Antarctic Science* **25**(3): 381-84.

van Franeker, J.A., Gavrilo, M., Mehlum, F., Veit, R.R. & Woehler, E.J. 1999. Distribution and abundance of the Antarctic Petrel. *Waterbirds* **22**(1): 14-28.

ANT127: Cape Darnley

IBA criteria	A1, A4ii
Coordinates	69°42'24" E, 67°53'05" S
Area	440 ha
Altitude	0 m
Protection	None



Site description

Cape Darnley lies at the northern extremity of Bjerkø Peninsula, on the Lars Christensen Coast, Mac.Robertson Land. The Bjerkø Peninsula is fully covered by a permanent ice cap, from which icebergs calve into western Prydz Bay. Fast ice persists along the coast where icebergs can become grounded, providing a stable platform where Emperor Penguins may breed.

The IBA qualifies on the basis of the Emperor Penguin (*Aptenodytes forsteri*) colony present, is entirely marine and is situated on fast ice ~20 km southeast of Cape Darnley and ~80 km northwest of the Amery Ice Shelf.

There are no research stations nearby. The closest permanent station is Mawson Station (AUS), ~290 km to the west on the Mawson Coast.

Birds

An Emperor Penguin colony was first seen at Cape Darnley from an aircraft in August 1958; ~5000 penguins were estimated to be present (Willing 1958). Fretwell *et al*. (2012) estimated 3465 Emperor Penguins were present in 2009 based on satellite image analysis. However, B. Wienecke (pers. comm. Dec 2014) reported ~8000 chicks present based on a more detailed photographic survey carried out in December 2013, which suggests that the Fretwell *et al*. (2012) result for 2009 may have been an underestimate.

No other birds are known to breed in the area.

Other threatened / endemic wildlife

None known.

Conservation issues

None known. Between 2004-14 one tourist visit was made to the Cape Darnley area, in 2011/12 when 108 visitors landed (IAATO Tourism Statistics, accessed: 18/12/2014). The site is very remote and rarely visited.

Further reading

Budd, G.M. 1961. The biotopes of emperor penguin rookeries. *Emu* **61**: 171-89.

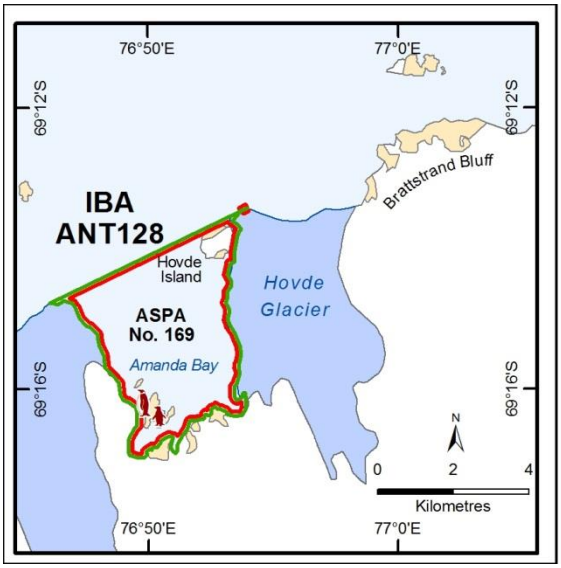
Fretwell, P.T., LaRue, M.A., Morin P., Kooyman, G.L., Wienecke, B., Ratcliffe, N., Fox, A.J., Fleming, A.H., Porter, C. & Trathan, P.N. 2012. An Emperor Penguin population estimate: The first global, synoptic survey of a species from space. *PLoS ONE* **7**(4): e33751. doi:10.1371/journal.pone.0033751

Willing R.L. 1958. Australian discoveries of Emperor Penguin rookeries in Antarctica during 1954-1957. *Nature* **182**: 1393-94.

Princess Elizabeth Land

ANT128: Amanda Bay

IBA criteria	A1, A4ii
Coordinates	76°50'51" E, 69°15'13" S
Area	1715 ha
Altitude	0 m
Protection	ASPA No. 169



Site description

Amanda Bay is situated between Hovde Glacier and Flatnes Ice Tongue, southeastern Prydz Bay, Ingrid Christensen Coast, Princess Elizabeth Land. The bay is ~4 km wide and extends around the same distance inland.

The IBA qualifies on the basis of the Emperor Penguin (*Aptenodytes forsteri*) colony present, and includes all of Amanda Bay and the islands within. The IBA coincides with the boundary of ASPA No. 169.

The nearest permanent stations are Zhongshan Station (CHN), Law-Racoviţă Station (ROU), and Progress II Station (RUS), and Bharati (IND), ~20 km to the southeast in the Larsemann Hills.

Birds

A large Emperor Penguin colony breeds within Amanda Bay, usually located on fast ice that persists near a rocky island in the southwestern part of the bay.

Various population estimates were made at this colony in the past (Wienecke & Pedersen 2009). Fretwell *et al*. (2012) estimated 6831 adults based on satellite image analysis. However, B. Wienecke (pers. comm. Dec 2014) reported ~9700 chicks present in the same year, based on a more detailed photographic survey carried out in December 2009, suggesting the Fretwell *et al*. (2012) result is an underestimate.

South Polar Skuas (*Catharacta maccormicki*) and Wilson's Storm-petrels (*Oceanites oceanicus*) are known to breed on the islands in Amanda Bay, although numbers are not known (ASPA No.169 Management Plan 2014). Adélie Penguins have been observed within the area (Todd *et al.* 1999) and a few dozen moult on the islands.

Other threatened / endemic wildlife

Weddell Seals (*Leptonychotes weddellii*) regularly haul out in the area, particularly in southern Amanda Bay where sea ice is more stable (ASPA No.169 Management Plan 2014).

Conservation issues

From 2003-14 one tourist visit was made to Amanda Bay in 2007/08 when 66 visitors landed (IAATO Tourism Statistics, accessed: 18/12/2014). Access to Amanda Bay was restricted by permit under the management plan for ASPA No.169 in 2008 and visits are infrequent.

Further reading

ASPA No. 169 Amanda Bay, Ingrid Christensen Coast, Princess Elizabeth Land, East Antarctica: Management Plan (2014).

Cracknell, G.S. 1986. Population counts and observations at the Emperor penguin *Aptenodytes forsteri* colony at Amanda Bay, Antarctica. *Emu* **86***:* 113-17.

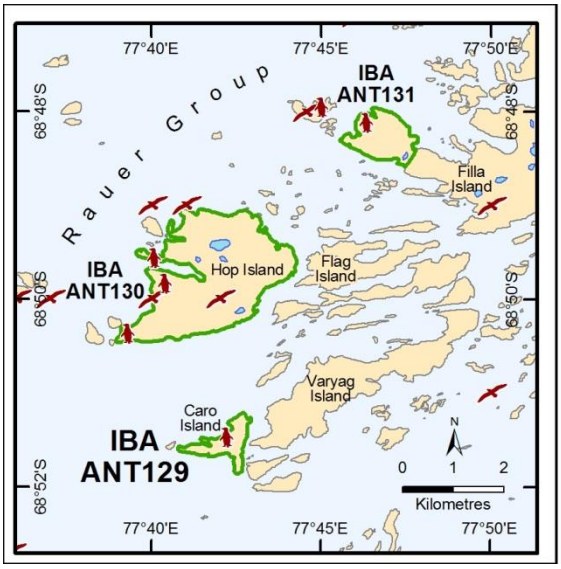
Fretwell, P.T., LaRue, M.A., Morin P., Kooyman, G.L., Wienecke, B., Ratcliffe, N., Fox, A.J., Fleming, A.H., Porter, C. & Trathan, P.N. 2012. An Emperor Penguin population estimate: The first global, synoptic survey of a species from space. *PLoS ONE* **7**(4): e33751. doi:10.1371/journal.pone.0033751

Todd, F.S., Splettstoesser, J.F., Ledingham, R. & Gavrilo, M. 1999. Short Communication: Observations in some Emperor Penguin *Aptenodytes forsteri* colonies in East Antarctica. *Emu* **99:** 142-45. http://dx.doi.org/10.1071/MU99017A

Wienecke, B. & Pedersen, P. 2009. Population estimates of Emperor Penguins at Amanda Bay, Ingrid Christensen Coast, Antarctica. *Polar Record* **45** (3): 207-14.

ANT129: Caro Island, Rauer Islands

IBA criteria	A4iii
Coordinates	77°42'11" E, 68°51'32" S
Area	57 ha
Altitude	0 – 40 m
Protection	None



Site description

The Rauer Islands are situated between Ranvik Bay and Sørsdal Glacier Tongue, Ingrid Christensen Coast, Princess Elizabeth Land. Caro Island lies ~2 km south of Hop Island, is ~1.3 km long by up to 1.2 km wide and is mainly ice free in summer. A prominent ridge of ~30 m in height rises to a maximum elevation on the northeastern coast of ~40 m.

The IBA qualifies on the basis of the Adélie Penguin (*Pygoscelis adeliae*) colony present, and includes all of Caro Island.

The nearest permanent station is Davis (AUS), ~33 km to the north on Broad Peninsula, Vestfold Hills.

Birds

Whitehead & Johnstone (1990) estimated 20 087 breeding pairs of Adélie Penguin on Caro Island in 1981/82. This compares with approximately 34 790 breeding pairs of Adélie Penguin present in 2010/11 as estimated from February 2011 satellite imagery (unpublished data, H. Lynch & M. LaRue pers. comm. 2014). Information on other breeding birds on Caro Island is not available.

Other threatened / endemic wildlife

None known.

Conservation issues

None known.

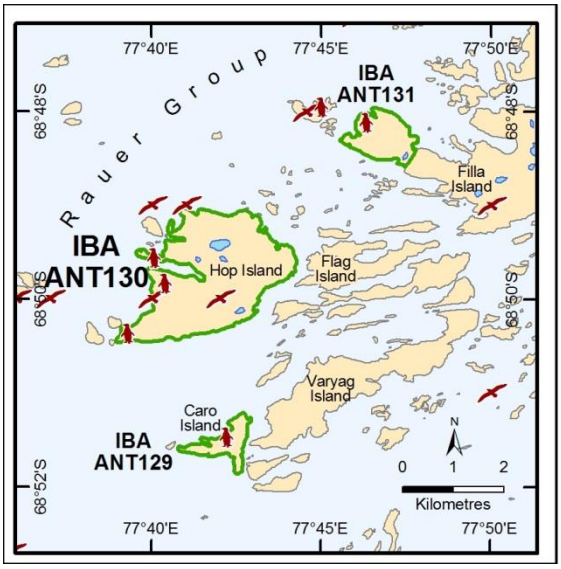
Further reading

Arnould, J.P.Y. & Whitehead, M.D. 1991. The diet of Antarctic Petrels, Cape Petrels and Southern Fulmars rearing chicks in Prydz Bay. *Antarctic Science* **3**: 19-27.

Whitehead, M.D. & Johnstone, G.W. 1990. The distribution and estimated abundance of Adélie Penguins breeding in Prydz Bay, Antarctica. *NIPR Symposium on Polar Biology:* 91-98.

ANT130: Hop Island, Rauer Islands

IBA criteria	A1, A4ii, A4iii
Coordinates	77°41'46" E, 68°49'45" S
Area	532 ha
Altitude	0 – 50 m
Protection	None



Site description

The Rauer Islands are situated between Ranvik Bay and Sørsdal Glacier Tongue, Ingrid Christensen Coast, Princess Elizabeth Land. Hop Island lies in the west of the Rauer group, is ~3 km long by 2.5 km wide and is mainly ice free in summer. Topography rises to a maximum elevation of ~50 m and the northern and western coasts are characterised by cliffs. A number of small lakes are present on the island. The decay of bedrock has created potential sites for cavity-nesting birds (Norman & Ward 1999).

The IBA qualifies on the basis of the Adélie Penguin (*Pygoscelis adeliae*) and South Polar Skua (*Catharacta maccormicki*) colonies present, and comprises all of Hop Island.

The nearest permanent station is Davis (AUS), ~30 km to the north on Broad Peninsula, Vestfold Hills.

Birds

Whitehead & Johnstone (1990) counted 43 268 breeding pairs of Adélie Penguin on Hop Island in 1981/82. This compares with approximately 51 015 breeding pairs of Adélie Penguin present in 2010/11 as estimated from February 2011 satellite imagery (unpublished data H. Lynch & M. LaRue pers. comm. 2014: CI not available). Adélie Penguin and South Polar Skua breeding is concentrated along the western coast of the island. Six flying bird species breed at Hop Island (Table 130.1).

Table 130.1: Flying bird species breeding at Hop Island.

Common name	Scientific name	Breeding pairs	Year	Source
Southern Fulmar	*Fulmarus glacialoides*	2576	1981	Creuwels *et al*. 2007
Antarctic Petrel	*Thalassoica antarctica*	1000	1986	van Franeker *et al*. 1999
Cape Petrel	*Daption capense*	50	1986	Arnould & Whitehead 1991
		200	1995	Hodum 1999; cited in Hodum 2004.
Snow Petrel	*Pagodroma nivea*	Confirmed		Green & Johnstone 1986; cited in Arnould & Whitehead 1991
Wilson's Storm-petrel	*Oceanites oceanicus*	Confirmed		Green & Johnstone 1986; cited in Arnould & Whitehead 1991
South Polar Skuas	*Catharacta maccormicki*	79	1990/91	Norman & Ward 1999

Southern Giant Petrels (*Macronectes giganteus*) have been reported visiting the island, presumably from the breeding colony situated on Hawker Island (Norman & Ward 1999).

Other threatened / endemic wildlife

Leopard Seals (*Hydrurga leptonyx*) frequent the coast during summer.

Conservation issues

None known.

Further reading

Arnould, J.P.Y. & Whitehead, M.D. 1991. The diet of Antarctic Petrels, Cape Petrels and Southern Fulmars rearing chicks in Prydz Bay. *Antarctic Science* **3**: 19-27.

Creuwels, J.C.S., Poncet, S., Hodum, P.J. & van Franeker J.A. 2007. Distribution and abundance of the Southern Fulmar *Fulmarus glacialoides*. *Polar Biology* **30**: 1083-1097.

Hodum, P., Croxall, J.P., Poncet, S. & Woehler, E. 2004. Breeding distribution of the Cape Petrel *Daption capense*. Unpublished draft manuscript.

Lynch, H.J. & LaRue, M.A. 2014. First global census of the Adélie Penguin. *The Auk* **131**(4): 457-66. doi:10.1642/AUK-14-31.1

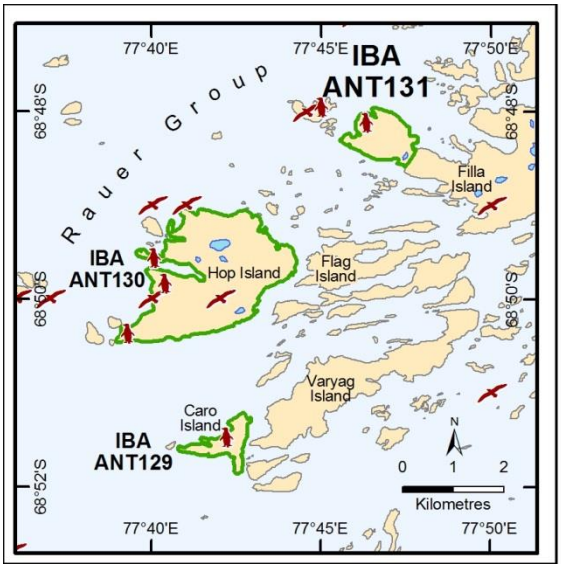
Norman, F.I. & Ward, S.J. 1999. Aspects of the Ecology of South Polar Skuas *Catharacta maccormicki* at Hop Island, Rauer Group, East Antarctica. *Emu* **99**(3): 176-190. doi: 10.1071/MU99021

van Franeker, J.A., Gavrilo, M., Mehlum, F., Veit, R.R. & Woehler, E.J. 1999. Distribution and abundance of the Antarctic Petrel. *Waterbirds* **22**(1): 14-28.

Whitehead, M.D. & Johnstone, G.W. 1990. The distribution and estimated abundance of Adélie Penguins breeding in Prydz Bay, Antarctica. *NIPR Symposium on Polar Biology:* 91-98.

ANT131: Filla Island, Rauer Islands

IBA criteria	A4iii
Coordinates	77°46'49" E, 68°48'16" S
Area	102 ha
Altitude	Not known
Protection	None



Site description

The Rauer Islands are situated between Ranvik Bay and Sørsdal Glacier Tongue, Ingrid Christensen Coast, Princess Elizabeth Land. Filla Island, the largest of the Rauer group, is up to 5.5 km long by 2.8 km wide and is ice free in summer.

The IBA qualifies on the basis of the Adélie Penguin (*Pygoscelis adeliae*) colony present and comprises the western extremity of Filla Island.

The nearest permanent station is Davis (AUS), ~26 km to the north on Broad Peninsula, Vestfold Hills.

Birds

Whitehead & Johnstone (1990) estimated 15 097 breeding pairs of Adélie Penguin on Filla Island in 1981/82. This compares with 27 900 breeding pairs of Adélie Penguin present in 2010/11 as estimated from February 2011 satellite imagery (unpublished data H. Lynch & M. LaRue pers. comm. 2014: CI not available).

Substantial numbers of fulmarine petrels also breed on Filla Island, with approximately 4007 breeding pairs of Southern Fulmars (*Fulmarus glacialoides*) counted in 1985 (Creuwels *et al*. 2007), 1100 pairs of Antarctic Petrel (*Thalassoica antarctica*) counted in 1981 (van Franeker *et al*. 1999), and 100 pairs of Cape Petrel (*Daption capense*) counted in 1995 (Hodum unpublished; cited in Hodum *et al*. 2004).

Other threatened / endemic wildlife

None known.

Conservation issues

None known.

Further reading

Creuwels, J.C.S., Poncet, S., Hodum, P.J. & van Franeker J.A. 2007. Distribution and abundance of the Southern Fulmar *Fulmarus glacialoides*. *Polar Biology* **30**: 1083-97.

Hodum, P., Croxall, J.P., Poncet, S. & Woehler, E. 2004. Breeding distribution of the Cape Petrel *Daption capense*. Unpublished draft manuscript.

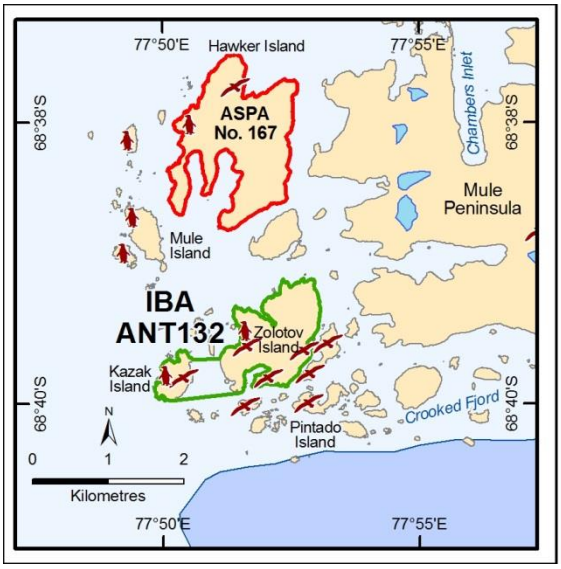
Lynch, H.J. & LaRue, M.A. 2014. First global census of the Adélie Penguin. *The Auk* **131**(4): 457-66. doi:10.1642/AUK-14-31.1

van Franeker, J.A., Gavrilo, M., Mehlum, F., Veit, R.R. & Woehler, E.J. 1999. Distribution and abundance of the Antarctic Petrel. *Waterbirds* **22**(1): 14-28.

Whitehead, M.D. & Johnstone, G.W. 1990. The distribution and estimated abundance of Adélie Penguins breeding in Prydz Bay, Antarctica. *NIPR Symposium on Polar Biology:* 91-98.

ANT132: Kazak Island / Zolotov Island

IBA criteria	A4iii
Coordinates	77°51'44" E, 68°39'37" S
Area	167 ha
Altitude	0 – 46 m
Protection	None



Site description

Kazak Island and Zolotov Island are situated 1 km south of Hawker Island (ASPA No. 167) and 0.5 km west of Mule Peninsula, in Prydz Bay on the Ingrid Christensen Coast, Princess Elizabeth Land. Kazak Island is ~ 0.6 km long and 0.45 km wide and rises to ~20 m. Zolotov Island is ~ 1.4 km long and up to 1.2 km wide and rises to ~46 m. Several small lakes are present on Zolotov Island (Australian Antarctic Data Centre 2012).

The IBA qualifies on the basis of the Adélie Penguin (*Pygoscelis adeliae*) colonies present and comprises all of Kazak Island and Zolotov Island and the intervening marine area.

The nearest permanent station is Davis (AUS), ~10 km to the northeast on Broad Peninsula, Vestfold Hills.

Birds

Whitehead & Johnstone (1990) estimated 5569 and 17 496 breeding pairs of Adélie Penguin on Kazak and Zolotov islands, respectively, in 1981/82. No recent census is available for the colonies. Breeding colonies occur along the western coast of Kazak Island, while on Zolotov Island extends from the northern to the southern coasts over the central part of the island.

Other threatened / endemic wildlife

None known.

Conservation issues

None known.

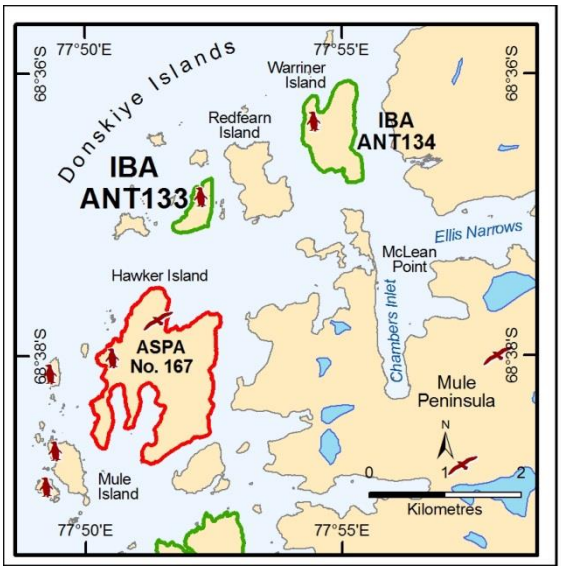
Further reading

Australian Antarctic Data Centre. 2012. Vestfold Hills Map 4 of 5, Scale 1: 50 000. Edition 6. Catalogue ID 13982.

Whitehead, M.D. & Johnstone, G.W. 1990. The distribution and estimated abundance of Adélie Penguins breeding in Prydz Bay, Antarctica. *NIPR Symposium on Polar Biology:* 91-98.

ANT133: Unnamed island at Donskiye Islands

IBA criteria	A4iii
Coordinates	77°52'11" E, 68°36'58" S
Area	20 ha
Altitude	0 – 20 m
Protection	None



Site description

The unnamed island is situated ~0.5 km west of Redfearn Island in the Donskiye Island group, in the southern part of the Vestfold Hills, and ~1 km north of ASPA No. 167 Hawker Island, Princess Elizabeth Land. The unnamed island is ice free, ~ 0.8 km long and up to 0.35 km wide, and rises to ~52 m.

The IBA qualifies on the basis of the Adélie Penguin (*Pygoscelis adeliae*) colony present at the site. The IBA comprises the entire unnamed island.

The nearest permanent station is Davis (AUS), ~6 km to the northeast on Broad Peninsula, Vestfold Hills.

Birds

Approximately 21 358 pairs of Adélie Penguin were estimated as breeding at the unnamed island using satellite imagery from February 2012 (unpublished data H. Lynch & M. LaRue pers. comm. 2014: CI not available). In 1981/82 the colony size was estimated with 10 522 breeding pairs (Whitehead & Johnstone 1990). The breeding colony is situated on the northern part of the island on both the east and west coast. Lynch & LaRue (2014) grouped records of Adélie Penguins present on the unnamed island in Donskiye Islands (IBA ANT137) with Warriner Island (IBA ANT138), Lugg, Magnetic and Turner islands (IBA ANT140), and Gardner Island (IBA ANT139) and referred to these as 'Vestfold South'.

No other birds are known to breed in the area.

Other threatened / endemic wildlife

None known.

Conservation issues

Donskiye Islands lie close to Davis Station and local operational activities could pose potential concerns for conservation of wildlife. In particular, oil spills and aircraft operations represent potential risks to local breeding birdlife. Davis Station has comprehensive procedures in place to manage and minimise these risks (see e.g. Australian Antarctic Data Centre 2012), and station management are cognisant of locally sensitive wildlife, so risks are considered low.

Further reading

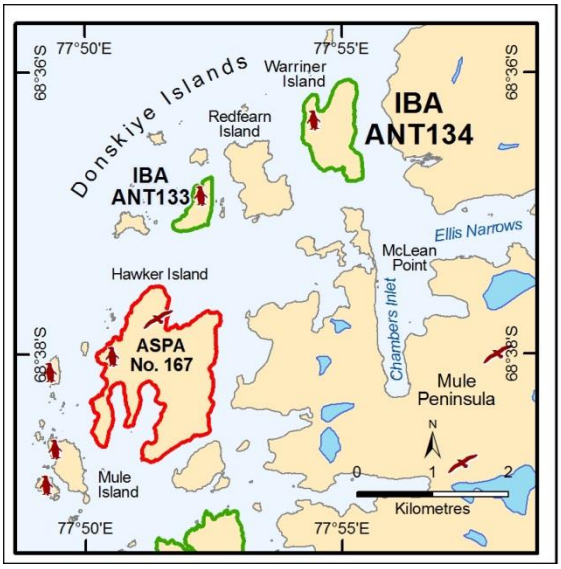
Australian Antarctic Data Centre. 2012. Vestfold Hills Map 4 of 5, Scale 1: 50000. Edition 6. Catalogue ID 13982.

Lynch, H.J. & LaRue, M.A. 2014. First global census of the Adélie Penguin. *The Auk* **131**(4): 457-66. doi:10.1642/AUK-14-31.1

Whitehead, M.D. & Johnstone, G.W. 1990. The distribution and estimated abundance of Adélie Penguins breeding in Prydz Bay, Antarctica. *NIPR Symposium on Polar Biology:* 91-98.

ANT134: Warriner Island, Donskiye Islands

IBA criteria	A4iii
Coordinates	77°54'51" E, 68°36'25" S
Area	68 ha
Altitude	0 – 55 m
Protection	None



Site description

Warriner Island is the eastern-most of the Donskiye Islands, located ~0.5 km west of Broad Peninsula in the southern part of the Vestfold Hills, Princess Elizabeth Land. It is an ice free island, ~ 1.2 km long and up to 0.7km wide. Its highest point reaches 52 m.

The IBA qualifies on the basis of the Adélie Penguin (*Pygoscelis adeliae*) colony present at the site. The IBA comprises all of Warriner Island.

The nearest permanent station is Davis (AUS), ~4 km to the northeast on Broad Peninsula, Vestfold Hills.

Birds

Approximately 23 760 pairs of Adélie Penguin were estimated as breeding at Warriner Island using satellite imagery from February 2012 (unpublished data H. Lynch & M. LaRue pers. comm. 2014: CI not available). In 1981/82 the colony size was estimated with 14 782 breeding pairs (Whitehead & Johnstone 1990). The breeding colony is situated on the flatter part of the island along its west coast. Lynch & LaRue (2014) grouped records of Adélie Penguins present on Warriner Island (IBA ANT138) with the unnamed island in Donskiye Islands (IBA ANT137), Lugg, Magnetic and Turner islands (IBA ANT140), and Gardner Island (IBA ANT139) and referred to these as 'Vestfold South'.

No other birds are known to breed in the area.

Other threatened / endemic wildlife

Southern Elephant Seals (*Mirounga leonina*) haul out in the vicinity at the western end of Broad Peninsula (Australian Antarctic Data Centre 2012).

Conservation issues

Donskiye Islands lie close to Davis Station and local operational activities could pose potential concerns for conservation of wildlife. In particular, oil spills and aircraft operations represent potential risks to local breeding birdlife. Davis Station has comprehensive procedures in place to manage and minimise these risks (see e.g. Australian Antarctic Data Centre 2012), and station management are cognisant of locally sensitive wildlife, so risks are considered low.

Further reading

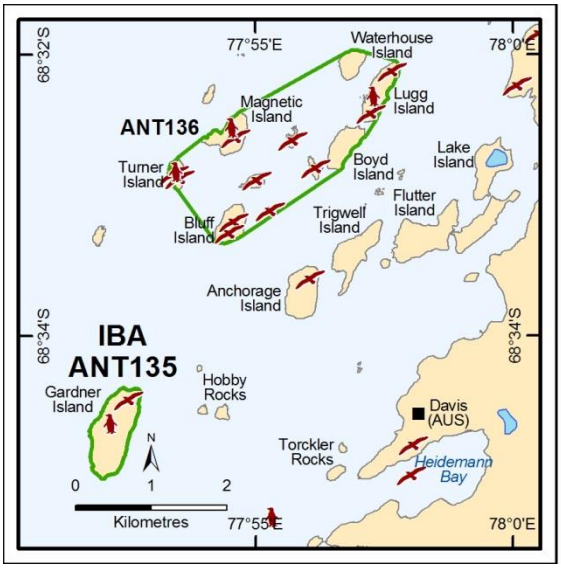
Australian Antarctic Data Centre. 2012. Vestfold Hills Map 4 of 5, Scale 1: 50 000. Edition 6. Catalogue ID 13982.

Lynch, H.J. & LaRue, M.A. 2014. First global census of the Adélie Penguin. *The Auk* **131**(4): 457-66. doi:10.1642/AUK-14-31.1

Whitehead, M.D. & Johnstone, G.W. 1990. The distribution and estimated abundance of Adélie Penguins breeding in Prydz Bay, Antarctica. *NIPR Symposium on Polar Biology:* 91-98.

ANT135: Gardner Island

IBA criteria	A4iii
Coordinates	77°52'15" E, 68°34'41" S
Area	51 ha
Altitude	0 – 50m
Protection	None



Site description

Gardner Island lies ~3 km west of Broad Peninsula, southern Vestfold Hills, on the Ingrid Christensen Coast, in Prydz Bay, Princess Elizabeth Land. The island is largely ice free, ~ 1.2 km by 0.5 km, and rises to ~47 m.

The IBA qualifies on the basis of the Adélie Penguin (*Pygoscelis adeliae*) colony present and comprises all of Gardner Island.

The nearest permanent station is Davis (AUS), ~3 km to the east on Broad Peninsula, Vestfold Hills.

Birds

Approximately 27 105 breeding pairs of Adélie Penguin were present at Gardner Island as estimated from February 2012 satellite imagery (unpublished data H. Lynch & M. LaRue pers. comm. 2014: CI not available). In 1981/82 the colony size was estimated at 22 180 breeding pairs (Whitehead & Johnstone 1990). Nests are widely distributed over the island. Lynch & LaRue (2014) grouped records of Adélie Penguins present on Gardner Island (IBA ANT139) with the unnamed island in Donskiye Islands (IBA ANT137), Warriner Island (IBA ANT138), and Lugg, Magnetic and Turner islands (IBA ANT140), and referred to these as 'Vestfold South'.

Snow Petrel (*Pagodroma nivea*) breeding is confirmed on Gardner Island (Australian Antarctic Data Centre 2012).

Other threatened / endemic wildlife

None known.

Conservation issues

Gardner Island lies close to Davis Station and local operational activities could pose potential concerns for conservation of wildlife. In particular, oil spills and aircraft operations represent potential risks to local breeding birdlife. Davis Station has comprehensive procedures in place to manage and minimise these risks (see e.g. Australian Antarctic Data Centre 2012), and station management are cognisant of locally sensitive wildlife, so risks are considered low.

Further reading

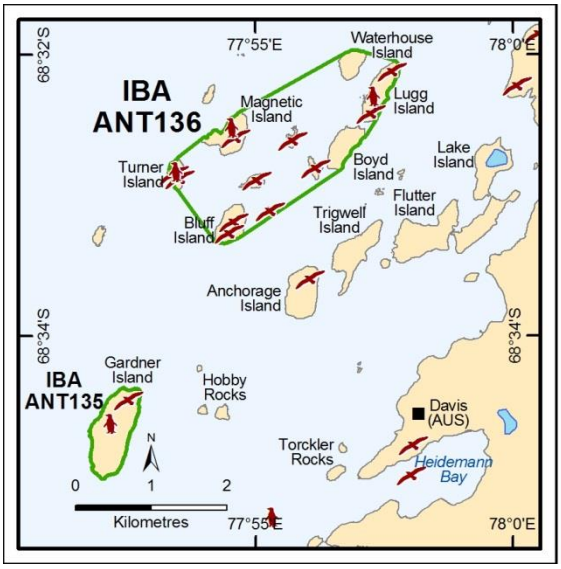
Australian Antarctic Data Centre. 2012. Vestfold Hills Map 4 of 5, Scale 1: 50000. Edition 6. Catalogue ID 13982.

Lynch, H.J. & LaRue, M.A. 2014. First global census of the Adélie Penguin. *The Auk* **131**(4): 457-66. doi:10.1642/AUK-14-31.1

Whitehead, M.D. & Johnstone, G. W. 1990. The distribution and estimated abundance of Adélie Penguins breeding in Prydz Bay, Antarctica. *NIPR Symposium Polar Biology:* 91-98.

ANT136: Magnetic Island and nearby islands

IBA criteria	A4iii
Coordinates	77°55'32" E, 68°32'39" S
Area	384 ha
Altitude	0 – 60 m
Protection	None



Site description

Magnetic Island, Turner Island and Lugg Island are situated amongst a group of small islands lying close offshore from the southern Vestfold Hills, in Prydz Bay on the Ingrid Christensen Coast, Princess Elizabeth Land. Adélie Penguins (*Pygoscelis adeliae*) breed on Magnetic, Turner and Lugg islands, which are up to ~0.5 km across. All of the islands are mostly ice free in summer. Turner Island rises up to ~40 m and Magnetic Island up to ~58 m.

The IBA qualifies on the basis of the Adélie Penguin colonies present. The IBA comprises Turner, Magnetic, Waterhouse, Lugg, Boyd and Bluff islands and the intervening islands and marine area.

The nearest permanent station is Davis (AUS), ~4 km to the southeast on Broad Peninsula, Vestfold Hills.

Birds

Whitehead & Johnstone (1990) estimated 17 184, 16 964, and 5553 breeding pairs of Adélie Penguin on Magnetic, Lugg and Turner islands, respectively, in 1981/82.

As estimated from February 2012 satellite imagery, approximately 14 840, 9392, and 4791 breeding pairs of Adélie Penguin were present on Magnetic, Lugg and Turner islands, respectively (unpublished data H. Lynch & M. LaRue pers. comm. 2014: CI not available). While the numbers estimated on Magnetic and Turner islands seem comparable to those counted in 1981/82 (Whitehead & Johnstone 1990), the presence of almost half the number of breeding pairs on Lugg Island seems anomalous, although the cause of the difference is unknown. Breeding on Magnetic Island occurs on a flat peninsula protruding on the western side of the island and along the central ridge and northwestern slopes. Breeding extends across most of Lugg Island, while breeding occurs mainly in the central part of Turner Island. Lynch & LaRue (2014) grouped records of Adélie Penguins present on Lugg, Magnetic and Turner islands (IBA ANT136) with Gardner Island (IBA ANT135), Warriner Island (IBA ANT134), and the unnamed island in Donskiye Islands (IBA ANT133), and referred to these as 'Vestfold South'.

Approximately 150 breeding pairs of Cape Petrel (*Daption capense*) were recorded on Bluff Island, 40 pairs on Turner Island and 35 pairs on Magnetic Island in 1990 (Hodum unpublished; cited in Hodum *et al*. 2004). Snow Petrels (*Pagodroma nivea*) breed on Turner, Lugg and several of the unnamed smaller islands in the group (Australian Antarctic Data Centre 2012).

Other threatened / endemic wildlife

None known.

Conservation issues

Magnetic Island and nearby islands lie close to Davis Station and local operational activities could pose potential concerns for conservation of wildlife. In particular, oil spills and aircraft operations represent potential risks to local breeding birdlife. Davis Station has comprehensive procedures in place to manage and minimise these risks (see e.g. Australian Antarctic Data Centre 2012), and station management are cognisant of locally sensitive wildlife, so risks are considered low.

Further reading

Australian Antarctic Data Centre. 2012. Vestfold Hills Map 2 of 5, Scale 1: 50 000. Edition 6. Catalogue ID 13980.

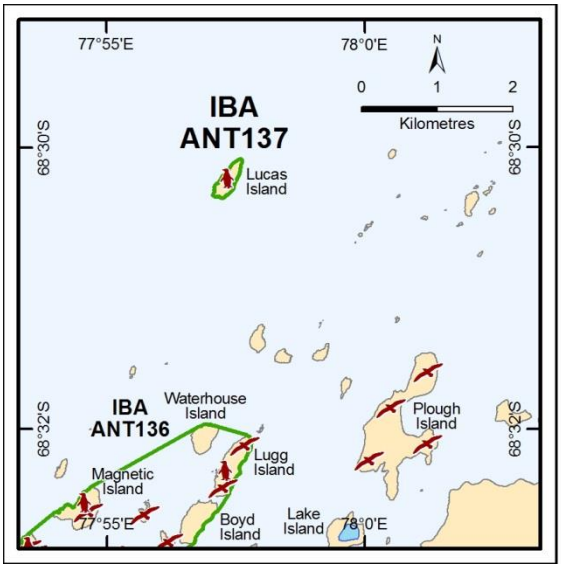
Hodum, P., Croxall, J.P., Poncet, S. & Woehler, E. 2004. Breeding distribution of the Cape Petrel *Daption capense*. Unpublished draft manuscript.

Lynch, H.J. & LaRue, M.A. 2014. First global census of the Adélie Penguin. *The Auk* **131**(4): 457-66. doi:10.1642/AUK-14-31.1

Whitehead, M.D. & Johnstone, G.W. 1990. The distribution and estimated abundance of Adélie Penguins breeding in Prydz Bay, Antarctica. *NIPR Symposium on Polar Biology:* 91-98.

ANT137: Lucas Island

IBA criteria	A4iii
Coordinates	77°57'21" E, 68°30'14" S
Area	9.3 ha
Altitude	0 – 40 m
Protection	None



Site description

Lucas Island is situated 3.5 km northwest of Plough Island and 5 km west of southern Long Peninsula, in Prydz Bay on the Ingrid Christensen Coast, Princess Elizabeth Land. Lucas Island is ~ 0.6 km long and up to 0.2 km wide, rises to ~40 m, and is mostly ice free in summer.

The IBA qualifies on the basis of the Adélie Penguin (*Pygoscelis adeliae*) colony present and comprises all of Lucas Island.

The nearest permanent station is Davis (AUS), ~8 km to the south on Broad Peninsula, Vestfold Hills.

Birds

Whitehead & Johnstone (1990) estimated 13 663 breeding pairs of Adélie Penguin on Lucas Island in 1981/82. No recent census is available for the colony. Penguins nest over the entire island.

No other birds are known to breed on the island.

Other threatened / endemic wildlife

None known.

Conservation issues

None known.

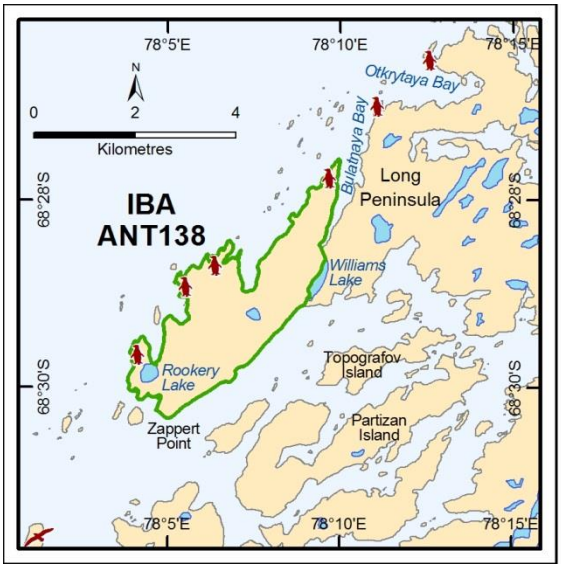
Further reading

Australian Antarctic Data Centre. 2012. Vestfold Hills Map 2 of 5, Scale 1: 50 000. Edition 6. Catalogue ID 13980.

Whitehead, M.D. & Johnstone, G.W. 1990. The distribution and estimated abundance of Adélie Penguins breeding in Prydz Bay, Antarctica. *NIPR Symposium on Polar Biology:* 91-98.

ANT138: Rookery Lake / W Long Peninsula

IBA criteria	A1, A4ii, A4iii
Coordinates	78°06'56" E, 68°29'11" S
Area	741 ha
Altitude	0 – 75 m
Protection	None



Site description

Long Peninsula is situated at the western extremity of the northern Vestfold Hills, in Prydz Bay on the Ingrid Christensen Coast, Princess Elizabeth Land. Adélie Penguins (*Pygoscelis adeliae*) breed on relatively flat sites along the western coast of Long Peninsula, extending from Rookery Lake in the southwest to Bulatnaya Bay in the northwest, a distance of ~6 km. The area is mostly ice free in the summer, and comprises a number of low hills rising to a maximum elevation of 74 m.

The IBA qualifies on the basis of the Adélie Penguin colony present, and comprises the area of Long Peninsula west of Williams Lake.

The nearest permanent station is Davis (AUS), ~10 km to the southwest on Broad Peninsula.

Birds

Whitehead & Johnstone (1990) counted 37 335 breeding pairs of Adélie Penguin on Long Peninsula from aerial photography acquired in Dec 1981. Breeding occurs at three main locations: on the coast west of Rookery Lake; on a broad, flat peninsula ~2 km northeast of Rookery Lake; and on the northern extremity of the peninsula that lies west of Bulatnaya Bay, locally known as 'Albino Rookery'.

Approximately 45 497 breeding pairs (95% CI 27 475, 73 759) of Adélie Penguin were present over this area as estimated from December 2012 satellite imagery (Lynch & LaRue 2014), indicating that numbers may be stable at this site. Lynch & LaRue (2014) refer to this site as 'Vestfold North'.

Other threatened / endemic wildlife

The sea ice within ~1 km from the shore of the breeding area has been identified as a Weddell Seal (*Leptonychotes weddellii*) pupping area (Australian Antarctic Data Centre 2012).

Conservation issues

None known.

Further reading

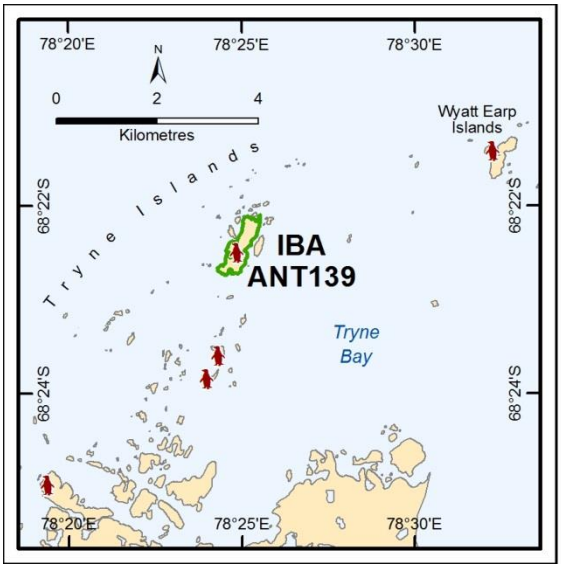
Australian Antarctic Data Centre. 2012. Vestfold Hills Map 2 of 5, Scale 1: 50 000. Edition 6. Catalogue ID 13980.

Lynch, H.J. & LaRue, M.A. 2014. First global census of the Adélie Penguin. *The Auk* **131**(4): 457-66. doi:10.1642/AUK-14-31.1

Whitehead, M.D. & Johnstone, G.W. 1990. The distribution and estimated abundance of Adélie Penguins breeding in Prydz Bay, Antarctica. *NIPR Symposium on Polar Biology:* 91-98.

ANT139: Tryne Islands

IBA criteria	A4iii
Coordinates	78°24'58" E, 68°22'27" S
Area	40 ha
Altitude	0 – 32 m
Protection	None



Site description

Tryne Islands are situated on the Ingrid Christensen Coast, Princess Elizabeth Land, and form the western limit of Tryne Bay which lies to the north of the Vestfold Hills, Prydz Bay.

The IBA qualifies on the basis of the Adélie Penguin (*Pygoscelis adeliae*) colony present, and comprises a small unnamed island of ~1.2 km by 0.5 km in the north of the Tryne Islands. The island is of low, rocky topography rising to an elevation of 32 m, and is largely ice free with several small ponds in summer.

The nearest permanent station is Davis (AUS), ~29 km to the southwest on Broad Peninsula in the Vestfold Hills.

Birds

Whitehead & Johnstone (1990) counted 16 231 breeding pairs of Adélie Penguin on the unnamed island from aerial photography acquired in Dec 1981. More recently, approximately 13 227 breeding pairs were present on the same island, as estimated from Dec 2011 satellite imagery (unpublished data H. Lynch & M. LaRue pers. comm. 2014: CI not available).

Other threatened / endemic wildlife

The area around Tryne Islands is a Weddell Seal (*Leptonychotes weddellii*) pupping area (Australian Antarctic Data Centre 2012).

Conservation issues

None known.

Further reading

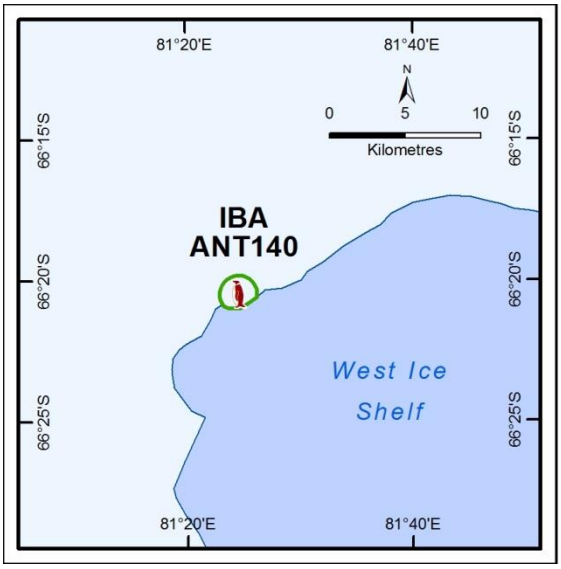
Australian Antarctic Data Centre. 2012. Vestfold Hills Map 1 of 5, Scale 1: 50 000. Edition 6. Catalogue ID 13979.

Lynch, H.J. & LaRue, M.A. 2014. First global census of the Adélie Penguin. *The Auk* **131**(4): 457-66. doi:10.1642/AUK-14-31.1

Whitehead, M.D. & Johnstone, G.W. 1990. The distribution and estimated abundance of Adélie Penguins breeding in Prydz Bay, Antarctica. *NIPR Symposium on Polar Biology*: 91-98.

ANT140: West Ice Shelf

IBA criteria	A1, A4ii
Coordinates	81°49'30" E, 66°32'12" S
Area	500 ha
Altitude	0 m
Protection	None



Site description

The West Ice Shelf lies on the King Leopold and Queen Astrid Coast, Princess Elizabeth Land, between the Davis Sea and Prydz Bay. The ice shelf, one of the largest in East Antarctica, extends ~350 km between Barrier Bay in the west and Posadowsky Bay in the east and up to 120 km northward from the continental margin.

The IBA qualifies on the basis of the Emperor Penguin (*Aptenodytes forsteri*) colony present on sea ice, and is entirely marine.

The nearest permanent station is Davis (AUS), ~280 km to the southwest on Broad Peninsula in the Vestfold Hills, Prydz Bay.

Birds

An Emperor Penguin colony is situated on fast ice near the northwestern margin of the West Ice Shelf. An incomplete count made in Nov 2011 recorded at least 3436 chicks (Wienecke 2012). The vast majority of these were observed on the sea ice, although it was noted that a few had made their way onto the top of the ice shelf via a snow ramp (Wienecke 2012).

A large emperor colony of ~15 000 birds was recorded in the region around 160 km north of the West Ice Shelf by Russian expeditions undertaken in the late 1950s – early 1960s. There have been substantial changes to an ice tongue and the ice shelf in the region since this time, and a colony has not been re-observed in that original location since. However, the northern West Ice Shelf colony is a probable descendant that has moved in accordance with the ice and favourable breeding conditions. A smaller colony of Emperor Penguins (1156 chicks counted Nov 2011; Wienecke 2012) is situated on the western side of the ice shelf in Barrier Bay, ~77 km southwest from the northern West Ice Shelf colony, and (speculatively) this may also be a descendant from the larger colony earlier observed by Russian expeditions; however it is not included within the IBA because of its distance from the larger aggregation.

Other threatened / endemic wildlife

None known.

Conservation issues

None known.

Further reading

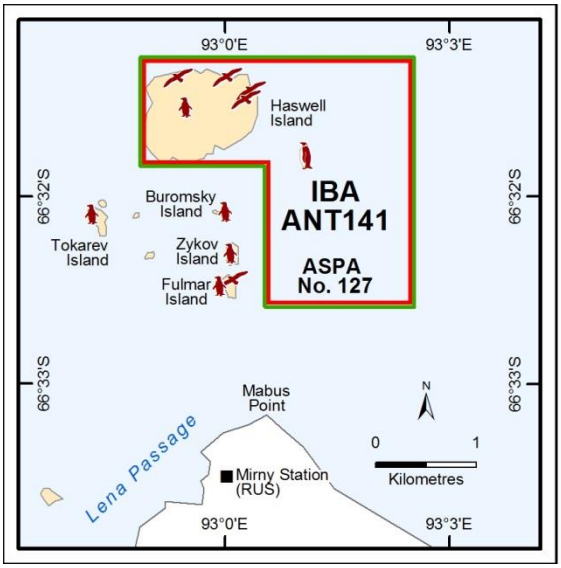
Fretwell, P.T., Trathan, P.N., Wienecke, B. & Kooyman, G.L. 2014. Emperor penguins breeding on iceshelves. *PLoS ONE* **9**(1): 1-9. doi:10.1371/journal.pone.0085285

Wienecke, B. 2012. Emperor penguins at the West Ice Shelf. *Polar Biology* **35**(9): 1289-96. doi:10.1007/s00300-012-1172-9.

Queen Mary Land

ANT141: Haswell Island

IBA criteria	A1, A4ii, A4iii
Coordinates	93°01'02" E, 66°31'49" S
Area	501 ha
Altitude	0 – 93 m
Protection	ASPA No. 127



Site description

Haswell Island is the main island in the Haswell Islands group, situated at the eastern limit of Macdonald Bay in the Davis Sea, ~3 km north from Mabus Point, Queen Mary Land. The island is roughly circular, ~1 km in diameter, and comprises several rocky knolls rising to a maximum elevation of 93 m.

Haswell Island and adjacent sea ice was specially protected in 1975 because of the presence of large numbers of eight breeding bird species, including Antarctic Petrel (*Thalassoica antarctica*), Southern Fulmar (*Fulmarus glacialoides*), Cape Petrel (*Daption capense*), Snow Petrel (*Pagodroma nivea*), Wilson's Storm-petrel (*Oceanites oceanicus*), South Polar Skua (*Catharacta maccormicki*), Adélie Penguin (*Pygoscelis adeliae*) and Emperor Penguin (*Aptenodytes forsteri*) (ASPA No. 127 Management Plan 2011).

The IBA qualifies on the basis of the Emperor Penguin colony and also qualifies on the basis of more than 10 000 seabirds present. The IBA comprises all of Haswell Island and a marine component encompassing the area within which the Emperor Penguins typically breed on sea ice. The IBA coincides with the boundary of ASPA No. 127.

The nearest permanent station is Mirny (RUS), ~3 km to the south on Mabus Point.

Birds

Emperor Penguins breed on fast ice that typically forms to the east and southeast of Haswell Island. Approximately 3247 Emperor Penguins were present in 2009 as estimated from satellite imagery, although image quality was poor (Fretwell *et al*. 2012). A mean of 4365 (SD=579) breeding pairs since 1981 was reported by Barbraud *et al.* (2011). Approximately 13 000 adults were recorded present during egg-laying in 2010 (ASPA No. 127 Management Plan 2011). Earlier counts estimated ~9000 breeding pairs in 1962 (Pryor 1968) and ~8500 pairs in 1970 (unpublished, cited in Woehler 1993; see note in Table 141.1). Barbraud *et al.* (2011) document a dramatic decline in the emperor population at Haswell Island and Pointe Géologie from around the mid-1970s, which they attribute largely to significant shifts in the sea ice regime and related changes in prey availability.

Adélie Penguins breed over much of Haswell Island. Snow Petrel and Wilson's Storm-petrel breed mainly on the eastern and southeastern coasts. Antarctic Petrel, Southern Fulmar and Cape Petrel breed along the northern and eastern coastlines. South Polar Skuas are widely distributed on the island, with the majority of nests close to the Adélie Penguin colony (ASPA No. 127 Management Plan 2011).

The number of birds breeding at Haswell Island are summarised in Table 141.1. Other non-breeding bird species recorded at the island include Chinstrap Penguin (*Pygoscelis antarctica*), Macaroni Penguin (*Eudyptes chrysolophus*), Southern Giant Petrel (*Macronectes giganteus*), Pomarine Jaeger (Skua) (*Stercorarius pomarinus*), Brown Skua (*Catharacta antarctica*) and Kelp Gull (*Larus dominicanus*). Pryor's (1968) detailed account of birds on Haswell Island provides a useful baseline against which to compare contemporary surveys of the status of breeding seabirds on Haswell Island.

Table 141.1: Bird species breeding on and adjacent to Haswell Island.

Common name	Scientific name	Breeding pairs	Year	Source
Emperor Penguin	*Aptenodytes forsteri*	9000[1]	1962	Pryor 1968
		8500[2]	1970	Unpublished Russian data, cited in Woehler 1993
		13 000 adults	2010	ASPA No 127 Haswell Island 2011
Adélie Penguin	*Pygoscelis adeliae*	17 800[1]	1962/63	Pryor 1968
		12 350	1978/79	Starck 1980
		13 500	2009/10	ASPA No 127 Haswell Island 2011
Southern Fulmar	*Fulmarus glacialoides*	~4000	1962/63	Pryor 1968
		3150±200 and 250± 10	1978/79	Starck 1980
		2500	2009/10	ASPA No 127 Haswell Island 2011
Antarctic Petrel	*Thalassoica antarctica*	1054±50[3]	1962/63	Pryor 1968
		250±10 nests	1978/79	Starck 1980
		250	2009/10	ASPA No 127 Haswell Island 2011
Cape Petrel	*Daption capense*	740±50	1962/63	Pryor 1968
		220±10 nests	1978/79	Starck 1980
		150	2009/10	ASPA No 127 Haswell Island 2011
Snow Petrel	*Pagodroma nivea*	350	1962/63	Pryor 1968
		60-75	1999/2001	ASPA No 127 Haswell Island 2011
Wilson's Storm-petrel	*Oceanites oceanicus*	500-600	1962	Pryor 1968
		>40	2009/10	ASPA No 127 Haswell Island 2011
South Polar Skua	*Catharacta maccormicki*	23	1962/36	Pryor 1968
		20 nests	1979	Starck 1980
		62	2009/10	ASPA No 127 Haswell Island 2011

1. Numbers in the source paper were halved to give breeding pairs.
2. On the assumption that the count of 17 000 cited by Woehler (1993) represents individuals rather than pairs, the count has been halved to give breeding pairs. The high figure seems unlikely in view of other counts made at Haswell Island.
3. Pryor (1968) used the term "breeding population", and it is uncertain whether this meant "breeding pairs". Based on Pryor's work, van Franeker *et al*. (1999) interpreted the observations as breeding pairs, which J.A. van Franeker (pers. comm. 2015) reaffirmed; this convention is therefore followed here.

Other threatened / endemic wildlife

Minke Whales (*Balaenoptera* sp.), Killer Whales (*Orcinus orca*) and Weddell Seals (*Leptonychotes weddellii*) are frequently observed in the vicinity. Other Antarctic seal species are observed only rarely.

Conservation issues

Barbraud *et al.* (2011) have shown that Emperor Penguin numbers at Haswell Island declined substantially around the 1970s, and numbers in 2009 remained consistently around 60% of those in their base year of 1958. A number of factors may be driving declines, including significant changes to the sea ice regime and related prey availability as a consequence of long term climate change, Antarctic fisheries (including illegal, unregulated and unreported fishing), and local disturbance from station activities and colony visits. Barbraud *et al.* (2011) identify the first of these as the most likely salient cause.

Further reading

ASPA No.127 Haswell Island: Management Plan (2011).

Barbraud, C., Gavrilo, M., Mizin, Y. & Weimerskirch, H. 2011. Comparison of Emperor Penguin declines between Pointe Géologie and Haswell Island over the past 50 years. *Antarctic Science* **23**(5): 461-68.

Fretwell, P.T., LaRue, M.A., Morin P., Kooyman, G.L., Wienecke, B., Ratcliffe, N., Fox, A.J., Fleming, A.H., Porter, C. & Trathan, P.N. 2012. An Emperor Penguin population estimate: The first global, synoptic survey of a species from space. *PLoS ONE* **7**(4): e33751. doi:10.1371/journal.pone.0033751

Pryor, M.E. 1968. The avifauna of Haswell Island. *Antarctic Research Series* **12:** 57-82.

Starck, W. 1980. The avifauna of Haswell Island (East Antarctica) in summer of 1978/79. *Polish Polar Research* **1**: 183-96.

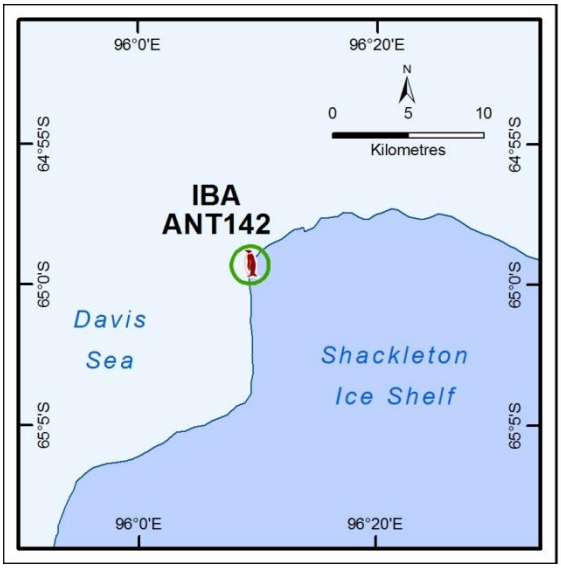
Todd, F.S., Splettstoesser, J.F., Ledingham, R. & Gavrilo, M. 1999. Short Communication: Observations in some Emperor Penguin *Aptenodytes forsteri* colonies in East Antarctica. *Emu* **99:** 142-45. http://dx.doi.org/10.1071/MU99017A

van Franeker, J.A., Gavrilo, M., Mehlum, F., Veit, R.R. & Woehler, E.J. 1999. Distribution and abundance of the Antarctic Petrel. *Waterbirds* **22**(1): 14-28.

Woehler, E.J. (ed.) 1993. *The distribution and abundance of Antarctic and sub-Antarctic penguins.* Scientific Committee on Antarctic Research. Cambridge, UK.

ANT142: Shackleton Ice Shelf

IBA criteria	A1, A4ii
Coordinates	96°11'01" E, 64°59'31" S
Area	500 ha
Altitude	0 -20 m
Protection	None



Site description

The Shackleton Ice Shelf extends ~350 km from Junction Corner in the west to Elliott Cape in the east on the Queen Mary Coast of Queen Mary Land. The ice shelf protrudes into the Davis Sea ~180 km in the west and ~80 km in the east.

The IBA qualifies on the basis of the Emperor Penguin (*Aptenodytes forsteri*) colony present and includes part of the northwestern margin of the ice shelf on which they may on occasion breed, and the adjacent marine area.

The closest permanent station is Mirny (RUS), ~230 km to the southwest at Queen Mary Land.

Birds

Analysis of a satellite image acquired on 10 October 2009 (Fretwell *et al.* 2012) indicated that approximately 6471 Emperor Penguins were present at the colony. During 2008-10, the colony was located on the fast ice at the base of the ice shelf. However, the colony moved onto the ice shelf itself in 2011 and 2012 owing to unsuitable sea ice conditions. Access onto the ice shelf was gained through a gulley several km east of the main colony breeding areas (Fretwell *et al*. 2014). Guano staining on shelf ice and evidence of individual birds in high resolution satellite imagery indicated that the colony moved over an area of ~6 x 5 km on the ice shelf throughout the course of the winter (Fretwell *et al*. 2014).

Other threatened / endemic wildlife

Numerous seals, most likely Weddell Seals (*Leptonychotes weddellii*), haul out along sea ice leads near the access gulley east of the Emperor Penguin colony, as evident in satellite imagery available on Google Earth (imagery Digital Globe, 24 Nov 2011).

Conservation issues

None known.

Further reading

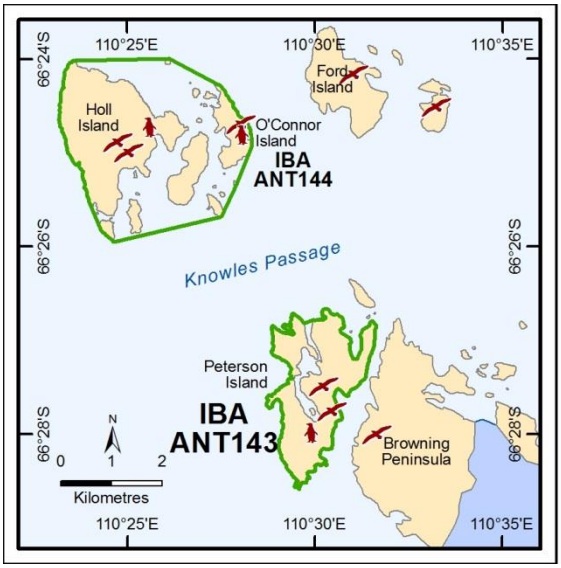
Fretwell, P.T., LaRue, M.A., Morin P., Kooyman, G.L., Wienecke, B., Ratcliffe, N., Fox, A.J., Fleming, A.H., Porter, C. & Trathan, P.N. 2012. An Emperor Penguin population estimate: The first global, synoptic survey of a species from space. *PLoS ONE* **7**(4): e33751. doi:10.1371/journal.pone.0033751

Fretwell, P.T., Trathan, P.N., Wienecke, B. & Kooyman, G.L. 2014. Emperor penguins breeding on iceshelves. *PLoS ONE* **9**(1): 1-9. doi:10.1371/journal.pone.0085285

Wilkes Land

ANT143: Peterson Island

IBA criteria	A4iii
Coordinates	110°30'01" E, 66°27'30" S
Area	397 ha
Altitude	0 – 60 m
Protection	None



Site description

Peterson Island is situated in the southern Windmill Islands, Budd Coast, Wilkes Land. The island is ~3.5 km long and up to 2 km wide, and is separated from Browning Peninsula by a narrow channel of ~200-400 m width. The island has rocky, undulating topography rising to ~60 m and is mostly ice free in summer. A large narrow inlet extends several km from the northern coast southward into the interior of the island, and several small lakes are present in the south.

The IBA qualifies on the basis of the Adélie Penguin (*Pygoscelis adeliae*) colony present and includes all of Peterson Island and the central inlet.

The nearest permanent station is Casey (AUS), ~19 km to the north on Bailey Peninsula.

Birds

Woehler *et al*. (1991) counted 20 453 breeding pairs of Adélie Penguin on Peterson Island in 1989/90, and noted the colony had been increasing since counts were first made in 1961. More recently, ~30 448 breeding pairs (95% CI 18 516, 50 020) of Adélie Penguin were present on Peterson Island as estimated from January 2011 satellite imagery (Lynch & LaRue 2014). While this more recent count suggests an increase by ~50% over 21 years, it is not clear whether this apparent change relates to inter-seasonal fluctuations, methodological differences, or represents a real increase in the local Adélie Penguin population.

Olivier, Lee & Woehler (2004) estimated 2815 breeding pairs of Snow Petrels (*Pagodroma nivea*) on Peterson Island in 2002/03, and this represents one of the largest colonies yet identified. Around 10 breeding pairs of Cape Petrels (*Daption capense*) were estimated present on the island in 1996 (Hodum *et al*. 2004). Southern Fulmars (*Fulmarus glacialoides*), South Polar Skuas (*Catharacta maccormicki*) and Wilson's Storm-petrels (*Oceanites oceanicus*) also breed on the island (Murray & Luders 1990; Australian Antarctic Data Centre 2012) although numbers are not known.

Other threatened / endemic wildlife

Southern Elephant Seals (*Mirounga leonina*) haul out and also breed on Peterson Island (Murray & Luders 1990), mainly on the northern and northwestern coasts. The colony is the most southerly known breeding site for Southern Elephant Seals (McMahon & Campbell 2000).

Conservation issues

None known.

Further reading

Australian Antarctic Data Centre. 2012. Windmill Islands Map 3 of 5, Scale 1: 50 000. Edition 6. Catalogue ID 14112.

Hodum, P., Croxall, J.P., Poncet, S. & Woehler, E. 2004. Breeding distribution of the Cape Petrel *Daption capense*. Unpublished draft manuscript.

Lynch, H.J. & LaRue, M.A. 2014. First global census of the Adélie Penguin. *The Auk* **131**(4): 457-66. doi:10.1642/AUK-14-31.1

McMahon, C.R. & Campbell, D. 2000. Southern elephant seals breeding at Peterson Island, Antarctica. *Polar Record* **36**(196): 51.

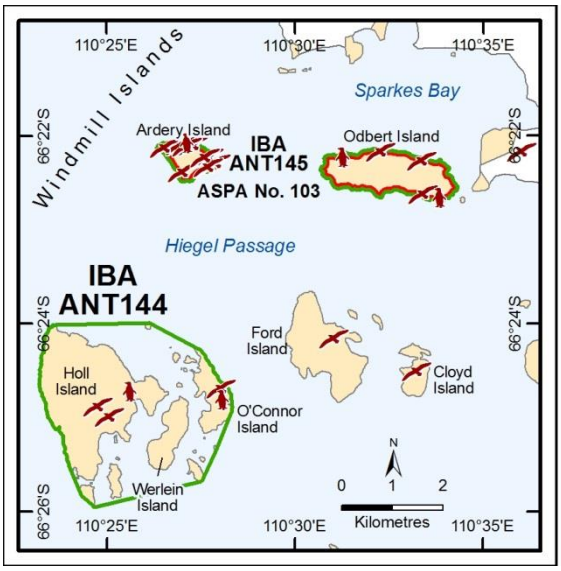
Murray, M.D. & Luders, D.J. 1990. Faunistic studies at the Windmill Islands, Wilkes Land, East Antarctica, 1959-80. *ANARE Research Notes* **73** (IV): 1-45.

Olivier, F., Lee, A.V. & Woehler, E.J. 2004. Distribution and abundance of Snow Petrels *Pagodroma nivea* in the Windmill Islands, East Antarctica. *Polar Biology* **27**: 257-65. doi:10.1007/s00300-004-0595-3

Woehler, E.J., Slip, D.J., Robertson, L.M., Fullagar, P.J. & Burton, H.R. 1991. The distribution, abundance and status of Adélie Penguins *Pygoscelis adeliae* at the Windmill Islands, Wilkes Land, Antarctica. *Marine Ornithology* **19**(1): 1-18.

ANT144: Holl Island / O'Connor Island

IBA criteria	A4iii
Coordinates	110°25'39" E, 66°24'54" S
Area	1052 ha
Altitude	0 – 90 m
Protection	None



Site description

Holl Island and O'Connor Island are situated in the southwest Windmill Islands, Budd Coast, Wilkes Land. Holl Island is roughly triangular in shape and up to 3 km long. O'Connor Island is ~1.7 km long and up to 0.7 km wide and lies ~600 m to the east, separated by a narrow channel and Werlein Island. Both islands are of rocky and hilly topography and are ice free in summer. Holl Island rises to ~90 m, with steep cliffs along the northwestern coast, while O'Connor Island has a maximum elevation of ~80 m. Several small lakes are present on Holl Island.

The IBA qualifies on the basis of the Adélie Penguin (*Pygoscelis adeliae*) colony present, and comprises Holl Island, O'Connor Island and the intervening islands and marine area.

The nearest permanent station is Casey (AUS), ~14 km to the north on Bailey Peninsula.

Birds

Woehler *et al*. (1991) counted 11 875 breeding pairs of Adélie Penguin on Holl Island and 4748 pairs on O'Connor Island in 1989/90, and noted the colony has been increasing since counts were first made in 1961. This compares with ~30 514 breeding pairs (95% CI 18 443, 49 850) of Adélie Penguin on both Holl Island and O'Connor Island as estimated from January 2011 satellite imagery (Lynch & LaRue 2014). While this more recent count suggests almost a doubling of numbers over 21 years, it is not clear whether this apparent change relates to inter-seasonal fluctuations, methodological differences, or represents a real increase in the local Adélie Penguin population.

Approximately 1084 and 327 breeding pairs of Snow Petrel (*Pagodroma nivea*) were estimated on Holl Island and O'Connor Island respectively in 2002/03 (Olivier, Lee & Woehler 2004). Although numbers are unknown, Cape Petrels (*Daption capense*) (Murray & Luders 1990) and South Polar Skuas (*Catharacta maccormicki*) also breed on both islands, with breeding Wilson's Storm-petrels (*Oceanites oceanicus*) confirmed only on Holl Island (Woehler *et al.* 1991; Australian Antarctic Data Centre 2012). Creuwels *et al*. (2007) estimated 400 breeding pairs of Southern Fulmar (*Fulmarus glacialoides*) present on Holl Island in 1977/78.

Other threatened / endemic wildlife

Weddell (*Leptonychotes weddellii*), Leopard (*Hydrurga leptonyx*) and Southern Elephant (*Mirounga leonina*) seals have been reported in the area (Murray & Luders 1990; Woehler *et al.* 1991).

Conservation issues

None known.

Further reading

Australian Antarctic Data Centre. 2012. Windmill Islands Map 3 of 5, Scale 1: 50 000. Edition 6. Catalogue ID 14112.

Creuwels, J.C.S., Poncet, S., Hodum, P.J. & Franeker, J.A. 2007. Distribution and abundance of the Southern Fulmar *Fulmarus glacialoides*. *Polar Biology* **30**(9): 1083-97. doi:10.1007/s00300-007-0276-0

Lynch, H.J. & LaRue, M.A. 2014. First global census of the Adélie Penguin. *The Auk* **131**(4): 457-66. doi:10.1642/AUK-14-31.1

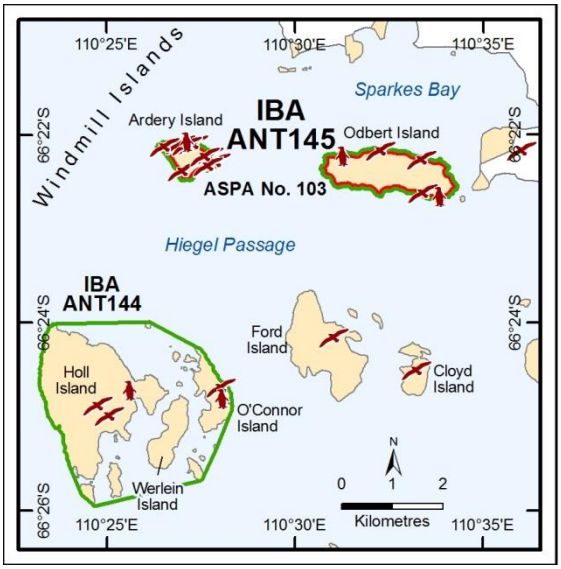
Murray, M.D. & Luders, D.J. 1990. Faunistic studies at the Windmill Islands, Wilkes Land, East Antarctica, 1959-80. *ANARE Research Notes* **73** (IV): 1-45.

Olivier, F., Lee, A.V. & Woehler, E.J. 2004. Distribution and abundance of Snow Petrels *Pagodroma nivea* in the Windmill Islands, East Antarctica. *Polar Biology* **27**: 257-65. doi:10.1007/s00300-004-0595-3

Woehler, E.J., Slip, D.J., Robertson, L.M., Fullagar, P.J. & Burton, H.R. 1991. The distribution, abundance and status o f Adélie Penguins *Pygoscelis adeliae* at the Windmill Islands, Wilkes Land, Antarctica. *Marine Ornithology* **19**(1): 1-18.

ANT145: Ardery Island / Odbert Island

IBA criteria	A4iii
Coordinates	110°32'32" E, 66°22'24" S
Area	244 ha
Altitude	0 – 113 m
Protection	ASPA No. 103



Site description

Ardery Island and Odbert Island are situated in the southern part of the Windmill Island group, Vincennes Bay, Budd Coast, Wilkes Land. The islands are located between Sparkes Bay and Hiegel Passage. Odbert Island, the larger of the two, has a steep rocky coast rising to ~100 m and is ~2.5 km long by ~0.8 km wide. Ardery Island is ~1 km long by ~0.5 km wide and rises to ~113 m. Both islands are of granitic composition, are rocky with very little soil material, and are mainly ice-free in the summer. The climate is like to be similar to nearby Casey Station, where the mean annual temperature is around –9.3°C, with mean temperatures for the warmest and coldest months of the year being 0.3°C and -14.9°C respectively, and maxima and minima ranging from 9.2°C to -41°C.

Ardery Island and Odbert Island were specially protected in 1966 primarily for values related to resident breeding fulmarine petrel species, including Antarctic Petrel (*Thalassoica antarctica*), Southern Fulmar (*Fulmarus glacialoides*), Cape Petrel (*Daption capense*) and Snow Petrel (*Pagodroma nivea*). Ardery Island is the only place where the two subspecies of Snow Petrels (*P. n. nivea* and *P.n. confusa*) have been observed together (ASPA No. 103 Management Plan 2010).

The IBA qualifies on the basis of the number of seabirds present and coincides with the boundary of ASPA No. 103.

The nearest permanent station is Casey (AUS), ~10 km to the north on Bailey Peninsula.

Birds

Tables 145.1 and 145.2 summarise data on the numbers of pairs for species breeding on Ardery and Odbert islands.

An Adélie Penguin (*Pygoscelis adeliae*) breeding colony is located on the southeastern coast of Odbert Island, and although this species is regularly observed on Ardery Island, they do not breed at this site.

Table 145.1: Bird species breeding at Odbert Island.

Common name	Scientific name	Breeding pairs	Year	Source
Adélie Penguin	*Pygoscelis adeliae*	10 689	1989	Woehler *et al*. 1991
		9247 (95% CI 5454, 15 378)	2011	Lynch & LaRue 2014
Southern Fulmar	*Fulmarus glacialoides*	2000	1984/85	van Franeker *et al*. 1990
Antarctic Petrel	*Thalassoica antarctica*	34	1984/85	van Franeker *et al*. 1990
Cape Petrel	*Daption capense*	100-200	1984/85	van Franeker *et al*. 1990
Snow Petrel	*Pagodroma nivea*	100-1000	1984/85	van Franeker *et al*. 1990
		824	2003	ASPA 103 Management Plan 2010
Wilson's Storm-petrel	*Oceanites oceanicus*	<1000	1984/85	van Franeker *et al*. 1990
South Polar Skua	*Catharacta maccormicki*	10-20	1984/85	van Franeker *et al*. 1990

Southern Fulmars nest along the northern and southwestern cliffs and at the eastern extremity of Ardery Island, and nest along the northern and southeastern coastal cliffs of Odbert Island. Antarctic Petrels breed on the northern coast of Ardery Island and in a small group of ~30 pairs near the central northern cliffs of Odbert Island. Cape Petrels breed on the northern and northeastern coasts of Ardery Island and on the northern and southeastern coasts of Odbert Island. Snow Petrels breed mostly on the higher slopes throughout both islands. Wilson's Storm-petrels (*Oceanites*

oceanicus) also breed across both islands, and are present in rocky areas with niches suitable for nest-building. South Polar Skuas (*Catharacta maccormicki)* breed close to petrel colonies on Ardery Island, whereas on Odbert Island they breed close to the Adélie Penguin colony (ASPA No. 103 Management Plan 2010).

The Southern Giant Petrel (*Macronectes giganteus*) has been recorded at the islands, although does not breed (ASPA No. 103 Management Plan 2010). More detailed descriptions of the environment and breeding sites on Ardery and Odbert islands may be found in the management plan for ASPA No.103.

Table 145.2: Bird species breeding at Ardery Island.

Common name	Scientific name	Breeding pairs	Year	Source
Southern Fulmar	*Fulmarus glacialoides*	3000	1984/85	van Franeker *et al*. 1990
		3860	1995	Barbraud & Baker 1998
Antarctic Petrel	*Thalassoica antarctica*	275	1984/85	van Franeker *et al*. 1990
		247	1995/96	Barbraud & Baker 1998
Cape Petrel	*Daption capense*	>600	1984/85	van Franeker *et al*. 1990
		500-550		Barbraud & Baker 1998
Snow Petrel	*Pagodroma nivea*	~1000	1984/85	van Franeker *et al*. 1990
		752	2003	ASPA 103 Management Plan 2010
Wilson's Storm-petrel	*Oceanites oceanicus*	~1000	1984/85	van Franeker *et al*. 1990
South Polar Skua	*Catharacta maccormicki*	10	1986/87	van Franeker *et al*. 1990
		16	1995/96	Barbraud & Baker 1998

Other threatened / endemic wildlife

Weddell Seals (*Leptonychotes weddellii*) are reported on the sea ice that forms around Ardery Island and Odbert Island (ASPA No. 103 Management Plan 2010).

Conservation issues

None known.

Further reading

ASPA No. 103 Ardery Island and Odbert Island, Budd Coast, Wilkes Land: Management Plan (2010).

Baker, S.C. & Barbraud, C. 2001. Foods of the South Polar Skua *Catharacta maccormicki* at Ardery Island, Windmill Islands, Antarctica. *Polar Biology* **24**(1): 59-61. doi:10.1007/s003000000163

Barbraud, C. & Baker, S.C. 1998. Short Communication: Fulmarine petrels and South Polar Skua *Catharacta maccormicki* populations on Ardery Island, Windmill Islands, Antarctica. *Emu* **98**: 234-36.

Creuwels, J.C., Poncet, S., Hodum, P.J. & van Franeker, J.A. 2007. Distribution and abundance of the Southern Fulmar *Fulmarus glacialoides*. *Polar Biology* **30**(9): 1083-97. doi:10.1007/s00300-007-0276-0

Hodum, P., Croxall, J.P., Poncet, S. & Woehler, E. 2004. Breeding distribution of the Cape Petrel *Daption capense*. Unpublished draft manuscript.

Lynch, H.J. & LaRue, M.A. 2014. First global census of the Adélie Penguin. *The Auk* **131**(4): 457-66. doi:10.1642/AUK-14-31.1

Murray, M.D. & Luders, D.J. 1990. Faunistic studies at the Windmill Islands, Wilkes Land, East Antarctica, 1959-80. *ANARE Research Notes* **73** (IV): 1-45.

Olivier, F., Lee, A.V. & Woehler, E.J. 2004. Distribution and abundance of Snow Petrels *Pagodroma nivea* in the Windmill Islands, East Antarctica. *Polar Biology* **27**: 257-65. doi:10.1007/s00300-004-0595-3

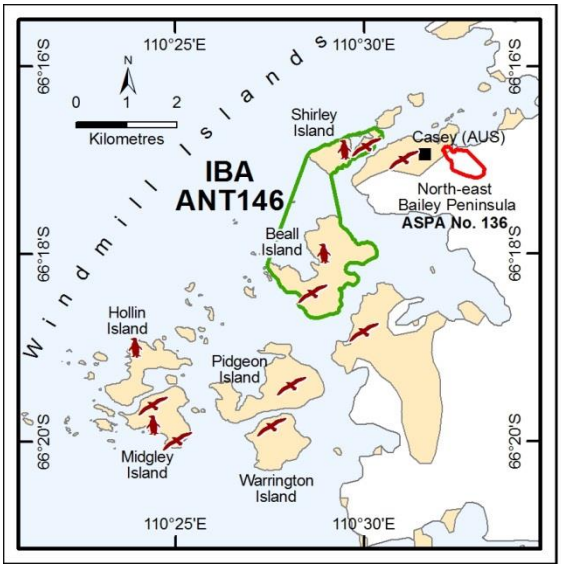
van Franeker, J.A., Bell, P.J. & Montague, T.L. 1990. Birds of Ardery and Odbert Islands, Windmill Islands, Antarctica. *Emu* **90**: 74-80.

van Franeker, J.A., Gavrilo, M., Mehlum, F., Veit, R.R. & Woehler, E.J. 1999. Distribution and abundance of the Antarctic Petrel. *Waterbirds* **22**(1): 14-28.

Woehler, E.J., Slip, D.J., Robertson, L.M., Fullagar, P.J. & Burton, H.R. 1991. The distribution, abundance and status of Adélie penguins *Pygoscelis adeliae* at the Windmill Islands, Wilkes Land, Antarctica. *Marine Ornithology* **19**: 1-18.

ANT146: Shirley Island / Beall Island

IBA criteria	A4iii
Coordinates	110°28'50" E, 66°17'46" S
Area	414 ha
Altitude	0 – 50 m
Protection	None



Site description

Shirley Island and Beall Island are part of the Windmill Islands group, Budd Coast, Wilkes Land. Shirley Island lies ~200 m west and Beall Island ~ 600 m southwest of Bailey Peninsula. Shirley Island is ~1.5 km long and ~0.5 km wide with a maximum elevation of 37 m, while Beall Island is ~2 km long and up to 1.5 km wide with a maximum elevation of 48 m. Both islands are mostly ice free with rocky, undulating terrain. Several small lakes are present on Beall Island, the largest of which lies at the north of the island and is saline (Hodgson *et al*. 2006).

The IBA qualifies on the basis of the Adélie Penguin (*Pygoscelis adeliae*) colony present and comprises Shirley Island, Beall Island and the intervening marine area.

The nearest permanent station is Casey (AUS), ~1 km to the east on Bailey Peninsula.

Birds

Woehler *et al*. (1991) counted 7637 and 5225 breeding pairs of Adélie Penguin on Shirley Island and Beall Island respectively in 1989/90 (12 862 in total). Murray & Luders (1990) reported an average of around 7500 pairs breeding on Shirley Island in the 1970s. This compares with approximately 13 658 breeding pairs (95% CI 8163, 22 603) of Adélie Penguin present on Shirley Island and Beall Island as estimated from January 2011 satellite imagery (Lynch & LaRue 2014). On Shirley Island breeding is concentrated in the southwest, with smaller groups occupying the northeast, while on Beall Island breeding is mainly on elevated ground in the south.

Snow Petrels (*Pagodroma nivea*) are widely distributed on Beall Island (Australian Antarctic Data Centre 2012), with ~452 breeding pairs counted in 2002/03 (Olivier, Lee & Woehler 2004). Snow Petrels also breed on the northeastern coast of Shirley Island, with ~61 breeding pairs counted in 2002/03 (Olivier, Lee & Woehler 2004). Wilson's Storm-petrel (*Oceanites oceanicus*) and South Polar Skua (*Catharacta maccormicki*) are confirmed breeding on Beall Island (Australian Antarctic Data Centre 2012), although numbers are not known.

Other threatened / endemic wildlife

Weddell (*Leptonychotes weddellii*), Leopard (*Hydrurga leptonyx*) and Southern Elephant (*Mirounga leonina*) seals have been reported in the area (Woehler *et al.* 1991).

Conservation issues

Shirley Island and Beall Island lie in close proximity to Casey Station, and as such station operations have the potential to affect birdlife on these islands. In particular, both fixed wing and helicopter aircraft regularly operate out of Casey Station during the summer breeding season, and local flight paths pass within several km of the islands. Aircraft access is tightly regulated taking into account the number and location of breeding birds, although potentially adverse conditions may force aircraft to pass near or over breeding colonies on these islands.

Shirley Island lies within the limits of recreational access for station personnel (Australian Antarctic Data Centre 2014). Travel to Shirley Island for recreational and other purposes is allowed by permission of the station leader and in accordance with Australian Antarctic Division (AAD) operational procedures, and visitors are required to follow AAD wildlife viewing guidelines. Beall Island lies outside of Casey recreational limits, and visits to this island are likely

therefore to be more limited and related to scientific or management purposes only with the permission of the station leader.

Further reading

Australian Antarctic Data Centre. 2012. Windmill Islands Map 2 of 5, Scale 1: 50 000. Edition 6. Catalogue ID 14111.

Australian Antarctic Data Centre. 2014. Casey: recreational limits, Scale 1: 15 500. Edition 5. Catalogue ID 14295.

Bricher, P.K., Lucieer, A. & Woehler, E.J. 2008. Population trends of Adélie Penguin (*Pygoscelis adeliae*) breeding colonies: a spatial analysis of the effects of snow accumulation and human activities. *Polar Biology* **31**(11): 1397-407. doi:10.1007/s00300-008-0479-z

Hodgson, D. A., Roberts, D., McMinn, A., Verleyen, E., Terry, B., Corbett, C.& Vyverman, W. 2006. Recent rapid salinity rise in three East Antarctic lakes. *Journal of Paleolimnology* **36**(4): 385-406. doi:10.1007/s10933-006-9010-0

Lynch, H.J. & LaRue, M.A. 2014. First global census of the Adélie Penguin. *The Auk* **131**(4): 457-66. doi:10.1642/AUK-14-31.1

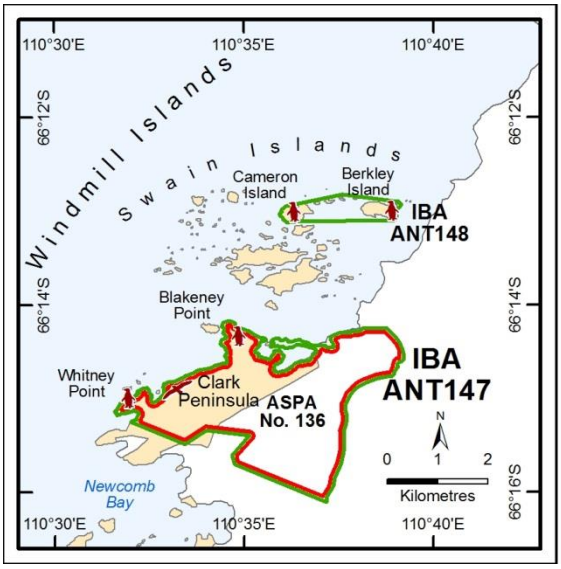
Murray, M.D. & Luders, D.J. 1990. Faunistic studies at the Windmill Islands, Wilkes Land, East Antarctica, 1959-80. *ANARE Research Notes* **73** (IV): 1-45.

Olivier, F., Lee, A.V. & Woehler, E.J. 2004. Distribution and abundance of Snow Petrels *Pagodroma nivea* in the Windmill Islands, East Antarctica. *Polar Biology* **27**: 257-65. doi:10.1007/s00300-004-0595-3

Woehler, E.J., Slip, D.J., Robertson, L.M., Fullagar, P.J. & Burton, H.R. 1991. The distribution, abundance and status of Adélie Penguins *Pygoscelis adeliae* at the Windmill Islands, Wilkes Land, Antarctica. *Marine Ornithology* **19**(1): 1-18.

ANT147: Clark Peninsula

IBA criteria	A4iii
Coordinates	110°35'48" E, 66°15'03" S
Area	938 ha
Altitude	0 – 130 m
Protection	ASPA No. 136



Site description

Clark Peninsula is a relatively large ice free area situated on the northern side of Newcomb Bay, Budd Coast, Wilkes Land. Clark Peninsula was protected in 1985 because it hosts one of the largest communities of terrestrial flora in Antarctica outside of the Antarctic Peninsula (ASPA No. 136 Management Plan 2014). Clark Peninsula is also an important breeding area for Adélie Penguins (*Pygoscelis adeliae*) and South Polar Skuas (*Catharacta maccormicki*).

The IBA qualifies on the basis of the Adélie Penguin colony present and comprises the same area as ASPA No. 136.

The nearest permanent station is Casey (AUS), ~5 km to the west on Bailey Peninsula.

Birds

Approximately 11 000 and 4000 breeding pairs of Adélie Penguin were counted at Whitney Point and Blakeney Point respectively in 2012/13 (ASPA No.136 Management Plan). This compares to 3803 and 5604 breeding pairs, respectively, counted in 1973 (Woehler *et al.* 1989), suggesting a substantial increase at Whitney Point (~190%) and a decrease at Blakeney Point (~28%) over a period of almost 40 years.

Wilson's Storm-petrel (*Oceanites oceanicus*), South Polar Skua and Snow Petrel (*Pagodroma nivea*) breed on Clark Peninsula (ASPA No.136 Management Plan), with 259 pairs of Snow Petrels confirmed breeding in 2002/03 (Olivier *et al.* 2004).

Other threatened / endemic wildlife

None known.

Conservation issues

None known.

Further reading

ASPA No. 136 Clark Peninsula, Budd Coast, Wilkes Land, East Antarctica: Management Plan (2014).

Bricher, P.K., Lucieer, A. & Woehler, E.J. 2008. Population trends of Adélie Penguin (*Pygoscelis adeliae*) breeding colonies: a spatial analysis of the effects of snow accumulation and human activities. *Polar Biology* **31**(11): 1397-407. doi:10.1007/s00300-008-0479-z

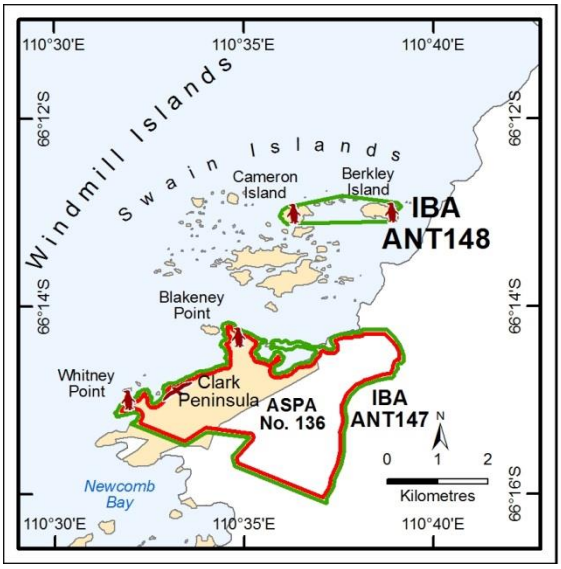
Lynch, H.J. & LaRue, M.A. 2014. First global census of the Adélie Penguin. *The Auk* **131**(4): 457-66. doi:10.1642/AUK-14-31.1

Olivier, F., Lee, A.V. & Woehler, E.J. 2004. Distribution and abundance of Snow Petrels *Pagodroma nivea* in the Windmill Islands, East Antarctica. *Polar Biology* **27**: 257-265. doi:10.1007/s00300-004-0595-3

Woehler, E.J., Tierney, T.J. & Burton, H.R. 1989. The distribution and abundance of Adélie Penguins *Pygoscelis adeliae* at the Vestfold Hills in 1973. *ANARE Research Notes* **70**.

ANT148: Berkley Island / Cameron Island

IBA criteria	A4iii
Coordinates	110°37'34" E, 66°12'59" S
Area	97 ha
Altitude	0 – 20 m
Protection	None



Site description

Berkley Island and Cameron Island are part of the Swain Islands, which lie in the northeast of the Windmill Islands, Budd Coast, Wilkes Land. They are situated ~2 km north of Clark Peninsula. Both islands are ~0.6 km long and ~0.3 km wide and are ice free in summer.

The IBA qualifies on the basis of the Adélie Penguin (*Pygoscelis adeliae*) colony present, and consists of Berkley Island, Cameron Island and the intervening marine area and smaller islets.

The nearest permanent station is Casey (AUS), ~9 km to the west on Bailey Peninsula.

Birds

A ground survey in December 1989 counted 5141 breeding pairs of Adélie Penguin on Berkley Island and 1347 pairs on Cameron Island (Woehler *et al*. 1991). Berkley Island showed the largest Adélie Penguin breeding population increase of all the Windmill Islands between 1961/62 and 1989/90 (Woehler *et al.* 1991), while Cameron Island also saw an increase over this period. The largest increase of 149% occurred between 1980 and 1990.

Approximately 13 423 breeding pairs (95% CI 8028, 22 057) of Adélie Penguin were present at Berkley Island and Cameron Island as estimated from January 2011 satellite imagery (Lynch & LaRue 2014), which would suggest continued increases in the local population.

No other birds are known to breed in the area.

Other threatened / endemic wildlife

Weddell Seals (*Leptonychotes weddellii*) have been observed breeding on fast ice northeast of the Swain Islands (Murray & Luders 1990), and Leopard Seals (*Hydrurga leptonyx*) are regularly seen in the area.

Conservation issues

None known.

Further reading

Lynch, H.J. & LaRue, M.A. 2014. First global census of the Adélie Penguin. *The Auk* **131**(4): 457-66. doi:10.1642/AUK-14-31.1

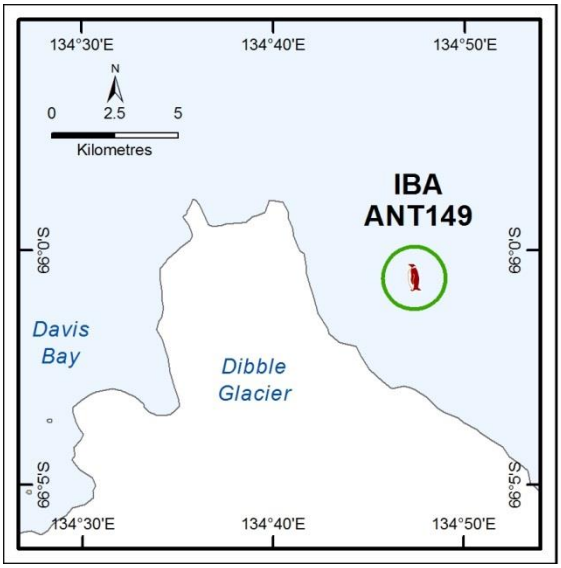
Murray, M.D. & Luders, D.J. 1990. Faunistic studies at the Windmill Islands, Wilkes Land, East Antarctica, 1959-80. *ANARE Research Notes* **73** (IV): 1-45.

Woehler, E.J., Slip, D.J., Robertson, L.M., Fullagar, P.J. & Burton, H.R. 1991. The distribution, abundance and status of Adélie Penguins *Pygoscelis adeliae* at the Windmill Islands, Wilkes Land, Antarctica. *Marine Ornithology* **19** (1): 1-18.

Terre Adélie

ANT149: Dibble Glacier

IBA criteria	A1, A4ii, A4iii
Coordinates	134°47'24" E, 66°00'36" S
Area	500 ha
Altitude	0 m
Protection	None



Site description

Dibble Glacier flows from the continental ice sheet into Davis Bay on the Wilkes Coast, Terre Adélie.

The IBA qualifies on the basis of the Emperor Penguin (*Aptenodytes forsteri*) colony present on fast ice ~5 km from the northeastern margin of the Dibble Glacier, and the site is entirely marine.

There are no research stations nearby, and the closest permanent station is Dumont d'Urville (FRA), ~250 km to the east at Pointe Géologie.

Birds

Analysis of a satellite image acquired on 12 October 2009 (Fretwell *et al.* 2012) indicated that approximately 12 476 Emperor Penguins were present at the colony. This colony was recorded for the first time by Fretwell *et al.* (2012). No other birds are known to breed in the area.

Other threatened / endemic wildlife

None known.

Conservation issues

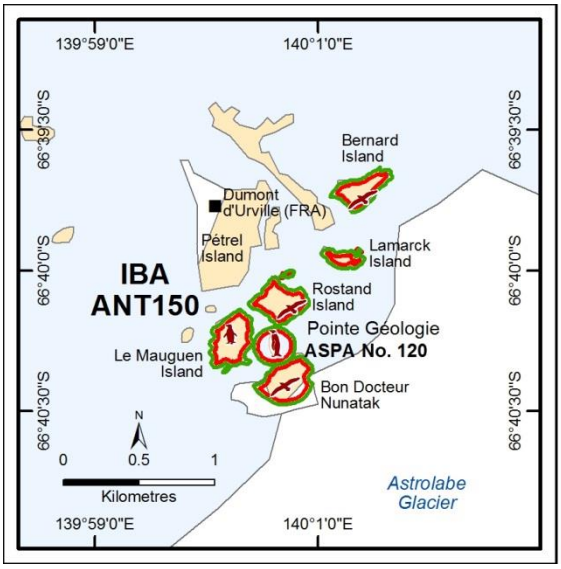
None known.

Further reading

Fretwell, P.T., LaRue, M.A., Morin P., Kooyman, G.L., Wienecke, B., Ratcliffe, N., Fox, A.J., Fleming, A.H., Porter, C. & Trathan, P.N. 2012. An Emperor Penguin population estimate: The first global, synoptic survey of a species from space. *PLoS ONE* **7**(4): e33751. doi:10.1371/journal.pone.0033751

ANT150: Pointe Géologie

IBA criteria	A1, A4ii, A4iii
Coordinates	140°00'37" E, 66°40'16" S
Area	37 ha
Altitude	0 – 50 m
Protection	ASPA No.120



Site description

The Géologie Archipelago lies within several km of the northwestern extremity of Astrolabe Glacier, Terre Adélie. Part of the archipelago was designated with special protection in 1995 (ASPA No.120 Pointe Géologie), including Rostand Island, Le Mauguen (formerly Carrel) Island, Lamarck Island, Bernard Island, Bon Docteur Nunatak and the Emperor Penguin (*Aptenodytes forsteri*) breeding area that exists on sea ice in the vicinity. ASPA No.120 was designated as a representative example of the terrestrial Antarctic ecosystem, recognising the high biological, geological and aesthetic values of the site, and a key aspect of these values is the presence of substantial numbers of breeding birds.

The IBA qualifies on the basis of the Emperor Penguin and Adélie Penguin (*Pygoscelis adeliae*) colonies present at the site. The boundary of ASPA No.120 defines the extent of the IBA.

The nearest permanent station is Dumont d'Urville (FRA), located on Petrel Island ~0.5 km to the northwest and adjacent to the ASPA and IBA.

Birds

The Géologie Archipelago contains one of the most diverse bird communities found anywhere on the Antarctic continent, with eight breeding species present (Micol & Jouventin 2001). Approximately 3588 pairs of Emperor Penguin, 54 431 pairs of Adélie Penguin were estimated as breeding at Pointe Géologie in 2013 (Barbraud *et al*. 2011; Barbraud, Delord, Weimerskirch, unpublished data: C. Barbraud pers. comm. 2014). While more than 60 pairs of South Polar Skua (*Catharacta maccormicki*) breed on the islands of the Géologie Archipelago, only 36 pairs were breeding on the islands within the boundary of the IBA in 2012/13 (R. Phillips pers. comm. 2015).

Other breeding birds recorded throughout the ASPA / IBA in 2010/11 are as follows: Snow Petrel (*Pagodroma nivea*) 369 pairs, Cape Petrel (*Daption capense*) 322 pairs, and Wilson's Storm-petrel (*Oceanites oceanicus*) 371 pairs (CEBC-CNRS unpublished data & Micol & Jouventin (2001), cited in ASPA No. 120 Management Plan 2011). Specific data on numbers of breeding pairs present by species on particular islands are given in the ASPA No.120 Management Plan (2011). ACAP (2010b) reported 8-9 pairs of Southern Giant Petrel (*Macronectes giganteus*) at Pointe Géologie in 2005.

Other threatened / endemic wildlife

Weddell Seals (*Leptonychotes weddellii*) are reported to breed in the Géologie Archipelago area (ASPA No. 120 Management Plan 2011).

Conservation issues

Table 3 of the ASPA No 120 Management Plan (2011) summarises population trends for breeding bird species at the Géologie Archipelago. Emperor Penguin and Southern Giant Petrel numbers decreased substantially during the construction phase of Dumont d'Urville station on Petrel Island in the early 1950s, and led to the permanent cessation of breeding by Southern Giant Petrels on Petrel Island. Overall, the trend for these species from 1952-84 was decline, although numbers for both species over the next 15 years (1984-2000) remained relatively stable at their lower levels. Over the period 1984-2011 numbers of Adélie Penguins, South Polar Skuas, Cape Petrels and Snow Petrels were either

increasing or remained stable. Overall, Emperor Penguin and Southern Giant Petrel numbers today remain lower than their 1952 levels, Adélie Penguins and South Polar Skuas have increased, while Cape Petrels and Snow Petrels have remained stable.

The decline in Emperor Penguin numbers over the 1970s has been at least in part attributed to weather anomalies causing reductions in the extent of sea ice, on which the birds depend for breeding. Recently, sea ice extent has been increasing and Emperor Penguin numbers have also increased, although it is likely that other contributory factors are involved.

Dumont d'Urville Station accommodates a maximum of ~100 people in summer and ~30 people in winter. However, since 1995 access to the Emperor Penguin and principal breeding areas of other seabird species has been controlled by the ASPA management plan, so direct human disturbance to birds over this period has been limited mostly to those carrying out research and is considered low.

From 1987-94 an 1100 m airstrip was constructed at Dumont d'Urville Station, which involved major works to build a rock causeway linking several islands. The airstrip was controversial for its construction effects and its potential impact on local fauna, although it was severely damaged by high seas in 1994 and never became operational. As a result, conservation concerns related to the operation of the airstrip did not become manifest.

A number of tourists visit Dumont d'Urville Station by ship. Over the period 2003-14 visits were made in five seasons with an average of 313 visitors per visit. Most of those visiting landed at Dumont d'Urville (IAATO Tourism Statistics, accessed: 18/12/2014), although access to the principal bird breeding areas is prohibited.

Further reading

ACAP (Agreement on the Conservation of Albatrosses and Petrels) 2010b. ACAP Species assessment: Southern Giant Petrel *Macronectes giganteus*. Downloaded from http://www.acap.aq on 12/03/ 2015.

ASPA No. 120 Pointe-Géologie Archipelago, Terre Adélie: Management Plan (2011).

Barbraud, C. & Weimerskirch, H. 2001. Emperor penguins and climate change. *Nature* **411**: 183-85.

Barbraud, C., Gavrilo, M., Mizin, Y. & Weimerskirch, H. 2011. Comparison of Emperor Penguin declines between Pointe Géologie and Haswell Island over the past 50 years. *Antarctic Science* **23**(5): 461-68.

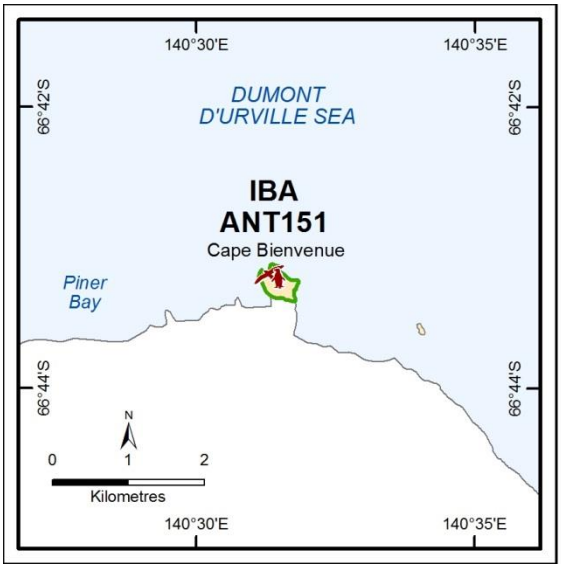
Fretwell, P.T., LaRue, M.A., Morin P., Kooyman, G.L., Wienecke, B., Ratcliffe, N., Fox, A.J., Fleming, A.H., Porter, C. & Trathan, P.N. 2012. An Emperor Penguin population estimate: The first global, synoptic survey of a species from space. *PLoS ONE* **7**(4): e33751. doi:10.1371/journal.pone.0033751

Lynch, H.J. & LaRue, M.A. 2014. First global census of the Adélie Penguin. *The Auk* **131**(4): 457-66. doi:10.1642/AUK-14-31.1

Micol, T. & Jouventin, P. 2001. Long-term population trends in seven Antarctic seabirds at Pointe Géologie (Terre Adélie): Human impact compared with environmental change. *Polar Biology* **24**: 175-85.

ANT151: Cape Bienvenue

IBA criteria	A4iii
Coordinates	140°31'29" E, 66°43'16" S
Area	15 ha
Altitude	Not known
Protection	None



Site description

Cape Bienvenue is a rocky peninsula approximately 0.5 km in length and across and forms the eastern coast of Piner Bay in Terre Adélie. The cape is ~18 km east of Cape Jules and a similar distance west of the Astrolabe Glacier Tongue.

The IBA qualifies on the basis of the Adélie Penguin (*Pygoscelis adeliae*) colony present and comprises all of the ice free area at Cape Bienvenue.

The nearest permanent station is Dumont d'Urville (FRA), ~25 km to the west at Pointe Géologie.

Birds

Barbraud *et al*. (1999) made a ground count of 15 023 breeding pairs of Adélie Penguin in 1997/98. This compares with approximately 35 466 breeding pairs (95% CI: 21 500, 57 951) of Adélie Penguin at Cape Bienvenue as estimated from February 2011 satellite imagery (Lynch & LaRue 2014). It is not clear whether this more recent count demonstrates change as a result of inter-seasonal fluctuations, methodological differences, or represents a real increase in the local Adélie Penguin population.

The Barbraud *et al*. (1999) survey also reported 20 pairs of Snow Petrels (*Pagodroma nivea*), two pairs of South Polar Skuas (*Catharacta maccormicki*) and confirmed Wilson's Storm-petrels (*Oceanites oceanicus*) as breeding at Cape Bienvenue.

Other threatened / endemic wildlife

None known.

Conservation issues

None known.

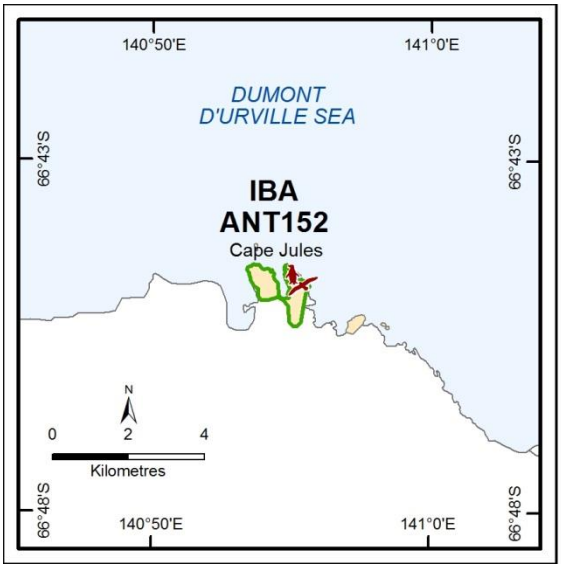
Further reading

Barbraud, C., Delord, K.C., Micol, T. & Jouventin, P. 1999. First census of breeding seabirds between Cap Bienvenue (Terre Adélie) and Moyes Islands (King George V Land), Antarctica: new records for Antarctic seabird populations. *Polar Biology* **21**: 146-50.

Lynch, H.J. & LaRue, M.A. 2014. First global census of the Adélie Penguin. *The Auk* **131**(4): 457-66. doi:10.1642/AUK-14-31.1

ANT152: Cape Jules

IBA criteria	A1, A4ii, A4iii
Coordinates	140°54'38" E, 66°44'51" S
Area	112 ha
Altitude	Not known
Protection	None



Site description

Cape Jules is a rocky peninsula of ~1 km in length and across, indented by a prominent cove on its northern coast. It is situated ~8 km west of the Zélée Glacier Tongue and ~18 km east of Cape Bienvenue in Terre Adélie.

The IBA qualifies on the basis of the Adélie Penguin (*Pygoscelis adeliae*) colony present and comprises all of the ice free area at Cape Jules.

The nearest permanent station is Dumont d'Urville (FRA), ~40 km to the west at Pointe Géologie.

Birds

Barbraud *et al*. (1999) counted 41 559 breeding pairs of Adélie Penguin at Cape Jules in 1997/98. This compares to approximately 56 399 breeding pairs (95% CI: 34 446, 92 123) of Adélie Penguin at Cape Jules as estimated from February 2011 satellite imagery (Lynch & LaRue 2014).

The Barbraud *et al*. (1999) survey also recorded 93 pairs of Snow Petrel (*Pagodroma nivea*), two pairs of Cape Petrel (*Daption capense*), 46 pairs of South Polar Skua (*Catharacta maccormicki*) and confirmed Wilson's Storm-petrels (*Oceanites oceanicus*) as breeding.

Other threatened / endemic wildlife

None known.

Conservation issues

None known.

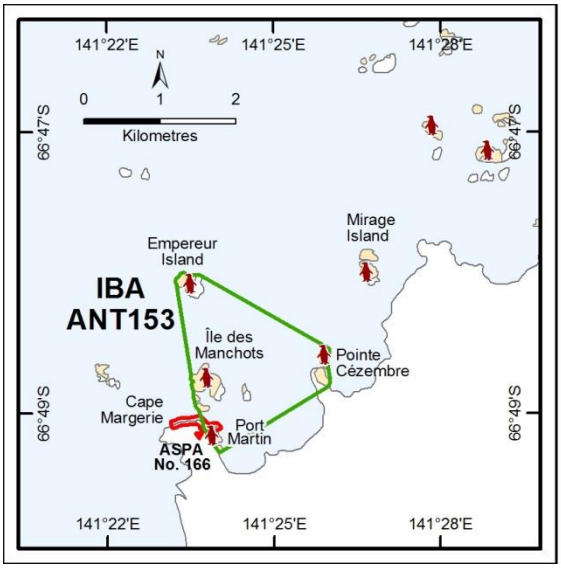
Further reading

Barbraud, C., Delord, K.C., Micol, T. & Jouventin, P. 1999. First census of breeding seabirds between Cap Bienvenue (Terre Adélie) and Moyes Islands (King George V Land), Antarctica: new records for Antarctic seabird populations. *Polar Biology* **21**: 146-50.

Lynch, H.J. & LaRue, M.A. 2014. First global census of the Adélie Penguin. *The Auk* **131**(4): 457-66. doi:10.1642/AUK-14-31.1

ANT153: Île des Manchots / Empereur Island

IBA criteria	A4iii
Coordinates	141°24'28" E, 66°48'38" S
Area	283 ha
Altitude	Not known
Protection	ASPA No. 166 relates to historic values



Site description

Île des Manchots and Empereur Island lie within two km of Cape Margerie, Terre Adélie. Port-Martin is an anchorage adjacent to Cape Margerie, from which the station established on the cape by the French Antarctic Expedition of 1949-50 takes its name. Port-Martin station was destroyed by fire in January 1952, was designated Historic Site & Monument No. 46 in 1985, and has since been designated as ASPA No. 166. The purpose of the protected area is conservation of the site's historic values, rather than the large colonies of birdlife present in the adjacent area.

The IBA qualifies on the basis of the Adélie Penguin (*Pygoscelis adeliae*) colony present, and includes Mont du Sabbat and Mont du Sphinx on the eastern coast of Cape Margerie, Île des Manchots, Empereur Island and Pointe de Cézembre and the intervening marine area.

The closest permanent station is Dumont d'Urville (FRA), ~65 km to the west at Pointe Géologie.

Birds

Barbraud *et al*. (1999) counted 20 171 breeding pairs of Adélie Penguin at Cape Margerie and Île des Manchots in 1997/98, although at this time none were breeding on Empereur Island (C. Barbraud pers. comm. 2015). More recently, approximately 35 000 breeding pairs (95% CI: 23 475, 62 350) of Adélie Penguin were present within the IBA area, as estimated from February 2011 satellite imagery (Lynch & LaRue 2014). The majority (~24 000 pairs) occupy Île des Manchots, with ~7100 pairs estimated on Empereur Island, ~3500 pairs on Cape Margerie, and ~250 pairs at Pointe de Cézembre (unpublished data H. Lynch & M. LaRue, pers. comm. 2014).

The Barbraud *et al*. (1999) survey also recorded six pairs of South Polar Skuas (*Catharacta maccormicki*) and confirmed the presence of breeding Wilson's Storm-petrels (*Oceanites oceanicus*).

Other threatened / endemic wildlife

None known.

Conservation issues

Three tourist visits to the Cape Margerie area have been reported in the ten years from 2004-14: all 48 people landed on a visit by *Spirit of Enderby* in 2008/09, and in the same year visits were made by *Bremen* (116 passengers) and *Orion* (192 passengers) although landings were not made (IAATO Tourism Statistics, accessed: 18/12/2014).

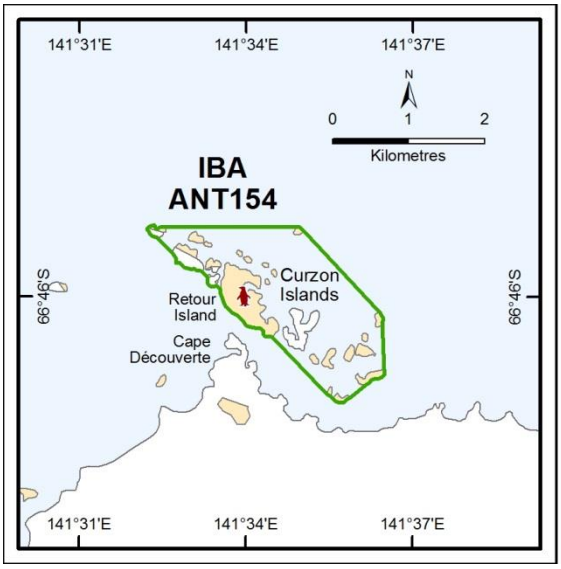
Further reading

Barbraud, C., Delord, K.C., Micol, T. & Jouventin, P. 1999. First census of breeding seabirds between Cap Bienvenue (Terre Adélie) and Moyes Islands (King George V Land), Antarctica: new records for Antarctic seabird populations. *Polar Biology* **21**: 146-50

Lynch, H.J. & LaRue, M.A. 2014. First global census of the Adélie Penguin. *The Auk* **131**(4): 457-66. doi:10.1642/AUK-14-31.1

ANT154: Curzon Islands

IBA criteria	A4iii
Coordinates	141°34'47" E, 66°46'01" S
Area	359 ha
Altitude	Not known
Protection	None



Site description

Curzon Islands are a group of mainly ice free islands ~300 m north of Cape Découverte, Terre Adélie. Retour Island is the largest in the group at ~1 km long and ~0.5 km wide.

The IBA qualifies on the basis of the Adélie Penguin (*Pygoscelis adeliae*) colony present, and comprises all of the island group and the intervening marine area.

The closest permanent station is Dumont d'Urville (FRA), ~70 km to the west at Pointe Géologie.

Birds

The penguins breed mainly on Retour Island, although nests are also present on surrounding smaller islands. Barbraud *et al*. (1999) counted 12 641 breeding pairs of Adélie Penguin in 1997/98. This compares with approximately 14 694 breeding pairs (95% CI: 8813, 24 081) of Adélie Penguin present at Curzon Islands as estimated from February 2011 satellite imagery (Lynch & LaRue 2014).

Barbraud *et al*. (1999) also recorded eight pairs of South Polar Skuas (*Catharacta maccormicki*) and confirmed that Wilson's Storm-petrels (*Oceanites oceanicus*) breed on the island group.

Other threatened / endemic wildlife

None known.

Conservation issues

Only two tourist visits to the Cape Découverte area have been reported in the ten years from 2004-14: 50 people visited in 2008/09 (none landed) and 72 people visited in 2005/06 (all landed) (IAATO Tourism Statistics, accessed: 18/12/2014).

Further reading

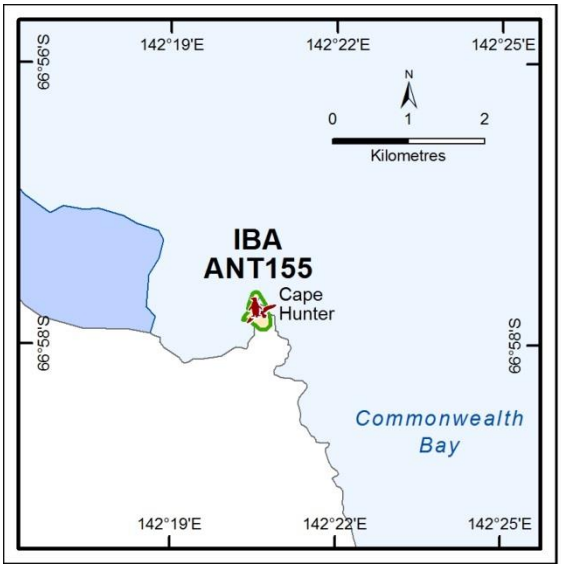
Barbraud, C., Delord, K.C., Micol, T. & Jouventin, P. 1999. First census of breeding seabirds between Cap Bienvenue (Terre Adélie) and Moyes Islands (King George V Land), Antarctica: new records for Antarctic seabird populations. *Polar Biology* **21**: 146-50

Lynch, H.J. & LaRue, M.A. 2014. First global census of the Adélie Penguin. *The Auk* **131**(4): 457-66. doi:10.1642/AUK-14-31.1

George V Land

ANT155: Cape Hunter

IBA criteria	A4iii
Coordinates	142°20'35" E, 66°57'47" S
Area	11 ha
Altitude	Not known
Protection	None



Site description

Cape Hunter is a rocky promontory of approximately 1 km in length and ~250 m wide on the western shore of Commonwealth Bay, George V Land, located ~13 km northwest of Cape Denison.

The IBA qualifies on the basis of the concentration of seabirds present (in particular Adélie Penguin (*Pygoscelis adeliae*) and Antarctic Petrel (*Thalassoica antarctica*)) and comprises the rocky promontory, the smaller offshore islands and the intervening marine area.

There are no research stations nearby. The closest permanent station is Dumont d'Urville (FRA), ~110 km to the west in Terre Adélie.

Birds

Barbraud *et al*. (1999) counted 15 997 breeding pairs of Adélie Penguin in 1997/98. During the same visit 3807 pairs of Antarctic Petrel, 53 pairs of Snow Petrel (*Pagodroma nivea*) and six pairs of South Polar Skuas (*Catharacta maccormicki*) were counted. Wilson's Storm-petrels (*Oceanites oceanicus*) were also confirmed to breed at the site (Barbraud *et al*. 1999). Large numbers of Antarctic Petrels were evident in photographs taken by Frank Hurley at Cape Hunter on the Australasian Antarctic Expedition 1911-14 (Hurley 1911-14).

More recently, approximately 7709 breeding pairs (95% CI 4552, 12 841) of Adélie Penguin were present at Cape Hunter as estimated from March 2010 satellite imagery (Lynch & LaRue 2014). It is not clear whether this more recent count demonstrates change as a result of inter-seasonal fluctuations, methodological differences, or represents a real reduction in the local Adélie Penguin population. Potentially, imagery from later in the season may have yielded a lower estimate of numbers than otherwise might have been expected.

Other threatened / endemic wildlife

None known.

Conservation issues

None known.

Further reading

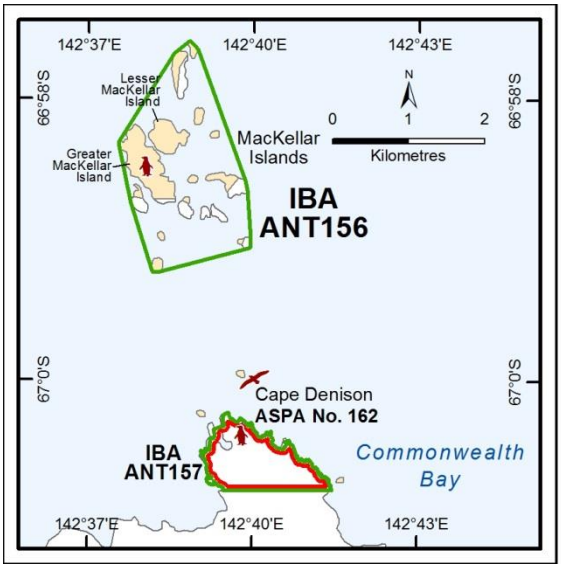
Barbraud, C., Delord, K.C., Micol, T. & Jouventin, P. 1999. First census of breeding seabirds between Cap Bienvenue (Terre Adélie) and Moyes Islands (King George V Land), Antarctica: new records for Antarctic seabird populations. *Polar Biology* **21**: 146-50.

Hurley, F. 1911-14. Unpublished photographs of Cape Hunter. From Photographs of the Australasian Antarctic Expedition 1911-14. Collections of the State Library of New South Wales, Australia. URL http://www.acmssearch.sl.nsw.gov.au/s/search.html?collection=slnsw

Lynch, H.J. & LaRue, M.A. 2014. First global census of the Adélie Penguin. *The Auk* **131**(4): 457-66. doi:10.1642/AUK-14-31.1

ANT156: MacKellar Islands

IBA criteria	A1, A4ii, A4iii
Coordinates	142°38'45" E, 66°58'31" S
Area	346 ha
Altitude	Not known
Protection	None



Site description

MacKellar Islands is a group of around 30 islands situated ~2 km north of Cape Denison, Commonwealth Bay, George V Land. Greater MacKellar Island is the largest of the group at ~1.2 km by ~0.5 km, while the adjacent Lesser MacKellar Island is roughly circular and ~0.5 km across. The larger islands in the group are mainly ice free, whereas the smaller islands have more ice cover.

The IBA qualifies on the basis of the Adélie Penguin (*Pygoscelis adeliae*) colony present, and consists of the entire island group and intervening marine area.

There are no research stations nearby. The closest permanent station is Dumont d'Urville, ~120 km to the west in Terre Adélie.

Birds

The majority of the Adélie Penguins breed on Greater MacKellar and on Lesser MacKellar islands, and a substantial number nest on the larger of the northern islands in the group, with smaller numbers occupying ice free ground on the remaining islands. Ensor & Bassett (1987) counted 13 160 Adélie Penguin chicks on Greater MacKellar Island and 13 970 chicks on Lesser MacKellar Island in January 1982, and these counts have been used as estimates of the minimum number of breeding pairs in subsequent compilations (e.g. Woehler 1993). Recently Southwell *et al*. (2015), after re-constructing the historical population estimates using the original counts and data on chick survival from remote cameras in east Antarctica, derived an estimate of 46 628 breeding pairs, although high uncertainty surrounds the estimate (95% CI 21 500 – 244 000). More recently, approximately 80 360 breeding pairs (95% CI 49 253, 131 836) of Adélie Penguin were present at MacKellar Islands as estimated from February 2011 satellite imagery (Lynch & LaRue 2014). Ensor & Bassett (1987) also noted four breeding pairs of Snow Petrels (*Pagodroma nivea*), 11 breeding pairs of Wilson's Storm-petrels (*Oceanites oceanicus*) and six breeding pairs of South Polar Skuas (*Catharacta maccormicki*) on these islands in 1982, and suggested that more flying birds could have been present.

Other threatened / endemic wildlife

None known.

Conservation issues

None known.

Further reading

Ensor, P.H. & Bassett, J.A. 1987.The breeding status of Adélie Penguins on the coast of George V Land, Antarctica. *ANARE Research Notes* **50.**

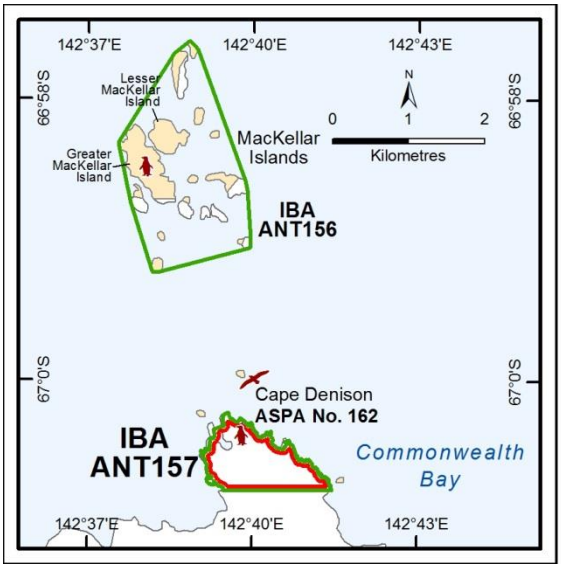
Lynch, H.J. & LaRue, M.A. 2014. First global census of the Adélie Penguin. *The Auk* **131**(4): 457-66. doi:10.1642/AUK-14-31.1

Southwell, C., Emmerson, L., Newbery, K., McKinlay, J., Kerry, K., Woehler, E. & Ensor. P. 2015. Re-constructing historical Adélie Penguin abundance estimates by retrospectively accounting for detection bias. *PLoS ONE* **10**(4): e0123540. doi:10.1371/journal.pone.0123540

Woehler, E.J. (ed.) 1993. The distribution and abundance of Antarctic and Subantarctic penguins. SCAR, Cambridge.

ANT157: Cape Denison

IBA criteria	A4iii
Coordinates	142°40'05" E, 67°00'35" S
Area	102 ha
Altitude	0 – 60 m
Protection	ASPA No. 162



Site description

Cape Denison is a rocky point at the western entrance to Commonwealth Bay, George V Land. The Cape extends ~1.5 km in width and ~1 km inland, rising to meet the permanent continental icecap at a height of around 40 m. Several valleys, oriented northwest/southeast, contain a number of small glacial lakes, and melt streams can form in summer. Cape Denison served as a base for the Australasian Antarctic Expedition of 1911-14, and a number of historic relics from this era remain. Cape Denison was designated as ASMA No.3 in 2004, although in 2014 this was replaced by an enlargement of ASPA No.162 Mawson's Huts, Cape Denison, to include all of the original ASMA within the boundary of the protected area. The main reason for protection is the site's historic values, although environmental features such as the lakes, flora, mammals and the breeding birds are also listed as of importance (ASPA No.162 Management Plan 2014).

The IBA qualifies on the basis of the concentration of seabirds present (in particular Adélie Penguin (*Pygoscelis adeliae*)) and coincides with the boundary of ASPA No.162.

There are no research stations nearby. The closest permanent station is Dumont d'Urville, ~120 km to the west in Terre Adélie.

Birds

The management plan for ASPA No. 162 (2014) gives 18 800 breeding pairs of Adélie Penguin present at Cape Denison, although the year and source of data are not given. The satellite image analysis by Lynch & LaRue (2014) gave an estimate of ~13 834 breeding pairs (95% CI 8377, 22 671) (February 2011). The penguins nest mainly on the eastern and western coasts of Cape Denison, although are also found in smaller numbers along the northern coast.

Map C of the 2014 management plan shows Snow Petrel (*Pagodroma nivea*) and Wilson's Storm-petrel (*Oceanites oceanicus*) breeding on elevated ridges across the cape. A solitary pair of Cape Petrels (*Daption capense*) was reported breeding in 1982 (Woehler & Johnstone 1991), which appears to be shown at the eastern extremity of the cape on a map of Cape Denison (Australian Antarctic Data Centre 2010). At least several pairs of Antarctic Prions (*Pachyptila desolata*) were observed nesting at Cape Denison in 1913 by the Australasian Antarctic Expedition. A pair and a single bird were shot for museum collections, although Antarctic Prions have not been observed at Cape Denison since; this is the only record of Antarctic Prions breeding on the continent apart from the Antarctic Peninsula (Ensor & Bassett 1987). The number of birds breeding at Cape Denison are summarised in Table 157.1. Other non-breeding bird species recorded at Cape Denison include Southern Giant Petrel (*Macronectes giganteus*) and Emperor Penguin (*Aptenodytes forsteri*) (ASPA No. 162 Management Plan 2014).

Table 157.1: Bird species breeding at Cape Denison.

Common name	Scientific name	Breeding pairs	Date	Source
Adélie Penguin	*Pygoscelis adeliae*	18 800	?	ASPA 162 Management Plan 2014
		13 834	Feb 2011	Lynch & LaRue 2014
South Polar Skua	*Catharacta maccormicki*	8	?	ASPA 162 Management Plan 2014
Wilson's Storm-petrel	*Oceanites oceanicus*	38	?	ASPA 162 Management Plan 2014
Snow Petrel	*Pagodroma nivea*	30	?	ASPA 162 Management Plan 2014
Cape Petrel	*Daption capense*	1	1982	Woehler & Johnstone 1991
Southern Fulmar	*Fulmarus glacialoides*	285	1982	Woehler & Johnstone 1991

Other threatened / endemic wildlife

Weddell (*Leptonychotes weddellii*), Southern Elephant (*Mirounga leonina*) and Leopard (*Hydrurga leptonyx*) seals are reported to haul out at Cape Denison. Southern Elephant Seals also remain in the area to moult (ASPA No. 162 Management Plan 2014).

Conservation issues

Cape Denison is isolated and difficult of access, although there has been steady interest by tourists over recent years, with visits made in seven out of the 10 seasons from 2004-14. For the years in which visits were made, an average of 197 people per year landed at Commonwealth Bay (IAATO Tourism Statistics, accessed: 18/12/2014). ATS Visitor Site Guidelines have been adopted for the area, which have been updated for consistency with the management plan adopted for ASPA No.162 in 2014, which allows for tourism at the site. Visits are also made to Cape Denison for historical conservation work, scientific research and for management, although because such visits are infrequent and small-scale, these activities are unlikely to pose risks to breeding birds at the site.

Further reading

Antarctic Treaty System Visitor Site Guidelines: Mawson's Huts and Cape Denison.
URL: http://www.ats.aq/siteguidelines/documents/2014/Mawson's Huts and Cape Denison e.pdf. Accessed 06/04/2015.

Australian Antarctic Data Centre. 2010. Cape Denison, Scale 1: 5000. Edition 3. Catalogue ID 13575.

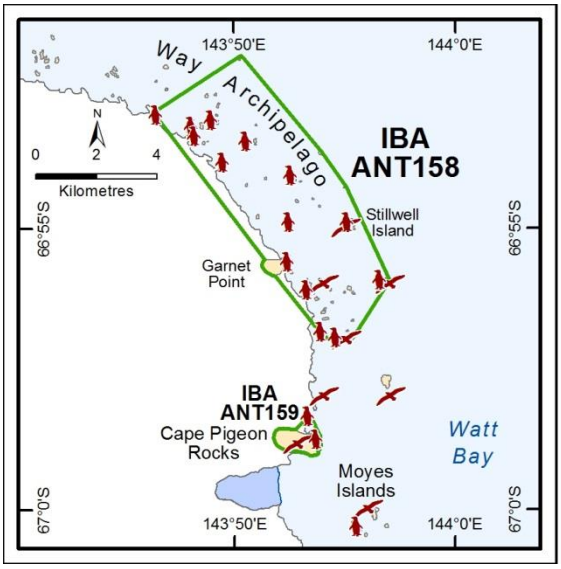
ASPA No. 162 Mawson's Huts, Cape Denison, Commonwealth Bay, George V Land, East Antarctica: Management Plan (2014).

Lynch, H.J. & LaRue, M.A. 2014. First global census of the Adélie Penguin. *The Auk* **131**(4): 457-66. doi:10.1642/AUK-14-31.1

Woehler, E.J. & Johnstone, G.W. 1991. Status and conservation of the seabirds of the Australian Antarctic Territory. In Croxall J.P. (ed.) Seabird status and conservation: a supplement. *ICBP Technical Publication* **11**: 279-308.

ANT158: Way Archipelago

IBA criteria	A1, A4ii, A4iii
Coordinates	143°52'06" E, 66°54'26" S
Area	3247 ha
Altitude	0 – 40 m
Protection	None



Site description

Way Archipelago forms an arc of around 120 islands fringing the continental coast of George V Land, extending up to ~4 km offshore and ~20 km from Cape Gray to a cluster of unnamed islands ~4 km southeast of Garnet Point. Stillwell Island is the largest island in the group, being ~0.5 km across, with a steep coastline rising to ~40 m (Stillwell 1918). Most of the islands in Way Archipelago remain relatively snow-free, even in winter, on account of the strong katabatic winds that persist in the region. Stillwell Island and Garnet Point have unusually large garnet crystals within the metamorphic gneiss rocks that dominate the local geology (Stillwell 1918). Six bird species have been recorded breeding at the archipelago.

The IBA qualifies on the basis of the Adélie Penguin (*Pygoscelis adeliae*) colonies that breeds on Stillwell Island, Garnet Point and a number of other islands throughout the archipelago, and includes the intervening marine area.

There are no research stations nearby. The closest permanent station is Dumont d'Urville (FRA), ~170 km to the west in Terre Adélie.

Birds

Approximately 51 900 breeding pairs of Adélie Penguin were present at Way Archipelago and a further 2165 at Garnet Point as estimated from January 2011 satellite imagery (unpublished data H. Lynch & M. LaRue pers. comm. 2014: CI not available). Satellite image analysis by Lynch & LaRue (2014, and unpublished data) indicates the majority of penguins are nesting on the largest three islands in the southeast of Way Archipelago, although breeding appears to occur on most of the small islands in the group. Data are not available on the numbers breeding on individual islands.

Almost 4000 pairs of Southern Fulmar (*Fulmarus glacialoides*) breed in the region and small numbers of other flying birds (Tables 158.1 and 158.2).

Table 158.1: Flying bird species breeding at Stillwell Island 1997/98[1].

Common name	Scientific name	Breeding pairs
South Polar Skua	*Catharacta maccormicki*	5
Cape Petrel	*Daption capense*	2
Snow Petrel	*Pagodroma nivea*	10
Southern Fulmar	*Fulmarus glacialoides*	2155
Wilson's Storm-petrel	*Oceanites oceanicus*	Confirmed breeding[2]

1. Data source: Barbraud *et al.* 1999
2. Numbers not known.

Table 158.2: Flying bird species breeding at unnamed islands east of Stillwell Island 1997/98[1].

Common name	Scientific name	Breeding pairs
South Polar Skua	*Catharacta maccormicki*	5
Cape Petrel	*Daption capense*	49
Snow Petrel	*Pagodroma nivea*	168
Southern Fulmar	*Fulmarus glacialoides*	1693
Antarctic Petrel	*Thalassoica antarctica*	402
Wilson's Storm-petrel	*Oceanites oceanicus*	Confirmed breeding[2]

1. Data source: Barbraud *et al.* 1999
2. Numbers not known.

Other threatened / endemic wildlife

None known.

Conservation issues

None known.

Further reading

Barbraud, C., Delord, K.C., Micol, T. & Jouventin, P. 1999. First census of breeding seabirds between Cap Bienvenue (Terre Adélie) and Moyes Islands (King George V Land), Antarctica: new records for Antarctic seabird populations. *Polar Biology* **21**: 146-50.

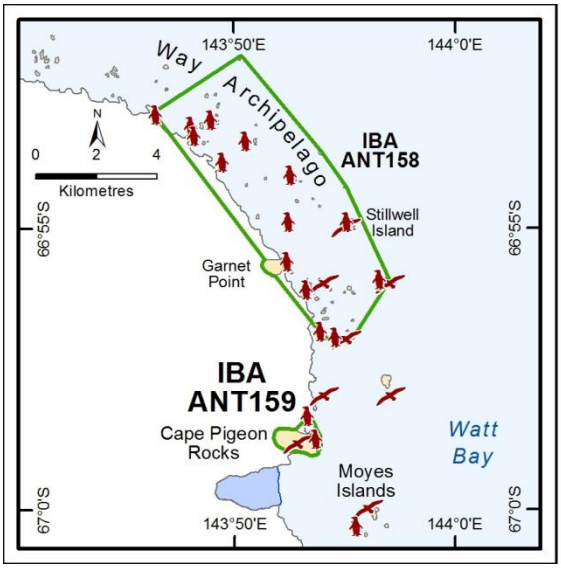
Ensor, P.H. & Bassett, J.A. 1987. The breeding status of Adélie Penguins on the coast of George V Land, Antarctica. *ANARE Research Notes* **50.**

Lynch, H.J. & LaRue, M.A. 2014. First global census of the Adélie Penguin. *The Auk* **131**(4): 457-66. doi:10.1642/AUK-14-31.1

Stillwell, F.L. 1918. The Cape Gray promontory and Stilwell Island. In Stillwell, F.L. *The metamophic rocks of Adélie Land*, Section 1. Scientific reports of the Australasian Antarctic Expedition 1911-14 under the leadership of Douglas Mawson, Series A, Vol 3, Part 1: Chapter 10.

ANT159: Cape Pigeon Rocks

IBA criteria	A4iii
Coordinates	143°52'58" E, 66°58'45" S
Area	127 ha
Altitude	Not known
Protection	None



Site description

Cape Pigeon Rocks are twin ice free promontories of ~1.6 km in length situated on the western shoreline of Watt Bay, ~5 km south of Garnet Point, George V Land. The site was named by Sir Douglas Mawson in 1912 after the colony of Cape Petrels (*Daption capense*) observed at the site, which persists today. The geology appears to be of igneous origin, with widespread gneiss and basic rocks evident in dykes (Laseron 1912). The IBA qualifies on the basis of the concentration of seabirds present (in particular Adélie Penguin (*Pygoscelis adeliae*)) and comprises the ice free ground of Cape Pigeon Rocks, a small ice free island to the east and the intervening marine area.

The closest permanent station is Dumont d'Urville (FRA), ~180 km to the west in Terre Adélie.

Birds

Approximately 10 335 breeding pairs of Adélie Penguin were present at Cape Pigeon Rocks as estimated from January 2011 satellite imagery (unpublished data H. Lynch & M. LaRue pers. comm. 2014: CI not available). Small numbers of flying birds also breed in the region (Table 159.1). Several of the photographs by Laseron (1912) show penguins, skuas, Cape Petrels and Southern Fulmars (*Fulmarus glacialoides*) present at the site at the time of Mawson's visit.

Table 159.1: Flying bird species breeding at Cape Pigeon Rocks 1997/98[1].

Common name	Scientific name	Breeding pairs
South Polar Skua	*Catharacta maccormicki*	8
Cape Petrel	*Daption capense*	106
Snow Petrel	*Pagodroma nivea*	97
Southern Fulmar	*Fulmarus glacialoides*	501
Wilson's Storm-petrel	*Oceanites oceanicus*	Confirmed breeding[2]

1. Data source: Barbraud *et al.* 1999
2. Numbers not known.

Other threatened / endemic wildlife

None known.

Conservation issues

None known.

Further reading

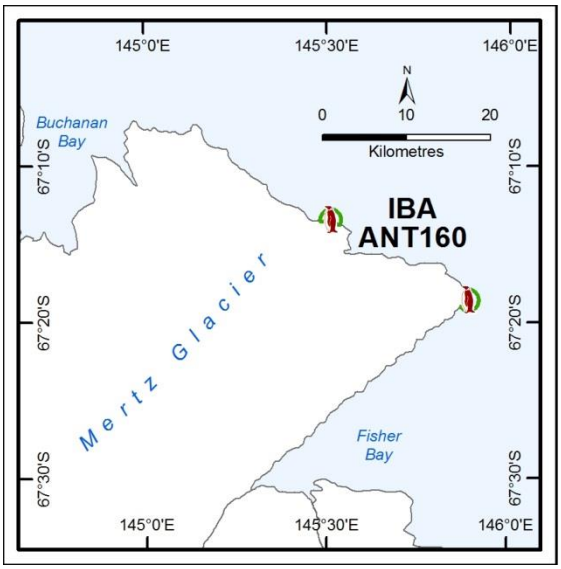
Barbraud, C., Delord, K.C., Micol, T. & Jouventin, P. 1999. First census of breeding seabirds between Cap Bienvenue (Terre Adélie) and Moyes Islands (King George V Land), Antarctica: new records for Antarctic seabird populations. *Polar Biology* **21**: 146-50.

Laseron, C.F. 1912. Unpublished photographs of Cape Pigeon Rocks. From Photographs of the Australasian Antarctic Expedition 1911-14. Collections of the State Library of New South Wales, Australia. URL http://acmssearch.sl.nsw.gov.au/s/search.html?collection=slnsw&meta_e=548 accessed 14/01/2015.

Lynch, H.J. & LaRue, M.A. 2014. First global census of the Adélie Penguin. *The Auk* **131**(4): 457-66. doi:10.1642/AUK-14-31.1

ANT160: Mertz Glacier

IBA criteria	A1, A4ii
Coordinates	145°30'43" E, 67°13'20" S & 145°53'59" E, 67°18'42" S
Area	641 ha
Altitude	0 m
Protection	None



Site description

Mertz Glacier and its associated glacier tongue are situated between Cape Hurley and Cape de la Motte, George V Land. Until recently, the Mertz Glacier Tongue extended ~100 km northward into the Dumont d'Urville Sea. A ~75 km section of the glacier tongue broke off in 2010, and the portion remaining is currently ~25 km in length and ~40 km across (Ancel *et al*. 2014). The IBA qualifies on the basis of the Emperor Penguin (*Aptenodytes forsteri*) colony present and is entirely marine. The colony breeds on fast ice that forms near the northeastern terminus of the Mertz Glacier Tongue.

The nearest permanent station is Dumont d'Urville (FRA), ~270 km to the west at Pointe Géologie.

Birds

Prior to the break of the northern section of the Mertz Glacier Tongue, approximately 4781 Emperor Penguins were present on fast ice near the northern terminus in October 2009, as estimated from satellite imagery (Fretwell *et al*. 2012). After the glacier tongue broke off, the colony appears to have split into two sub-colonies and moved ~75 km south to breed near the new northern terminus of the glacier tongue. In 2012 the sub-colonies were separated by ~20 km and a ground census estimated 5100 breeding pairs in the western colony and 2300 breeding pairs in the east (Ancel *et al.* 2014).

According to the criteria used to define Antarctic IBAs, only the new western colony would be identified as an IBA and the eastern would not qualify because numbers in 2012 were slightly below the threshold. However, both sub-colonies have been included within the IBA because Fretwell *et al*. (2012) earlier identified only a single colony, because the re-located sub-colonies breed relatively close to each other, and because their breeding locations vary according to the highly dynamic local ice conditions. In these circumstances, it was considered appropriate to include both breeding groups within a single IBA. No other birds are known to breed in the area.

Other threatened / endemic wildlife

Weddell Seals (*Leptonychotes weddellii*) have been observed on sea ice near leads in the vicinity (Ancel *et al.* 2014).

Conservation issues

IAATO reports three tourist visits to the Mertz Glacier area from 2003-14, with an average of 248 visitors per visit, although a landing was made in only one season (IAATO Tourism Statistics, accessed: 18/12/2014). The level of visitation is low and is not anticipated to cause conservations issues.

Further reading

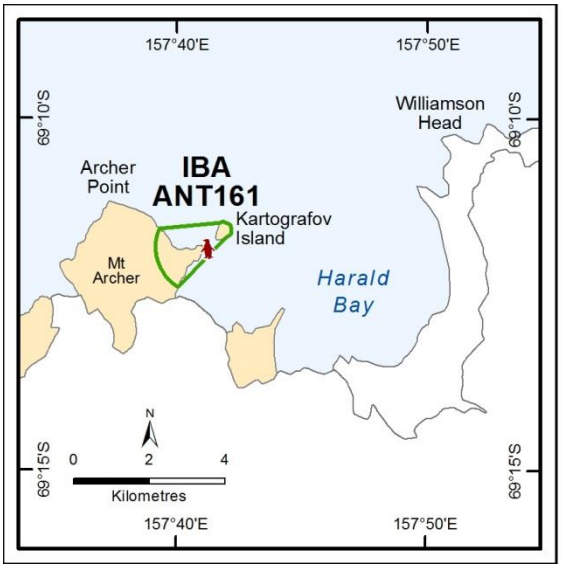
Ancel, A., Cristofari, R., Fretwell, P.T., Trathan, P.N., Wienecke, B., Boureau, M., Morinay, J., Blanc, S., Le Maho, Y. & Le Bohec, C. 2014. Emperors in hiding: when ice-breakers and satellites complement each other in Antarctic exploration. *PLoS ONE* **9**(6): 1-8. doi:10.1371/journal.pone.0100404

Fretwell, P.T., LaRue, M.A., Morin P., Kooyman, G.L., Wienecke, B., Ratcliffe, N., Fox, A.J., Fleming, A.H., Porter, C. & Trathan, P.N. 2012. An Emperor Penguin population estimate: The first global, synoptic survey of a species from space. *PLoS ONE* **7**(4): e33751. doi:10.1371/journal.pone.0033751

Oates Land

ANT161: Kartografov Island / Mount Archer

IBA criteria	A4iii
Coordinates	157°40'27" E, 69°11'51" S
Area	204 ha
Altitude	Not known
Protection	None



Site description

Kartografov Island (Cartographers Island) and Mount Archer are situated about half-way between Williamson Head and the Matusevich Glacier Tongue, which lie about 18 km apart on the coast of Oates Land. Kartografov Island is around 500 m across, and serves with Williamson Head in the east to enclose Harald Bay. Mount Archer is around 3 km across and its height is not known.

The IBA qualifies on the basis of the concentration of seabirds present (in particular Adélie Penguin (*Pygoscelis adeliae*)) and comprises the lower eastern extremity of Mount Archer and all of Kartografov Island, including the intervening marine area.

There are no research stations nearby. The closest permanent stations are Mario Zucchelli (ITA) and Jang Bogo (KOR), ~650 km to the southeast in Terra Nova Bay, Ross Sea.

Birds

Approximately 21 033 breeding pairs (95% CI 12 559, 34 257) of Adélie Penguin were present on the lower eastern slopes of Mount Archer and on Kartografov Island as estimated from February 2012 satellite imagery (Lynch & LaRue 2014). These authors refer to this site as 'Harald Bay'. The majority of penguins appear to breed at the eastern extremity of Mount Archer, with smaller groups occupying Kartografov Island. No other birds are known to breed in the area.

Other threatened / endemic wildlife

None known.

Conservation issues

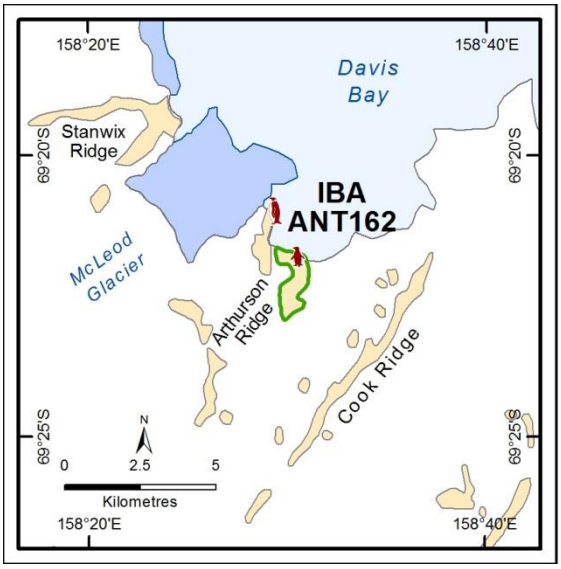
None known.

Further reading

Lynch, H.J. & LaRue, M.A. 2014. First global census of the Adélie Penguin. *The Auk* **131**(4): 457-66. doi:10.1642/AUK-14-31.1

ANT162: Arthurson Ridge

IBA criteria	A4iii
Coordinates	158°30'17" E, 69°22'15" S
Area	154 ha
Altitude	0 – 400 m
Protection	None



Site description

Arthurson Ridge is an ice free outcrop that lies between Cook Ridge and McLeod Glacier in Davis Bay, Oates Land.

The IBA qualifies on the basis of the concentration of seabirds present (in particular Adélie Penguin (*Pygoscelis adeliae*)) and comprises ice free ground along the coast of Davis Bay and extending onto the lower eastern slope of Arthurson Ridge.

There are no research stations nearby. The closest permanent stations are Mario Zucchelli (ITA) and Jang Bogo (KOR), ~620 km to the southwest in Terra Nova Bay, Ross Sea.

Birds

Approximately 14 461 breeding pairs (95% CI 8643, 23 880) of Adélie Penguins were present on Arthurson Ridge as estimated from March 2012 satellite imagery (Lynch & LaRue 2014). An Emperor Penguin (*Aptenodytes forsteri*) colony is situated nearby in Davis Bay, although with only ~1745 breeding pairs (Fretwell *et al*. 2012) it does not qualify as an IBA. No other birds are known to breed in the area.

Other threatened / endemic wildlife

None known.

Conservation issues

None known.

Further reading

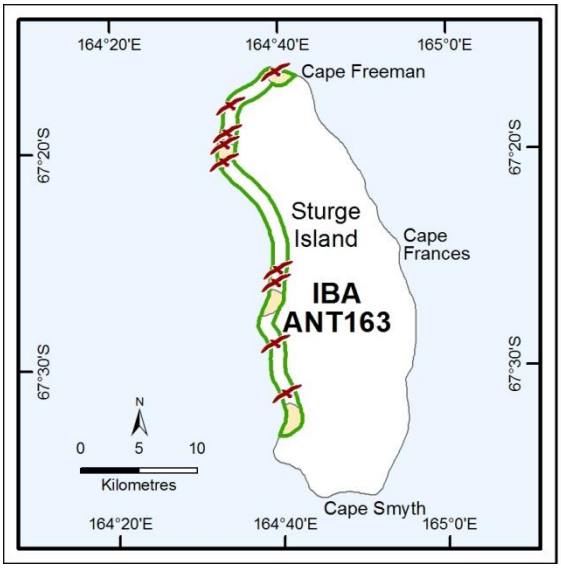
Fretwell, P.T., LaRue, M.A., Morin P., Kooyman, G.L., Wienecke, B., Ratcliffe, N., Fox, A.J., Fleming, A.H., Porter, C. & Trathan, P.N. 2012. An Emperor Penguin population estimate: The first global, synoptic survey of a species from space. *PLoS ONE* **7**(4): e33751. doi:10.1371/journal.pone.0033751

Lynch, H.J. & LaRue, M.A. 2014. First global census of the Adélie Penguin. *The Auk* **131**(4): 457-66. doi:10.1642/AUK-14-31.1

Balleny Islands

ANT163: Sturge Island

IBA criteria	A4ii, A4iii
Coordinates	164°38'57" E, 67°27'03" S
Area	4655 ha
Altitude	0 – 520 m
Protection	None



Site description

Sturge Island is the largest and most southerly of the Balleny Islands, situated in the Southern Ocean ~300 km north of the Antarctic continent at Oates Land. Sturge Island is ~37 km long by ~12 km wide, and rises to an elevation of ~520 m. The Balleny Islands straddle the Antarctic Circle and extend over a distance of ~150 km. The islands are of volcanic origin and are predominantly covered by permanent ice.

The IBA qualifies on the basis of the large Southern Fulmar (*Fulmarus glacialoides*) and Snow Petrel (*Pagodroma nivea*) colonies present on ice free cliffs along the western and northern coasts of Sturge Island.

The nearest permanent stations are Mario Zucchelli (ITA) and Jang Bogo (KOR) ~800 km to the south in Terra Nova Bay, and Dumont d'Urville (FRA) ~1000 km to the southwest in Terre Adélie.

Birds

Southern Fulmars estimated numbering between 10 – 20 000 breeding pairs were observed on the northwestern coast of Sturge Island in 1965 (Robertson *et al*. 1980). At this time Snow Petrels were also observed nesting on the western cliffs, estimated to number between 5000 – 10 000 breeding pairs. These colonies were not observed during a 1973 expedition (Robertson *et al*. 1980), although this may be a result of the timing or limited scope of the survey. Approximately 6000 breeding pairs of Southern Fulmars were observed in 1965 on Row Island, ~120 km to the northwest of Sturge Island, although this site does not qualify as an IBA.

The Balleny Islands host at least eight species of breeding birds, including Adélie Penguin (*Pygoscelis adeliae*), Chinstrap Penguin (*Pygoscelis antarctica*), Cape Petrel (*Daption capense*), Snow Petrel, Antarctic Petrel (*Thalassoica antarctica*), Southern Fulmar, Wilson's Storm-petrel (*Oceanites oceanicus*) and South Polar Skua (*Catharacta maccormicki*) (Robertson *et al*. 1980; Cruwys 2007). Counts for penguins in the Balleny Islands do not qualify for IBA status, and numbers for the other species are not well known.

Southern Giant Petrel (*Macronectes giganteus*), Antarctic Prion (*Pachyptila desolata*), Sooty Shearwater (*Puffinus griseus*), Arctic Tern (*Sterna paradisaea*), Brown Skua (*Catharacta antarctica*), Grey-headed Albatross (*Diomedea chrysostoma*), Black-browed Albatross (*Diomedea melanophrys*), Light-mantled Sooty Albatross (*Phoebetria palpebrata*), Wandering Albatross (*Diomedea exulans*), Macaroni Penguin (*Eudyptes chrysolophus*) and White-chinned Petrel (*Procellaria aequinoctialis*) have also been observed in the area (Robertson *et al*. 1980; Cruwys 2007; ASPA No. 104 Management Plan (2015)).

Other threatened / endemic wildlife

Weddell (*Leptonychotes weddellii*), Crabeater (*Lobodon carcinophagus*) and Southern Elephant (*Mirounga leonina*) seals forage, breed and moult in the Balleny Islands (Varian 2005).

Conservation issues

Due to its remote location and rugged terrain, which makes boat landings difficult, the islands have been visited only rarely (Cruwys 2007). In the period 2004-14 only three tourist visits were made to the Balleny Islands (IAATO Tourism Statistics, accessed: 18/12/2014). A small group of three tourists landed on the island in 2005/06 and the other two groups (in 2004/05 and 2013/14) did not land. One visit was made in 2001 by New Zealand research teams (Bradford-Grieve & Fenwick 2002). Direct human disturbance in the area is therefore expected to be minimal.

Further reading

ASPA No. 104 Sabrina Island, Balleny Islands: Management Plan (2015).

Bradford-Grieve, J. & Fenwick, G. 2002. A review of the current knowledge describing the biodiversity of the Balleny Islands. Final Research Report for National Institute of Water and Atmospheric Research Limited. Auckland, New Zealand. Unpublished report for the Ministry of Fisheries. Wellingon, New Zealand.

Cruwys, L. 2007. Balleny Islands. In Riffenburgh B. (ed.) *Encyclopedia of the Antarctic* Vol. 1 A-K. London, Taylor & Francis: 123-124.

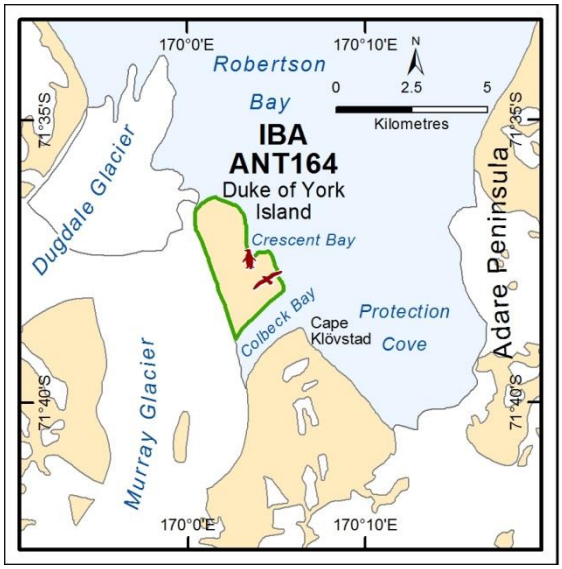
Robertson,C.J.R., Gilbert, J.R. & Erickson, A.W. 1980. Birds and seals of the Balleny Islands, Antarctica. *National Museum of New Zealand Reconds* **1** (16): 271-79.

Varian, S. J. 2005. A summary of the values of the Balleny Islands, Antarctica. Ministry of Fisheries. Wellington, New Zealand.

Northern Victoria Land

ANT164: Duke of York Island

IBA criteria	A4iii
Coordinates	170°02'44" E, 71°37'32" S
Area	680 ha
Altitude	0 – 470 m
Protection	None



Site description

Duke of York Island is a small island of ~4 km by 2 km situated in southwestern Robertson Bay, on the Pennell Coast. The island rises to ~470 m and lies ~7 km west of the Adare Peninsula, northern Victoria Land. Members of the British Antarctic Expedition (1898-1900) built a stone hut on the island, from which they explored the local area (Borchgrevink 1901).

The IBA qualifies on the basis of the concentration of seabirds present (in particular Adélie Penguin (*Pygoscelis adeliae*)) and comprises the whole island.

The nearest permanent stations are Mario Zucchelli (ITA) and Jang Bogo (KOR), ~390 km to the south in Terra Nova Bay, Ross Sea.

Birds

Approximately 16 340 breeding pairs (95% CI: 9730, 26 955) of Adélie Penguin were present at Crescent Bay, Duke of York Island, in 2010/11, as estimated from satellite imagery acquired 16 Feb 2011 (Lynch & LaRue 2014). This compares with earlier counts made by K. Barton of 1750 (1982), 4749 (1985), 4454 (1988), and 2307 (1990), giving an average of 3315 pairs over this period (Woehler & Croxall 1997).

Greenfield & Smellie (1992) noted that Marchant & Higgins (1990) reported a breeding colony of Snow Petrel (*Pagodroma nivea*) present on Duke of York Island, although did not consider the evidence for its presence to be strong. Borchgrevink reported collecting Snow Petrel and Wilson's Storm-petrel (*Oceanites oceanicus*) eggs in the vicinity of Robertson Bay (Borchgrevink 1901). There remains uncertainty about the presence of breeding Snow Petrels on the island. Information on other birds on the island is unavailable.

Other threatened / endemic wildlife

Weddell Seals (*Leptonychotes weddellii*) were observed breeding on sea ice on the coast of Duke of York Island by members of the British Antarctic Expedition 1910-13 (photographs archived at the Scott Polar Research Institute). Recent information is not available.

Conservation issues

None known.

Further reading

Borchgrevink, C.E. 1901. *First on the Antarctic Continent: being an account of the British Antarctic Expedition 1898-1900*. Cambridge University Press, Cambridge.

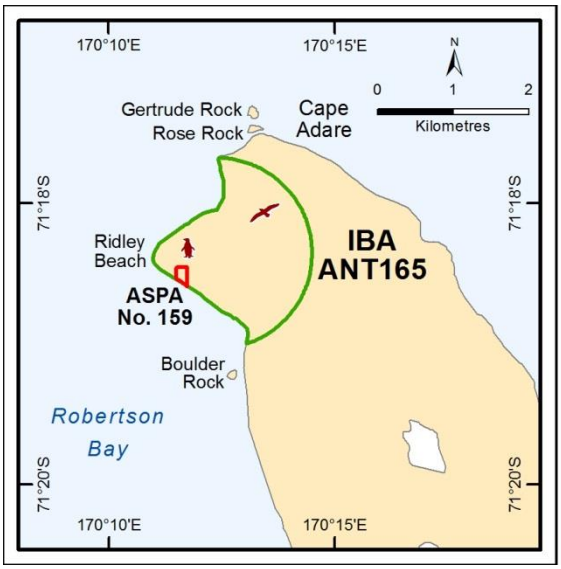
Greenfield, L.G. & Smellie, J.M. 1992. Known, new and probable Snow Petrel breeding locations in the Ross Dependency and Marie Byrd Land. *Notornis* **39**: 119-24.

Marchant, S. & Higgins, P.J. 1990. *Handbook of Australian, New Zealand and Antarctic Birds. Vol. I. Ratites to Petrels*. Oxford University Press, Melbourne.

Woehler, E.J. & Croxall, J.P. 1997. The status and trends of Antarctic and sub-Antarctic seabirds. *Marine Ornithology* **25**: 43-66.

ANT165: Cape Adare

IBA criteria	A1, A4ii, A4iii
Coordinates	170°13'01" E, 71°18'20" S
Area	294 ha
Altitude	0 to < 500 m
Protection	ASPA No. 159 is designated for historic values



Site description

Cape Adare is situated at the north of the Adare Peninsula, on the Borchgrevink Coast, northern Victoria Land. Ridley Beach lies ~1.6 km southwest of Cape Adare, and is a roughly triangular pebbly depositional feature beneath the steep slopes of the Cape Adare promontory which rises up ~300 m (Reid 1962). Huts and other historic relics left by the Borchgrevink (1898-1900) and Scott *Terra Nova* (1910-13) expeditions are present at the site, and these are protected under ASPA No. 159 Cape Adare, Borchgrevink Coast.

The IBA qualifies on the basis of the large Adélie Penguin (*Pygoscelis adeliae*) and South Polar Skua (*Catharacta maccormicki*) colonies present, and comprises ice free ground at Ridley Beach. The IBA encompasses ASPA No. 159, although the protection relates to the historic values of the site rather than resident birdlife.

The nearest permanent stations are Mario Zucchelli (ITA) and Jang Bogo (KOR), ~420 km south in Terra Nova Bay.

Birds

Historically, Cape Adare has been the largest Adélie Penguin colony in the Ross Sea, although recent counts at Cape Crozier have rivalled those at Cape Adare (Lyver *et al.* 2014). The Adélie colony at Cape Adare had a mean count of 227 000 breeding pairs over 4 seasons sampled between 1981 and 2012 (Lyver *et al.* 2014). The colony occupies Ridley Beach, extending to include a talus slope forming a ledge ~10 m above the beach and part of the western slopes of the Cape Adare promontory. A South Polar Skua colony of ~300 pairs breeds above the penguin colony at the crest of the promontory (Reid 1962), with 306 pairs estimated from a ground count made in January 1982 (Ainley *et al.* 1986). Confirmed visitors to the area are Southern Giant Petrel (*Macronectes giganteus*), Antarctic Petrel (*Thalassoica antarctica*), Snow Petrel (*Pagodroma nivea*) and Wilson's Storm-petrel (*Oceanites oceanicus*), although these species are not known to breed in the area.

Other threatened / endemic wildlife

Weddell Seals (*Leptonychotes weddellii*) are reported to haul out on Ridley Beach.

Conservation issues

Cape Adare is remote and inaccessible, and is visited infrequently by national programmes and tourists. An annual average of 308 tourists (including passengers, staff and crew) visited Cape Adare from 2006–2011. However, only 7 tourists visited in 2012/13, and none in 2011/12 (IAATO Tourism Statistics, accessed: 24/04/2014). Human disturbance in the area is expected to be minimal.

Further reading

Ainley, D.G., Morrell, S.H. & Wood, R.C. 1986. South Polar Skua breeding colonies in the Ross Sea region. *Notornis* **33**: 155-63.

ASPA No. 159 Cape Adare, Borchgrevink Coast: Management Plan (2010).

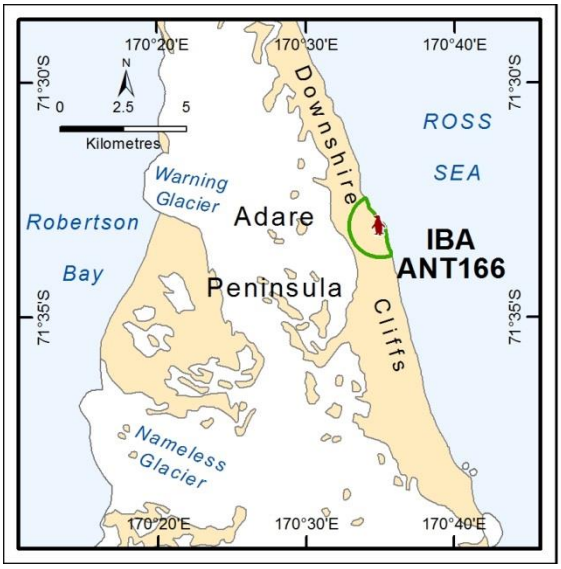
Harper, P.C., Knox, G.A., Spurr, E.B., Taylor, R.H. Wilson, G.J & Young, E.C. 1984. The status and conservation of birds in the Ross Sea sector of Antarctica. In: Croxall, J.P., Evans, P.G.H. & Schreiber, R.W. (eds) Status and Conservation of the World's Seabirds. *ICBP Technical Publication* **2**: 593-608.

Lyver, P.O'B., Barron, M., Barton, K.J., Ainley, D.G., Pollard, A., Gordon, S., McNeill, S., Ballard, G. & Wilson P.R. 2014. Trends in the breeding population of Adélie Penguins in the Ross Sea, 1981–2012: a coincidence of climate and resource extraction effects. *PLoS ONE* **9**(3): e91188. doi:10.1371/journal.pone.0091188

Reid, B. 1962. An assessment of the size of the Cape Adare Adélie Penguin rookery and skuary – with notes on Petrels. *Notornis* **10** (3): 98-111.

ANT166: Downshire Cliffs

IBA criteria	A4iii
Coordinates	170°34'13" E, 71°33'11" S
Area	243 ha
Altitude	0 to < 1400 m
Protection	None



Site description

The Downshire Cliffs are formed of basalt rising to 2000 m on the eastern slopes of the Adare Peninsula, Borchgrevink Coast, northern Victoria Land.

The IBA qualifies on the basis of the concentration of seabirds present (in particular Adélie Penguin (*Pygoscelis adeliae*)) and comprises the ice free slopes below Downshire Cliffs where the penguins breed.

The nearest permanent stations are Mario Zucchelli (ITA) and Jang Bogo (KOR), ~400 km to the south in Terra Nova Bay.

Birds

A mean of 19 617 breeding pairs of Adélie Penguin was reported over 5 seasons sampled between 1981 and 2012 (Lyver *et al*. 2014). Information on other bird species at the site is not available.

Other threatened / endemic wildlife

None known.

Conservation issues

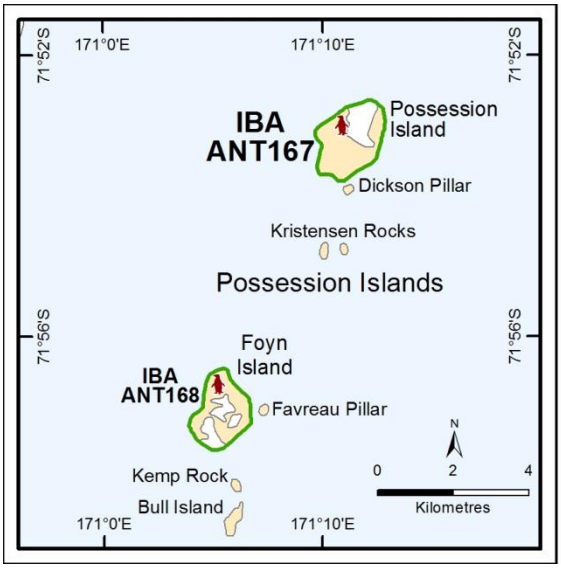
None known.

Further reading

Lyver, P.O'B., Barron, M., Barton, K.J., Ainley, D.G., Pollard, A., Gordon, S., McNeill, S., Ballard, G. & Wilson P.R. 2014. Trends in the breeding population of Adélie Penguins in the Ross Sea, 1981–2012: a coincidence of climate and resource extraction effects. *PLoS ONE* **9**(3): e91188. doi:10.1371/journal.pone.0091188

ANT167: Possession Island

IBA criteria	A1, A4ii, A4iii
Coordinates	171°11'17" E, 71°53'12" S
Area	276 ha
Altitude	0 to < 100 m
Protection	None



Site description

Possession Island is the largest and most northerly of the Possession Islands, which lie 17 km east of Cape Roget, at the southern extremity of Adare Peninsula, Borchgrevink Coast, northern Victoria Land.

The IBA qualifies on the basis of the Adélie Penguin (*Pygoscelis adeliae*) and South Polar Skua (*Catharacta maccormicki*) colonies present and comprises the entire island.

The nearest permanent stations are Mario Zucchelli (ITA) and Jang Bogo (KOR), ~380 km to the south in Terra Nova Bay.

Birds

The Adélie Penguin colony at Possession Island had a mean of 111 306 breeding pairs over 3 seasons sampled from 1981 – 2012 (Lyver *et al*. 2014). South Polar Skuas are also present on the island, with 474 breeding pairs recorded from a ground count made in 1982 (Ainley *et al*. 1986), making it the second largest South Polar Skua colony recorded in the Ross Sea region after Cape Crozier. No recent information is available on the skua colony, and information on other birds breeding in the area is not available.

Other threatened / endemic wildlife

None known.

Conservation issues

Possession Island is visited regularly by tourist ships, although not every year. From 2004–2014 visits were conducted on 6 seasons with an average of 86 visitors per season, of whom the majority landed. The number of visitors fluctuates, with four visitors in 2011/12 and 211 visitors in 2013/14 (IAATO Tourism Statistics, accessed: 02/02/2015).

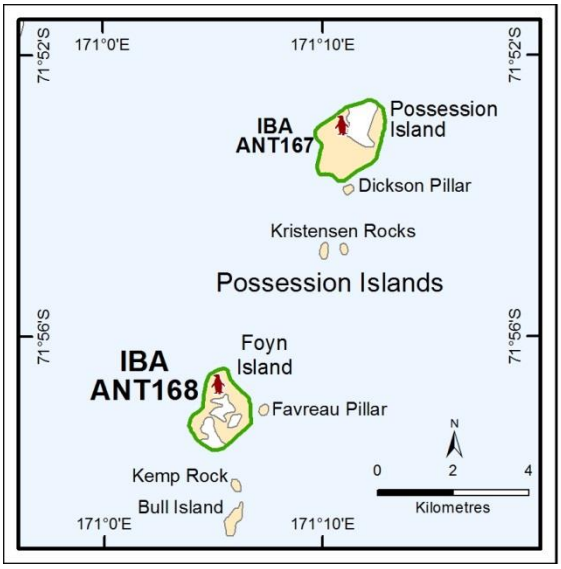
Further reading

Ainley, D.G., Morrell, S.H. & Wood, R.C. 1986. South Polar Skua breeding colonies in the Ross Sea region. *Notornis* **33**: 155-63.

Lyver, P.O'B., Barron, M., Barton, K.J., Ainley, D.G., Pollard, A., Gordon, S., McNeill, S., Ballard, G. & Wilson P.R. 2014. Trends in the breeding population of Adélie Penguins in the Ross Sea, 1981–2012: a coincidence of climate and resource extraction effects. *PLoS ONE* **9**(3): e91188. doi:10.1371/journal.pone.0091188

ANT168: Foyn Island

IBA criteria	A4iii
Coordinates	171°05'21" E, 71°57'05" S
Area	224 ha
Altitude	0 to < 100 m
Protection	None



Site description

Foyn Island is the second largest of the Possession Islands, which lie 17 km east of Cape Roget, at the southern extremity of Adare Peninsula, Borchgrevink Coast, northern Victoria Land. Foyn Island extends around 2 km across.

The IBA qualifies on the basis of the concentration of seabirds present (in particular Adélie Penguin (*Pygoscelis adeliae*)) and comprises the entire island.

The nearest permanent stations are Mario Zucchelli (ITA) and Jang Bogo (KOR), ~370 km to the south in Terra Nova Bay.

Birds

The Adélie Penguin colony at Foyn Island had a mean of 30 494 breeding pairs over 6 seasons sampled from 1981 – 2012 (Lyver *et al.* 2014). South Polar Skuas (*Catharacta maccormicki*) are also present on the island, with 397 breeding pairs recorded in the 1980s (Ainley *et al.* 1986), although because this count was made from an aerial survey it has not be used for the purpose of assessing the IBA. No recent information is available on the skua colony, and information on other birds breeding in the area is not available.

Other threatened / endemic wildlife

None known.

Conservation issues

No tourist ships are known to have visited Foyn Island over the last ten years. The last recorded visit was in 1994/95 when 131 passengers landed, and two ships in 1992/93 landed a combined total of 220 passengers (IAATO Tourism Statistics, accessed: 02/02/2015).

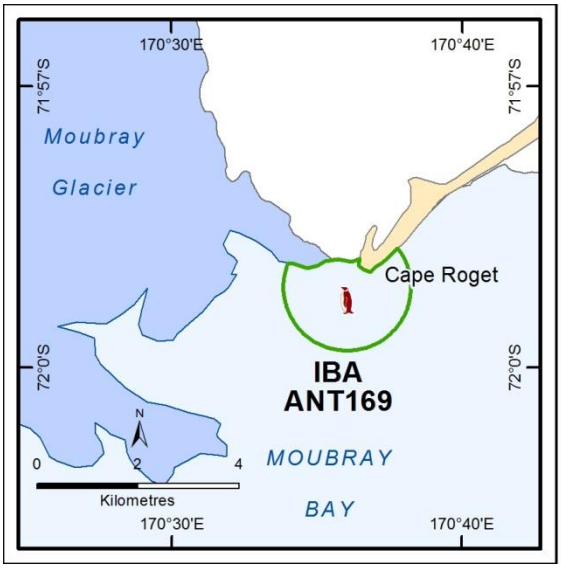
Further reading

Ainley, D.G., Morrell, S.H. & Wood, R.C. 1986. South Polar Skua breeding colonies in the Ross Sea region. *Notornis* **33**: 155-63.

Lyver, P.O'B., Barron, M., Barton, K.J., Ainley, D.G., Pollard, A., Gordon, S., McNeill, S., Ballard, G. & Wilson P.R. 2014. Trends in the breeding population of Adélie Penguins in the Ross Sea, 1981–2012: a coincidence of climate and resource extraction effects. *PLoS ONE* **9**(3): e91188. doi:10.1371/journal.pone.0091188

ANT169: Cape Roget

IBA criteria	A1, A4ii
Coordinates	170°36'07" E, 71°59'20" S
Area	371 ha
Altitude	0 m
Protection	None



Site description

Cape Roget is situated at the southern extremity of the Adare Peninsula, on the Borchgrevink Coast, northern Victoria Land.

An Emperor Penguin (*Aptenodytes forsteri*) colony breeds on sea ice that forms at the northern entrance to Moubray Bay, several km south of Cape Roget. The IBA qualifies on the basis of the Emperor Penguin colony present and is entirely marine.

The nearest permanent stations are Mario Zucchelli (ITA) and Jang Bogo (KOR), ~360 km to the south in Terra Nova Bay.

Birds

The Emperor Penguin population at Cape Roget ranged from ~3700 – ~7300 breeding pairs between 1983 and 1996 (Barber-Meyer *et al*. 2007, 2008). Analysis of a satellite image acquired 16 Oct 2009 (Fretwell *et al.* 2012) indicated that approximately 9505 Emperor Penguins were present at the colony, although image quality was rated Fair and the authors considered the result may be an overestimate.

Other threatened / endemic wildlife

None known

Conservation issues

None known

Further reading

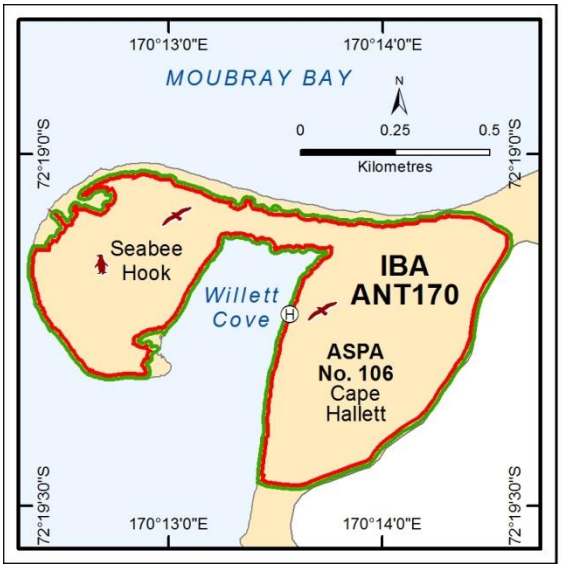
Barber-Meyer, S.M., Kooyman, G.L. & Ponganis, P.J. 2007. Estimating the relative abundance of Emperor Penguins at inaccessible colonies using satellite imagery. *Polar Biology* **30**: 1565-1570.

Barber-Meyer, S.M., Kooyman, G.L. & Ponganis, P.J. 2008. Trends in western Ross Sea Emperor Penguin chick abundances and their relationships to climate. *Antarctic Science* **20** (1): 3-11. doi:10.1017/S0954102007000673

Fretwell, P.T., LaRue, M.A., Morin P., Kooyman, G.L., Wienecke, B., Ratcliffe, N., Fox, A.J., Fleming, A.H., Porter, C. & Trathan, P.N. 2012. An Emperor Penguin population estimate: the first global, synoptic survey of a species from space. *PLoS ONE* **7**(4): e33751. doi:10.1371/journal.pone.0033751

ANT170: Seabee Hook, Cape Hallett

IBA criteria	A1, A4ii, A4iii
Coordinates	170°13'31" E, 72°19'13" S
Area	53 ha
Altitude	0 to < 200 m
Protection	ASPA No. 106



Site description

Seabee Hook is located 0.3 km west of Cape Hallett, situated at the northern extremity of the Hallett Peninsula, Borchgrevink Coast, northern Victoria Land. Seabee Hook is a relatively flat, depositional feature that consists of coarse volcanic parent material forming a series of beach ridges. Steep scree and permanent ice rising to more than 65 m form the western slopes of northern Hallett Peninsula.

The IBA qualifies on the basis of the Adélie Penguin (*Pygoscelis adeliae*) colony that occupies Seabee Hook, and is coincident with the boundary of ASPA No. 106: Cape Hallett. The ASPA is designated as an outstanding example of biological diversity, including for its large seabird colonies and diverse terrestrial ecology.

The nearest permanent stations are Mario Zucchelli (ITA) and Jang Bogo (KOR), ~330 km to the south in Terra Nova Bay.

Birds

A mean of 42 628 breeding pairs of Adélie Penguin was reported over 14 seasons sampled between 1981 and 2012 (Lyver *et al*. 2014). Approximately 63 971 breeding pairs were present in 2009/10 (combined total of direct nest, oblique aerial and ground photo counts made 26 Nov – 3 Dec 2009; unpublished data ERA 2010 cited in ASPA No.106 Management Plan (2010)).

South Polar Skuas (*Catharacta maccormicki*) breed within the area, and 14 breeding pairs and 66 individuals were observed on Seabee Hook in 2009, and another 23 breeding pairs and 92 individuals were present east of Willett Cove (unpublished data ERA 2010 cited in ASPA No.106 Management Plan (2010)).

Visitors to the area include Emperor Penguins (*Aptenodytes forsteri*), Chinstrap Penguins (*Pygoscelis antarctica*), Wilson's Storm-petrels (*Oceanites oceanicus*), Snow Petrels (*Pagodroma nivea*) and Southern Giant Petrels (*Macronectes giganteus*).

Other threatened / endemic wildlife

Weddell Seals (*Leptonychotes weddellii*) breed in Edisto Inlet and have been observed on Seabee Hook. Leopard Seals (*Hydrurga leptonyx*) and Minke Whales (*Balaenoptera acutorostrata*) are commonly observed offshore.

Conservation issues

A permanent NZL / USA scientific station was built on Seabee Hook in 1964, which involved destruction of nesting sites for thousands of pairs of Adélie Penguin. Prior to station construction, the colony was around 62 900 pairs (1959), which reduced to 37 000 pairs (1968) after the station was operational (ASPA No.106 Management Plan 2010). The station was closed in 1973, although clean-up did not commence until the 1980s and continued through until 2010 when the last materials remaining were removed. Penguins have begun to recolonise former station areas following removal of structures and debris.

Cape Hallett is visited by tourist ships. Parts of the coastline are accessible for tourists as they are situated outside of the ASPA and ATS Visitor Site Guidelines apply. From 2008–2013 an average of 101 visitors landed in the area, although the number of visitors fluctuates. For example, in 2008/09 more than 300 people landed, while in 2010/11

and in 2012/13 less than 100 people landed, whereas in 2011/12 no tourist landings were made (IAATO Tourism Statistics, accessed: 24/04/2014).

Further reading

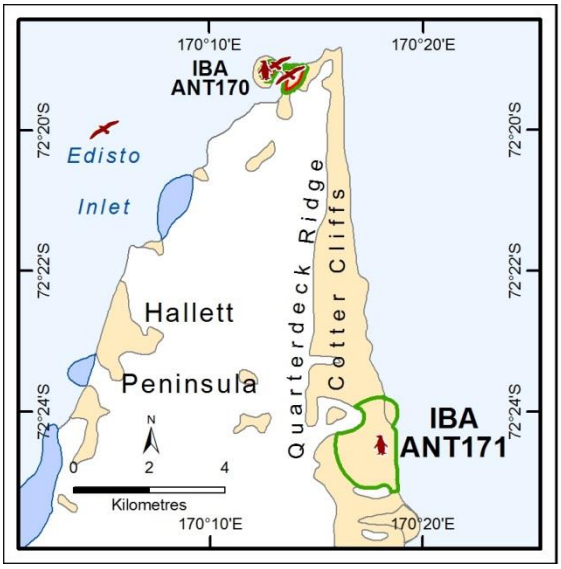
Antarctic Treaty System Visitor Site Guidelines: Seabee Hook
URL: http://www.ats.aq/siteguidelines/documents/Seabee_hook_e.pdf Accessed 06/04/2015.

ASPA No. 106 Cape Hallett, Northern Victoria Land, Ross Sea: Management Plan (2010).

Lyver, P.O'B., Barron, M., Barton, K.J., Ainley, D.G., Pollard, A., Gordon, S., McNeill, S., Ballard, G. & Wilson P.R. 2014. Trends in the breeding population of Adélie Penguins in the Ross Sea, 1981–2012: a coincidence of climate and resource extraction effects. *PLoS ONE* **9**(3): e91188. doi:10.1371/journal.pone.0091188

ANT171: Cotter Cliffs

IBA criteria	A1, A4ii, A4iii
Coordinates	170°17'35" E, 72°24'31" S
Area	296 ha
Altitude	0 to < 1300 m
Protection	None



Site description

Cotter Cliffs form the eastern coast of Hallett Peninsula, located on the Borchgrevink Coast, northern Victoria Land.

The IBA qualifies on the basis of the large Adélie Penguin (*Pygoscelis adeliae*) colony that breeds on ice-free slopes immediately south of Cotter Cliffs and below Quarterdeck Ridge on Hallett Peninsula.

The nearest permanent stations are Mario Zucchelli (ITA) and Jang Bogo (KOR), ~320 km to the southwest in Terra Nova Bay.

Birds

A mean of 38 252 breeding pairs of Adélie Penguin was reported over 8 seasons sampled between 1981 and 2012 (Lyver *et al*. 2014). Information on other bird species at the site is not available.

Other threatened / endemic wildlife

None known.

Conservation issues

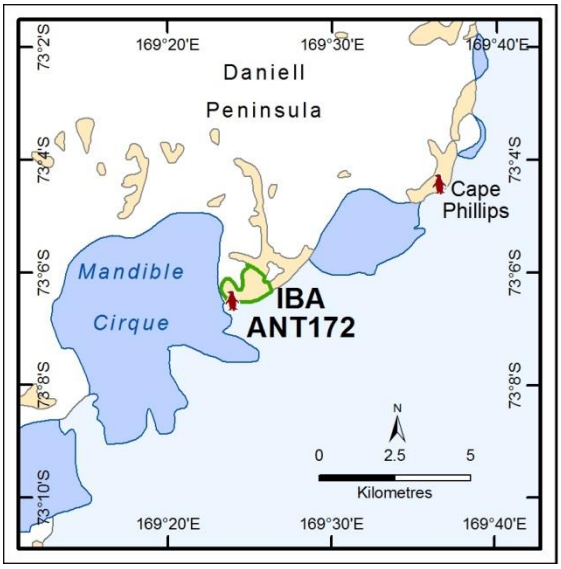
None known.

Further reading

Lyver, P.O'B., Barron, M., Barton, K.J., Ainley, D.G., Pollard, A., Gordon, S., McNeill, S., Ballard, G. & Wilson P.R. 2014. Trends in the breeding population of Adélie Penguins in the Ross Sea, 1981–2012: a coincidence of climate and resource extraction effects. *PLoS ONE* **9**(3): e91188. doi:10.1371/journal.pone.0091188

ANT172: Mandible Cirque

IBA criteria	A4iii
Coordinates	169°24'48" E, 73°06'17" S
Area	121 ha
Altitude	0 to < 800 m
Protection	None



Site description

Mandible Cirque is situated on the southern coast of Daniell Peninsula, on the Borchgrevink Coast of northern Victoria Land, ~ 8 km southwest of Cape Phillips.

The IBA qualifies on the basis of the large Adélie Penguin (*Pygoscelis adeliae*) colony breeding on ice-free ground adjacent to Mandible Cirque.

The nearest permanent stations are Mario Zucchelli (ITA) and Jang Bogo (KOR), ~240 km to the southwest in Terra Nova Bay.

Birds

A mean of 16 837 breeding pairs of Adélie Penguin was reported over 3 seasons sampled between 1981 and 2012 (Lyver *et al*. 2014). Information on other bird species at the site is not available.

Other threatened / endemic wildlife

None known.

Conservation issues

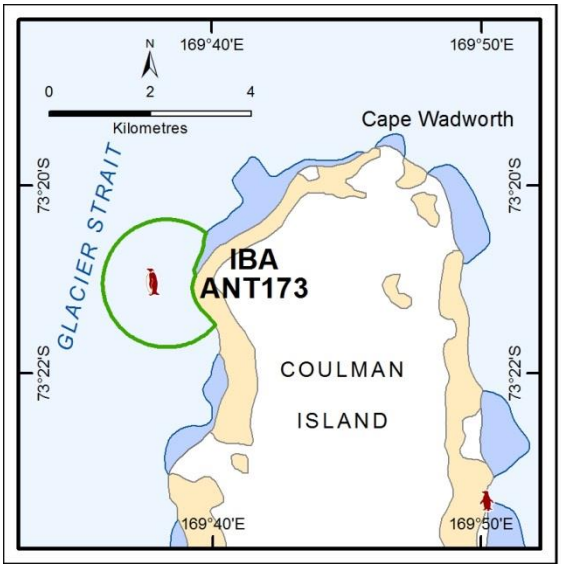
None known.

Further reading

Lyver, P.O'B., Barron, M., Barton, K.J., Ainley, D.G., Pollard, A., Gordon, S., McNeill, S., Ballard, G. & Wilson P.R. 2014. Trends in the breeding population of Adélie Penguins in the Ross Sea, 1981–2012: a coincidence of climate and resource extraction effects. *PLoS ONE* **9**(3): e91188. doi:10.1371/journal.pone.0091188

ANT173: Cape Wadworth, Coulman Island

IBA criteria	A1, A4ii, A4iii
Coordinates	169°37'56" E, 73°21'03" S
Area	415 ha
Altitude	0 m
Protection	None



Site description

Coulman Island lies along the Borchgrevink Coast of northern Victoria Land, ~18 km east of the Borchgrevink Glacier Tongue. The island is an elongated basaltic dome covered by a permanent ice cap. Cape Wadworth is the northern-most point of Coulman Island.

The IBA qualifies on the basis of the Emperor Penguin (*Aptenodytes forsteri*) colony that breeds on sea ice ~5 km southwest of Cape Wadworth. Breeding extends ~2 km offshore from the northwestern coast of Coulman Island, and the IBA is entirely marine.

The nearest permanent stations are Mario Zucchelli (ITA) and Jang Bogo (KOR) ~220 km to the southwest in Terra Nova Bay.

Birds

The Coulman Island Emperor Penguin colony is currently the largest known, although the emperor colony at Cape Washington (IBA ANT176) has in some years been comparable, or sometimes of larger, in size. The colony breeds on sea ice up to approximately 1 km from the northwestern Coulman Island coast. The population ranged between ~19 000 and ~35 000 pairs from 1983-2005 (Barber-Meyer *et al*. 2007, 2008). Analysis of a satellite image acquired 16 Oct 2009 (Fretwell *et al.* 2012) indicated that 25 298 Emperor Penguins were present at the colony, although image quality was rated Fair.

Information on other bird species at the site is not available.

Other threatened / endemic wildlife

None known

Conservation issues

See IBA ANT174 for information about conservation issues at Coulman Island.

Further reading

Barber-Meyer, S.M., Kooyman, G.L. & Ponganis, P.J. 2007. Estimating the relative abundance of Emperor Penguins at inaccessible colonies using satellite imagery. *Polar Biology* **30**: 1565-1570.

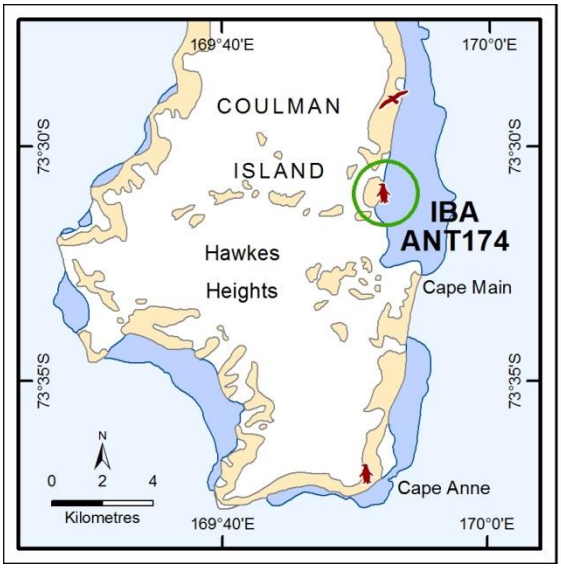
Barber-Meyer, S.M., Kooyman, G.L. & Ponganis, P.J. 2008. Trends in western Ross Sea Emperor Penguin chick abundances and their relationships to climate. *Antarctic Science* **20**(1): 3-11. doi:10.1017/S0954102007000673

Fretwell, P.T., LaRue, M.A., Morin P., Kooyman, G.L., Wienecke, B., Ratcliffe, N., Fox, A.J., Fleming, A.H., Porter, C. & Trathan, P.N. 2012. An Emperor Penguin population estimate: the first global, synoptic survey of a species from space. *PLoS ONE* **7**(4): e33751. doi:10.1371/journal.pone.0033751

Kooyman, G.L. & Ponganis, P.J. 2014. Chick production at the largest Emperor Penguin colony decreases by 50% from 2008-10. *Antarctic Science* **26**: 33-37.

ANT174: Cape Main, Coulman Island

IBA criteria	A4iii
Coordinates	169°52'17" E, 73°31'01" S
Area	500 ha
Altitude	0 to < 1000 m
Protection	None



Site description

Coulman Island lies along the Borchgrevink Coast of northern Victoria Land, ~18 km east of the Borchgrevink Glacier Tongue. The island is an elongated basaltic dome covered by a permanent ice cap. Cape Main is an ice free outcrop and moraine that lies on the eastern coast of Coulman Island.

The IBA qualifies on the basis of the concentration of seabirds present (in particular Adélie Penguin (*Pygoscelis adeliae*)) and comprises ice free ground and a strip of moraine that lies on the eastern coast of the island, ~3 km north of Cape Main.

The nearest permanent stations are Mario Zucchelli (ITA) and Jang Bogo (KOR), ~220 km to the southwest in Terra Nova Bay.

Birds

A large colony of Adélie Penguins is recorded breeding on ice-free ground adjacent to the ice shelf north of Cape Main, with on average 17 991 breeding pairs present from 1981 – 2012 (Lyver *et al.* 2014). The main nesting area lies over low ridges on a large triangular moraine (not shown on map) that extends eastward from rocky cliffs on the eastern coast of Coulman Island. A small group of nests is located on the steeper slopes just below these cliffs. Information on other bird species at the site is not available.

Other threatened / endemic wildlife

None known.

Conservation issues

Coulman Island is visited by tourist ships relatively infrequently. From 2008–13 visits were made in two seasons with a total of three tourist ships, and it is reported that ice walks, helicopter flights and small boat cruising took place, although the specific sites where these activities occurred are not reported (IAATO Tourism Statistics, accessed: 24/11/2014). The number of tourists visiting the site is therefore uncertain, although is expected to be minimal. Few visits to Coulman Island are made by national programmes, and data for the penguin census are gathered by aerial survey under controlled conditions, so disturbance from these sources is anticipated to be minimal.

Further reading

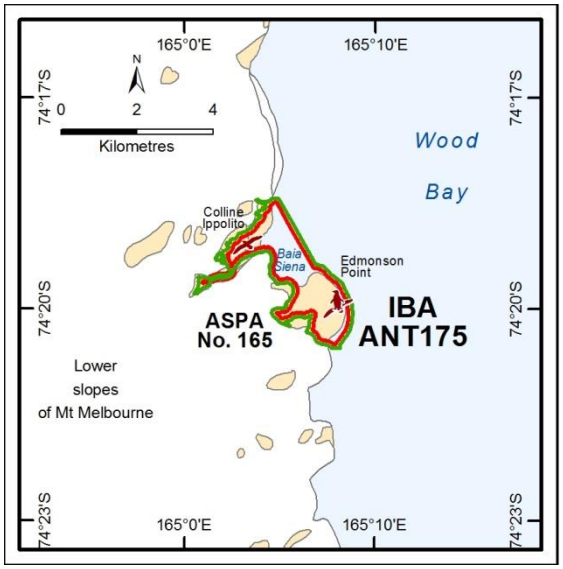
Lyver, P.O'B., Barron, M., Barton, K.J., Ainley, D.G., Pollard, A., Gordon, S., McNeill, S., Ballard, G. & Wilson P.R. 2014. Trends in the breeding population of Adélie Penguins in the Ross Sea, 1981–2012: a coincidence of climate and resource extraction effects. *PLoS ONE* **9**(3): e91188. doi:10.1371/journal.pone.0091188

Taylor, R.H. & Wilson, P.R. 1985. Adélie Penguin rookeries at Coulman Island, Western Ross Sea, Antarctica. *Notornis* **32** (2): 101-07.

Wood Bay / Terra Nova Bay

ANT175: Edmonson Point

IBA criteria	A4ii
Coordinates	165°05'44" E, 74°19'32" S
Area	550 ha
Altitude	0 – 300 m
Protection	ASPA No. 165



Site description

Edmonson Point is situated in Wood Bay, Ross Sea, at the foot of the eastern slopes of Mount Melbourne, Victoria Land.

The IBA qualifies on the basis of the South Polar Skua (*Catharacta maccormicki*) colony present and is coincident with the boundary of Antarctic Specially Protected Area No. 165: Edmonson Point, Wood Bay. The ASPA is designated for its outstanding ecological and scientific values, in particular for the outstanding freshwater and terrestrial habitats present, and the opportunities offered at the site for studies of Adélie Penguin (*Pygoscelis adeliae*) and South Polar Skua.

The nearest permanent stations are Jang Bogo (KOR, year-round), Mario Zucchelli (ITA, summer-only), and Gondwana (DEU, summer occasional use), located ~50 km to the southwest in the Northern Foothills.

Birds

A stable colony of ~120 breeding pairs of South Polar Skua are present at Edmonson Point, with the majority nesting close to the Adélie Penguin colony and a further 36 pairs nesting on the slopes of Ippolito Hills (Colline Ippolito) (CCAMLR 1999; Pezzo *et al*. 2001; V. Volpi pers. comm. 2005 cited in ASPA No. 165 Management Plan). A count made in 2010 recorded 116 pairs, with 55 pairs at Ippolito Hills and the remainder on Edmonson Point. Several groups of non-breeders, ranging between 50 and 70 individuals, are frequently observed near freshwater ponds during the breeding season (Pezzo *et al*. 2001). The colony is one of the most numerous in Victoria Land, and has an unusually high ratio of skuas to resident penguins, being around 1:20 (CCAMLR 1999; Pezzo *et al*. 2001).

The small colony of Adélie Penguins is located in the southeastern part of Edmonson Point, and is insufficiently large to qualify as an IBA in its own right. The colony had on average ~1890 breeding pairs in the period 1981 – 2012 (Lyver *et al*. 2014).

Snow Petrels (*Pagodroma nivea*) and Wilson's Storm-petrels (*Oceanites oceanicus*) have been observed as visitors, although are not known to breed in the area (ASPA No. 165 Management Plan).

Other threatened / endemic wildlife

Weddell Seals (*Leptonychotes weddellii*) regularly breed on sea ice that forms along the coast of Edmonson Point, and have also been observed hauling out along the beaches (ASPA No. 165 Management Plan).

Conservation issues

None known.

Further reading

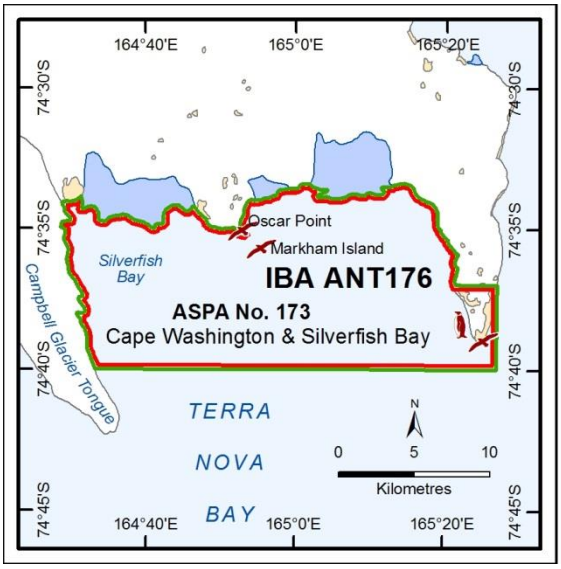
ASPA No. 165 Edmonson Point, Wood Bay, Victoria Land, Ross Sea: Management Plan (2011).
CCAMLR. 1999. Report of member's activities in the Convention Area 1998/99: Italy. CCAMLR-XVIII/MA/14.

Lyver, P.O'B., Barron, M., Barton, K.J., Ainley, D.G., Pollard, A., Gordon, S., McNeill, S., Ballard, G. & Wilson P.R. 2014. Trends in the breeding population of Adélie Penguins in the Ross Sea, 1981–2012: a coincidence of climate and resource extraction effects. *PLoS ONE* **9**(3): e91188. doi:10.1371/journal.pone.0091188

Pezzo, F., Olmastroni, S., Corsolini, S. & Focardi, S. 2001. Factors affecting the breeding success of the South Polar Skua *Catharacta maccormicki* at Edmonson Point, Victoria Land, Antarctica. *Polar Biology* **24**: 389-93. doi:10.1007/s003000000213

ANT176: Cape Washington

IBA criteria	A1, A4ii, A4iii
Coordinates	164°58'02" E, 74°37'07" S
Area	28584 ha
Altitude	0 to < 500 m
Protection	ASPA No. 173



Site description

Cape Washington is situated on the lower slopes of Mount Melbourne, Victoria Land, in northern Terra Nova Bay, Ross Sea. The IBA qualifies on the basis of the Emperor Penguin (*Aptenodytes forsteri*) and South Polar Skua (*Catharacta maccormicki*) colonies that breed near Cape Washington, and coincides with the boundary of ASPA No. 173: Cape Washington & Silverfish Bay. The ASPA was designated in 2013 for its outstanding ecological and scientific values, particularly in recognition of the large Emperor Penguin colony present.

The nearest permanent stations are Jang Bogo (KOR, year-round), Mario Zucchelli (ITA, summer-only) and Gondwana (DEU, summer occasional use), located ~30 km to the west in the vicinity of Gerlache Inlet.

Birds

The Emperor Penguin colony population ranges from 13 000 – 25 000 breeding pairs (Barber-Meyer *et al*. 2007, 2008), and ~17 000 pairs were present in 2010 (G. Kooyman pers. comm. 2012). The colony is one of the largest known, and in some years exceeds the size of the Coulman Island colony (IBA ANT173) to become the largest colony in the Ross Sea. The colony typically breeds on sea ice up to 0.5 km west of Cape Washington, although may break into a number of sub-groups and move several km from this site throughout the breeding season.

Around 50 pairs of South Polar Skua breed on ice free slopes above Cape Washington, and Snow Petrels (*Pagodroma nivea*) have been observed breeding in coastal cliffs northeast of the cape (Greenfield & Smellie 1992). South Polar Skuas were also observed breeding at Oscar Point (~20 pairs) and on Markham Island (~21 pairs) in 1982 (Ainley *et al.* 1986).

Adélie Penguins (*Pygoscelis adeliae*) are regularly observed near the emperor colony, although do not breed at the site. Other visiting birds observed in the area include Wilson's Storm-petrels (*Oceanites oceanicus*) and Southern Giant Petrels (*Macronectes giganteus*) (Kooyman *et al*. 1990).

Other threatened / endemic wildlife

Killer Whale (*Orcinus orca*) forage in the vicinity and Minke Whales (*Balaenoptera bonaerensis*), other *Balaenoptera* species and Arnoux's Beaked Whale (*Berardius arnuxii*) have been observed nearby.

Weddell (*Leptonychotes weddellii*), Leopard (*Hydrurga leptonyx*) and Crabeater (*Lobodon carcinophagus*) seals are common in the region. The western part of the area east of the Campbell Glacier Tongue, Silverfish Bay, is a nursery ground for Antarctic Silverfish (*Pleuragramma antarcticum*).

Conservation issues

The Cape Washington Emperor Penguin colony was visited regularly by tourists over the last 20 years, with an average of ~200 tourists visiting per season over the last decade. Recreational visits have also been undertaken regularly by station personnel from nearby stations (ASPA No. 173 Management Plan 2013). Logistic activity, in particular by aircraft and ships, operating nearby is a potential conservation issue, although access and overflight are now carefully controlled by the ASPA No. 173 Management Plan (2013).

Further reading

ASPA No. 173 Cape Washington and Silverfish Bay, Northern Terra Nova Bay, Ross Sea: Management Plan (2013).

Ainley, D.G., Morrell, S.H. & Wood, R.C. 1986. South Polar Skua breeding colonies in the Ross Sea region. *Notornis* **33**: 155-63.

Barber-Meyer, S.M., Kooyman, G.L. & Ponganis, P.J. 2007. Estimating the relative abundance of Emperor Penguins at inaccessible colonies using satellite imagery. *Polar Biology* **30**: 1565-70.

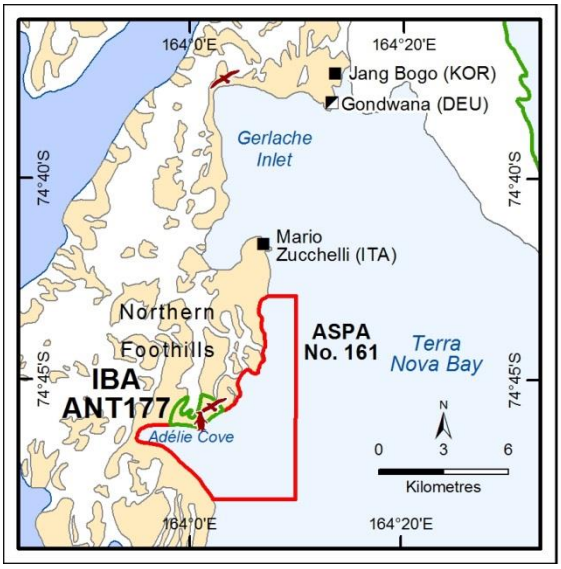
Barber-Meyer, S.M., Kooyman, G.L. & Ponganis, P.J. 2008. Trends in western Ross Sea Emperor Penguin chick abundances and their relationships to climate. *Antarctic Science* **20**(1): 3-11. doi:10.1017/S0954102007000673

Greenfield, L.G. & Smellie, J.M. 1992. Known, new and probable Snow Petrel breeding locations in the Ross Dependency and Marie Byrd Land. *Notornis* **39**: 119-24.

Kooyman, G.L., Croll, D., Stone, S. & Smith, S. 1990. Emperor penguin colony at Cape Washington, Antarctica. *Polar Record* **26**: 103-08.

ANT177: Adélie Cove

IBA criteria	A4iii
Coordinates	164°00'35" E, 74°45'51" S
Area	186 ha
Altitude	0 to < 100 m
Protection	ASPA 161 protects adjacent marine area



Site description

Adélie Cove is situated in Terra Nova Bay on the coast of the Northern Foothills, Victoria Land. The IBA qualifies on the basis of the concentration of seabirds present (in particular Adélie Penguin (*Pygoscelis adeliae*)) and comprises ice free ground on the northern coast of Adélie Cove adjacent to ASPA No. 161 Terra Nova Bay.

The nearest permanent stations are Mario Zucchelli (ITA) and Jang Bogo (KOR), ~9 km and 17 km to the north respectively.

Birds

An average of ~11 234 breeding pairs of Adélie Penguin were present each season from 1981 – 2012 (Lyver *et al.* 2014). Approximately 91 breeding pairs of South Polar Skua (*Catharacta maccormicki*) were reported along the Northern Foothills coast (Ainley 1986), although the exact extent of the area of the count is not known. A more recent census counted 30 breeding pairs of South Polar Skua in the immediate vicinity of the Adélie Penguin colony, and Wilson's Storm-petrel (*Oceanites oceanicus*) have also been also observed in the area (S. Olmastroni pers. comm. 2015). Information on other breeding bird species in the area is not available.

Other threatened / endemic wildlife

Leopard Seals (*Hydrurga leptonyx*) have been reported in the area (S. Olmastroni pers. comm. 2015).

Conservation issues

The proximity of nearby stations and associated aircraft and other human activity could pose risks of disturbance to the colony. Italy has recently proposed construction of a new hard-rock airstrip in the Northern Foothills, several kilometres to the north of the Adélie Penguin colony (Government of Italy 2014). Sound intensity measurements and penguin observations at Adélie Cove reported minimal disturbance during a single test flight by a large transport aircraft over the proposed airstrip, although a detailed account, including information on breeding South Polar Skuas or other birds, was not provided. A Comprehensive Environmental Evaluation is being prepared by Italy prior to construction of the airstrip (S. Torcini pers. comm. 2015).

Further reading

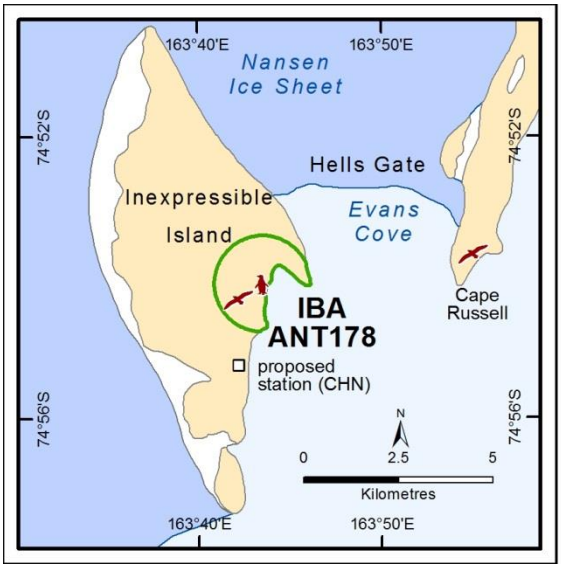
Ainley, D.G., Morrell, S.H., & Wood, R.C 1986. South Polar Skua breeding colonies in the Ross Sea region. *Notornis* **33**: 155-163

Government of Italy 2014. Proposal for a hard rock airstrip in the Northern Foothills. Information Paper 057 presented to the ATCM XXXVII, 28 April – 07 May 2014, Brazilia, Brazil.

Lyver, P.O'B., Barron, M., Barton, K.J., Ainley, D.G., Pollard, A., Gordon, S., McNeill, S., Ballard, G. & Wilson P.R. 2014. Trends in the breeding population of Adélie Penguins in the Ross Sea, 1981–2012: a coincidence of climate and resource extraction effects. *PLoS ONE* **9**(3): e91188. doi:10.1371/journal.pone.0091188

ANT178: Inexpressible Island

IBA criteria	A4ii, A4iii
Coordinates	163°43'02" E, 74°54'01" S
Area	365 ha
Altitude	0 to < 200 m
Protection	None



Site description

Inexpressible Island, Victoria Land, is situated in Terra Nova Bay, Ross Sea. The island is bounded in the east by Hells Gate and Evans Cove, and in the west by the Nansen Ice Sheet

The eastern side of the island is relatively flat with a few low hills, while a ridge of ~110 m elevation runs along the western flank. Several lakes are present (PRIC & Tongji University 2014).

The IBA qualifies on the basis of the South Polar Skua (*Catharacta maccormicki*) colony present and the concentration of seabirds (in particular Adélie Penguin (*Pygoscelis adeliae*)) and comprises an area of ice free ground on the eastern shore of Inexpressible Island.

The nearest permanent stations are Mario Zucchelli (ITA) and Jang Bogo (KOR), situated ~30 km to the northeast. China has announced plans to construct a new station several kilometres to the south of the IBA (PRIC & Tongji University 2014).

Birds

An average of ~24 450 breeding pairs of Adélie Penguin were present each season from 1981 – 2012 (Lyver *et al.* 2014). Approximately 60 breeding pairs of South Polar Skuas were present on Inexpressible Island both within and near the vicinity of the IBA in 1982 (Ainley *et al.* 1986), although the precise breeding area has not been defined.

Other threatened / endemic wildlife

Weddell Seals (*Leptonychotes weddellii*) have been observed on sea ice near Inexpressible Island (PRIC & Tongji University 2014).

Conservation issues

Inexpressible Island is visited regularly by tourist ships, and from 2008–13 an average of 73 people per season landed (IAATO Tourism Statistics, accessed: 24/04/2014).

China recently announced plans to establish a new permanent research station on ice free ground ~2 km to the south of the IBA. The shortest distance between the Adélie Penguin colony and the proposed station site is ~1.5 km (PRIC & Tongji University 2014). Helicopter, ships, vehicles and pedestrians are likely to operate in close proximity to the IBA, both during construction and when operational. China has expressed interest in establishing a new Antarctic Specially Protected Area (PRIC & Tongji University 2014), and if designated this should help protect the penguin colony.

Further reading

Ainley, D.G., Morrell, S.H., & Wood, R.C 1986. South Polar Skua breeding colonies in the Ross Sea region. *Notornis* **33**: 155-63.

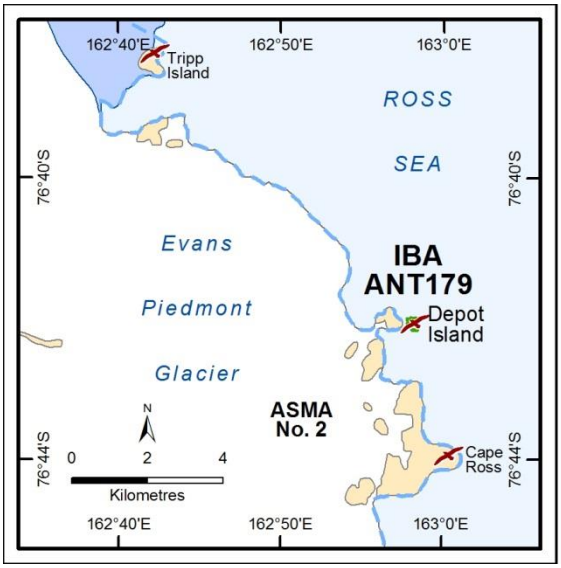
Lyver, P.O'B., Barron, M., Barton, K.J., Ainley, D.G., Pollard, A., Gordon, S., McNeill, S., Ballard, G. & Wilson P.R. 2014. Trends in the breeding population of Adélie Penguins in the Ross Sea, 1981–2012: a coincidence of climate and resource extraction effects. *PLoS ONE* **9**(3): e91188. doi:10.1371/journal.pone.0091188

PRIC (Polar Research Institute of China) & Tongji University. 2014. Proposed construction and operation of a new Chinese research station, Victoria Land, Antarctica. Draft Comprehensive Environmental Evaluation. Working Paper 016 presented to the ATCM XXXVII, 28 April – 07 May 2014, Brasília, Brazil.

Southern Victoria Land

ANT179: Depot Island

IBA criteria	A4ii
Coordinates	162°58'13" E, 76°42'05" S
Area	7.2 ha
Altitude	Not known
Protection	None



Site description

Depot Island is of roughly triangular in shape and situated ~200 m off the coast of Evans Piedmont Glacier, southern Victoria Land. It is situated ~ 4 km north of Cape Ross and ~ 10 km southeast of Tripp Island. The ice free island is ~ 0.3 km long and up to 0.3 km wide.

The IBA qualifies on the basis of the South Polar Skua (*Catharacta maccormicki*) colony present at the site and comprises all of Depot Island.

The nearest permanent scientific stations are Scott Base (NZL) and McMurdo Station (USA) situated ~160 km to the southeast on Hut Point Peninsula, Ross Island.

Birds

South Polar Skuas breed on Gregory Island, with ~72 breeding pairs estimated in 1982 (Ainley *et al*. 1986). No recent information on the colony is available, and no other birds are known to breed in the area.

Other threatened / endemic wildlife

None known.

Conservation issues

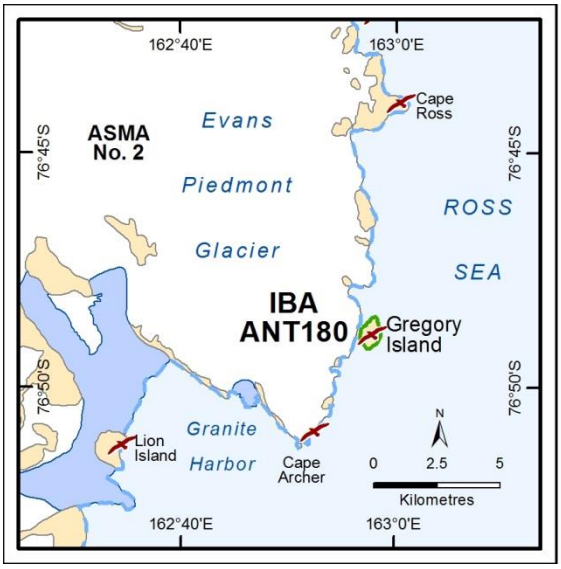
None known.

Further reading

Ainley, D.G., Morrell, S.H. & Wood, R.C. 1986. South Polar Skua breeding colonies in the Ross Sea region. *Notornis* **33**: 155-163.

ANT180: Gregory Island

IBA criteria	A4ii
Coordinates	162°57'45" E, 76°48'52" S
Area	70 ha
Altitude	0 – 100 m
Protection	None



Site description

Gregory Island, McMurdo Sound, is situated a few hundred metres off the coast of the Evans Piedmont Glacier, southern Victoria Land. It is situated ~5 km north of Cape Archer and ~8 km south of Cape Ross. The ice free island is ~1.2 km long and up to 0.8 km wide.

The IBA qualifies on the basis of the South Polar Skua (*Catharacta maccormicki*) colony present at the site and comprises all of Gregory Island.

The nearest permanent scientific stations are Scott Base (NZL) and McMurdo (USA) situated ~150 km to the south-east on Hut Point Peninsula, Ross Island.

Birds

South Polar Skuas breed on Gregory Island, with ~119 breeding pairs estimated in 1983 (Ainley *et al*. 1986). No recent information on the colony is available, and no other birds are known to breed in the area.

Other threatened / endemic wildlife

None known.

Conservation issues

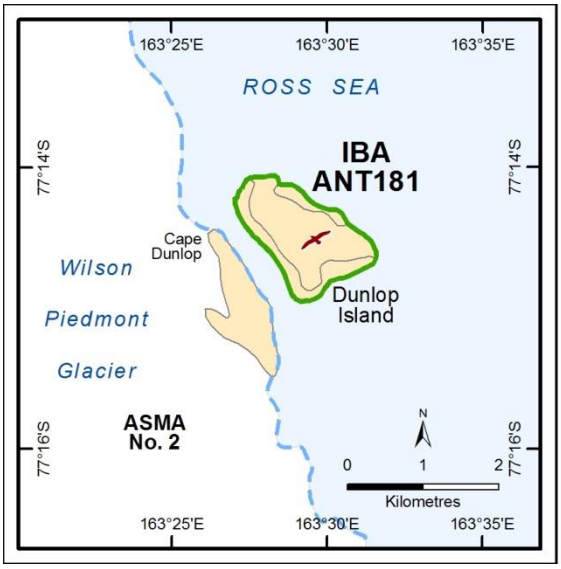
None known.

Further reading

Ainley, D.G., Morrell, S.H. & Wood, R.C. 1986. South Polar Skua breeding colonies in the Ross Sea region. *Notornis* 33: 155-163.

ANT181: Dunlop Island

IBA criteria	A4ii
Coordinates	163°29'13" E, 77°14'29" S
Area	168 ha
Altitude	20 m
Protection	None



Site description

Dunlop Island, McMurdo Sound, lies ~400 m off the coast of Cape Dunlop and the Wilson Piedmont Glacier, southern Victoria Land. The island is mainly ice free, is roughly triangular in shape, and rises to an elevation of ~10 m. The island is ~1.8 km long by up to 1.2 km wide.

The IBA qualifies on the basis of the South Polar Skua (*Catharacta maccormicki*) colony present at the site and comprises all of Dunlop Island.

The nearest permanent scientific stations are Scott Base (NZL) and McMurdo (USA) situated ~100 km to the southeast on Hut Point Peninsula, Ross Island.

Birds

South Polar Skuas breed on Dunlop Island, with ~88 breeding pairs estimated in 1982 (Ainley *et al*. 1986). No recent information on the colony is available, and no other birds are known to breed in the area.

Other threatened / endemic wildlife

None known.

Conservation issues

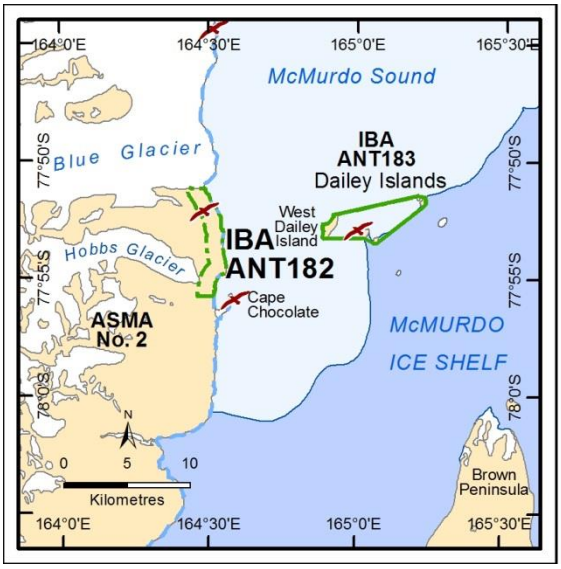
None known.

Further reading

Ainley, D.G., Morrell, S.H. & Wood, R.C. 1986. South Polar Skua breeding colonies in the Ross Sea region. *Notornis* **33**: 155-163.

ANT182: Blue Glacier to Cape Chocolate

IBA criteria	A4ii
Coordinates	169°20'10" E, 77°28'56" S
Area	1206 ha
Altitude	0 to < 100 m
Protection	ASMA No.2 McMurdo Dry Valleys



Site description

Blue Glacier is situated between the Ferrar and Koettlitz glaciers, McMurdo Dry Valleys, southern Victoria Land. Blue Glacier flows into McMurdo Sound ~10 km north of Cape Chocolate. Ice free ground extending along the coast to the south of the glacier forms part of the McMurdo Dry Valleys, and lies within Antarctic Specially Managed Area No.2.

The IBA qualifies on the basis of the South Polar Skua (*Catharacta maccormicki*) colony that breeds on the ice free ground extending ~10 km southward along the coast from Blue Glacier towards Cape Chocolate. The IBA boundary is uncertain because the exact extent of the breeding area included within the count is not known.

The nearest permanent scientific stations are Scott Base (NZL) and McMurdo (USA) situated ~50 km to the east on Hut Point Peninsula, Ross Island.

Birds

Approximately ~226 breeding pairs of South Polar Skuas were estimated as breeding along the coast extending southward from Blue Glacier in 1981 (Ainley *et al*. 1986). No recent information on the colony is available, and no other birds are known to breed in the area.

Other threatened / endemic wildlife

None known.

Conservation issues

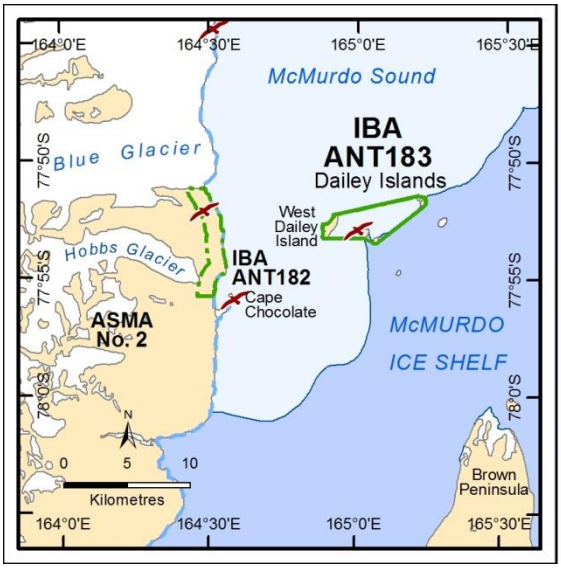
None known.

Further reading

Ainley, D.G., Morrell, S.H. & Wood, R.C. 1986. South Polar Skua breeding colonies in the Ross Sea region. *Notornis* **33**: 155-63.

ANT183: Dailey Islands

IBA criteria	A4ii
Coordinates	165°03'20" E, 77°52'33" S
Area	1654 ha
Altitude	0 to < 180 m
Protection	None



Site description

The Dailey Islands are a group of five ice free islands located at the northern margin of the McMurdo Ice Shelf, ~10 km northeast of Cape Chocolate, southern Victoria Land, and ~15 km north of Brown Peninsula. West Dailey Island is the largest of the group at ~2 km long by up to 0.9 km wide.

The IBA qualifies on the basis of the South Polar Skua (*Catharacta maccormicki*) colony present at the site. The IBA comprises all the islands that are part of the Dailey Islands group and the intervening marine area.

The nearest permanent scientific stations are Scott Base (NZL) and McMurdo (USA), situated ~35 km to the east on Hut Point Peninsula, Ross Island.

Birds

South Polar Skuas breed on the Dailey Islands, with ~77 breeding pairs estimated in 1981 (Ainley *et al*. 1986). No recent information on the colony is available, and no other birds are known to breed in the area.

Other threatened / endemic wildlife

None known.

Conservation issues

None known.

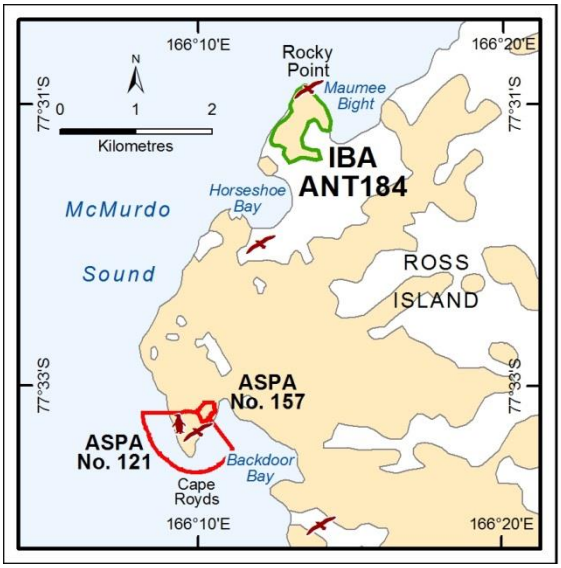
Further reading

Ainley, D.G., Morrell, S.H. & Wood, R.C. 1986. South Polar Skua breeding colonies in the Ross Sea region. *Notornis* **33**: 155-63.

Ross Island / southern Ross Sea

ANT184: Rocky Point, Ross Island

IBA criteria	A4ii
Coordinates	166°13'22" E, 77°31'09" S
Area	40 ha
Altitude	0 – 50 m
Protection	None



Site description

Rocky Point is situated between Horseshoe Bay and Maumee Bight, ~ 4 km north of Cape Royds, Ross Island.

The IBA qualifies on the basis of the South Polar Skua (*Catharacta maccormicki*) colony present. The IBA comprises all of the ice free ground at Rocky Point.

The nearest permanent scientific stations are Scott Base and (NZL) McMurdo (USA), situated ~40 km to the south on Hut Point Peninsula, Ross Island.

Birds

South Polar Skuas breed at Rocky Point, with ~66 breeding pairs estimated in 1981 (Ainley *et al.* 1986). No recent information on the colony is available. A small Adélie Penguin (*Pygoscelis adeliae*) colony of 2000 – 4000 breeding pairs is present at Cape Royds, which is protected by ASPA No. 121 for its value in long term and detailed research programmes. South Polar Skuas are also known to breed within and near the protected area.

Other threatened / endemic wildlife

None known.

Conservation issues

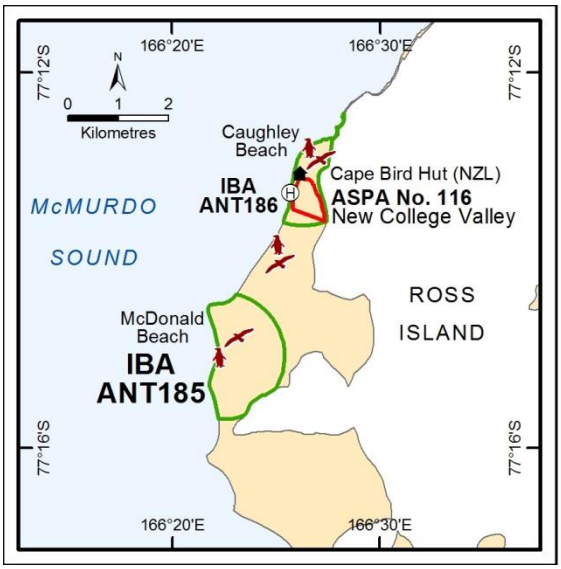
None known. Compared to Cape Royds, which is of interest to tourists and national program personnel both for the presence of the penguin colony and Shackleton's historic hut, relatively few people visit Rocky Point and human disturbance is expected to be minimal.

Further reading

Ainley, D.G., Morrell, S.H. & Wood, R.C. 1986. South Polar Skua breeding colonies in the Ross Sea region. *Notornis* **33**: 155-63.

ANT185: McDonald Beach, Cape Bird

IBA criteria	A4ii, A4iii
Coordinates	166°23'28" E, 77°15'01" S
Area	269 ha
Altitude	0 to < 350 m
Protection	None



Site description

Cape Bird is situated at the northwestern extremity of Ross Island at the foot of Mount Bird, where a nearby ice free point extends ~10 km along the coast, and includes McDonald Beach and Caughley Beach. Three Adélie Penguin (*Pygoscelis adeliae*) colonies occupy this coast, known informally as 'Northern', 'Middle' and 'Southern' rookeries.

The IBA qualifies on the basis of the South Polar Skua (*Catharacta maccormicki*) colony present and the concentration of seabirds (in particular Adélie Penguin) and comprises the ice-free area at McDonald Beach.

The nearest permanent scientific stations are McMurdo (USA) and Scott Base (NZL), situated ~67 km to the south on Hut Point Peninsula, Ross Island.

Birds

The McDonald Beach colony ('Southern Rookery') comprises ~13 000 breeding pairs of Adélie Penguin (count approximate, Coats 2010). The mean total count for all three colonies over 30 seasons between 1981 and 2012 was 43 321 breeding pairs, while the most recent count for all three colonies was 75 696 breeding pairs (Lyver *et al*. 2014).

Approximately 137 breeding pairs of South Polar Skua were estimated at McDonald Beach in 2013-14 (Wilson *et al*. in prep.). Spurr, Wilson & Agar (1990) reported ~300 breeding pairs and 300 non-breeders, although these counts covered the entire ice free area at Cape Bird.

The following birds have been recorded as visitors to Cape Bird: Emperor Penguin (*Aptenodytes forsteri*), Chinstrap Penguin (*Pygoscelis antarctica*), Southern Giant Petrel (*Macronectes giganteus*), Southern Fulmar (*Fulmarus glacialoides*), Antarctic Petrel (*Thalassoica antarctica*), Snow Petrel (*Pagodroma nivea*), Wilson's Storm-petrel (*Oceanites oceanicus*), Brown Skua (*Catharacta antarctica*) and Kelp Gull (*Larus dominicanus*) (Spurr, Wilson & Agar 1990).

Other threatened / endemic wildlife

Weddell (*Leptonychotes weddellii*), Crabeater (*Lobodon carcinophagus*) and Leopard (*Hydrurga leptonyx*) seals, as well as Killer Whales (*Orcinus orca*), have been observed in the area.

Conservation issues

A small number of tourists visit Cape Bird by ship. Over 5 seasons from 2008–13 an average of 122 tourists and guides visited Cape Bird each year. Almost all visitors landed ashore, except in 2008/09 when only 41 of the total of 131 visitors landed (IAATO Tourism Statistics, accessed: 24/04/2014).

See IBA ANT186 for comments on conservation issues related to aircraft access at Cape Bird.

Further reading

ASPA No. 116 New College Valley, Caughley Beach, Cape Bird: Management Plan (2011)

Coats, L. 2010. Antarctic field season 2010: update #4: Cape Bird.
http://www.coplateau.com/Update4_Cape_Bird.html - accessed 30 Jan 2015.

Harper, P.C., Knox, G.A., Spurr, E.B., Taylor, R.H. Wilson, G.J & Young, E.C. 1984. The status and conservation of birds in the Ross Sea sector of Antarctica. In: Croxall, J.P., Evans, P.G.H. & Schreiber, R.W. (eds) Status and Conservation of the World's Seabirds. *ICBP Technical Publication* **2**: 593-608.

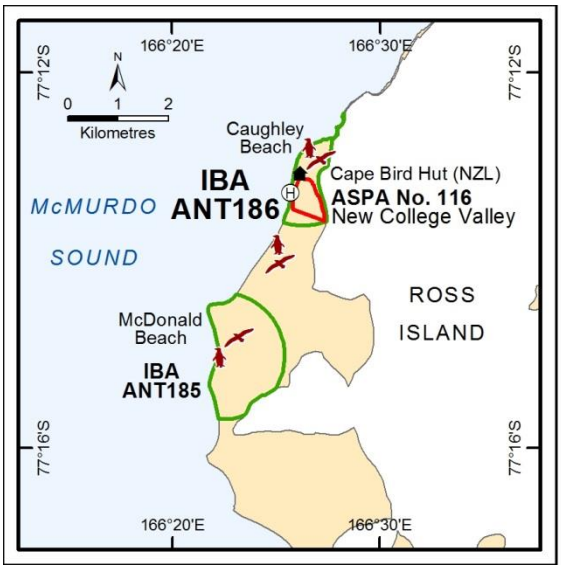
Lyver, P.O'B., Barron, M., Barton, K.J., Ainley, D.G., Pollard, A., Gordon, S., McNeill, S., Ballard, G. & Wilson, P.R. 2014. Trends in the breeding population of Adélie Penguins in the Ross Sea, 1981–2012: a coincidence of climate and resource extraction effects. *PLoS ONE* **9**(3): e91188. doi:10.1371/journal.pone.0091188

Spurr, E.B., Wilson, K.-J. & Agar, P.M. 1990. Bird species recorded at Cape Bird, Ross Island, Antarctica. *Notornis* **37**(1): 37-44.

Wilson, D.J., Lyver, P.O'B., Whitehead, A.L., Greene, T.C., Dugger, K., Karl, B.J., Barringer, J.R.F., McGarry, R., Pollard, A.M. & Ainley, D.G. in prep. Adélie Penguin colony size predicts South Polar Skua abundance on Ross Island, Antarctica. *The Condor*.

ANT186: Caughley Beach, Cape Bird

IBA criteria	A1, A4ii, A4iii
Coordinates	166°26'35" E, 77°13'13" S
Area	103 ha
Altitude	0 to 250 m
Protection	Encompasses ASPA No. 116



Site description

Cape Bird is situated at the northwestern extremity of Ross Island at the foot of Mount Bird, where a nearby ice free point extends ~10 km along the coast, and includes McDonald Beach and Caughley Beach. Three Adélie Penguin (*Pygoscelis adeliae*) colonies occupy this coast, known informally as 'Northern', 'Middle' and 'Southern' rookeries.

The IBA qualifies on the basis of the Adélie Penguin and South Polar Skua (*Catharacta maccormicki*) colonies present and comprises the ice-free area at Caughley Beach. The IBA includes ASPA No. 116 New College Valley (designated for its extensive moss beds and associated microflora and fauna) and the Cape Bird Hut (NZL).

The nearest permanent scientific stations are Scott Base (NZL) and McMurdo (USA), situated ~67 km to the south on Hut Point Peninsula, Ross Island.

Birds

The Caughley Beach colony ('Northern Rookery') is the largest of the three colonies at Cape Bird with ~40 000 Adélie Penguin breeding pairs (count approximate, Coats 2010). See IBA ANT185 McDonald Beach for a description of mean population counts between 1981 and 2012 for all three Cape Bird colonies and information on other birds that have been observed in the vicinity.

South Polar Skuas nest inside ASPA No. 116, although numbers are not known (ASPA No.116 Management Plan 2011). Wilson *et al.* (in prep.) estimated 140 breeding pairs of South Polar Skua within 1000 m of the Adélie Penguin colony at Caughley Beach.

Other threatened / endemic wildlife

Weddell (*Leptonychotes weddellii*), Crabeater (*Lobodon carcinophagus*) and Leopard (*Hydrurga leptonyx*) seals, as well as Killer Whales (*Orcinus orca*), have been observed in the vicinity.

Conservation issues

Access to Cape Bird Hut is generally made by helicopter from the stations on Hut Point Peninsula. Two designated landing sites exist, one ~400 m southwest from the hut at Caughley Beach for use between October to February and one adjacent to the hut for use between March and September. Helicopter movements have caused disturbance to penguins breeding near the approach routes and landing sites in recent years (D. Ainley pers. comms 2011, 2012) and this represents a potential conservation concern. See the description of IBA ANT185 McDonald Beach for details of tourist visits.

Further reading

ASPA No. 116 New College Valley, Caughley Beach, Cape Bird: Management Plan (2011).

Coats, L. 2010. Antarctic field season 2010: update #4: Cape Bird. http://www.coplateau.com/Update4_Cape_Bird.html - accessed 30 Jan 2015.

Harper, P.C., Knox, G.A., Spurr, E.B., Taylor, R.H. Wilson, G.J & Young, E.C. 1984. The status and conservation of birds in the Ross Sea sector of Antarctica. In: Croxall, J.P., Evans, P.G.H. & Schreiber, R.W. (eds) Status and Conservation of the World's Seabirds. *ICBP Technical Publication* **2**: 593-608.

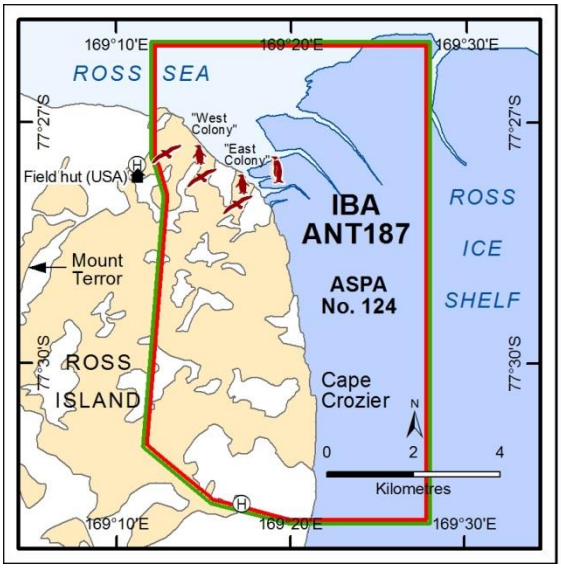
Lyver, P.O'B., Barron, M., Barton, K.J., Ainley, D.G., Pollard, A., Gordon, S., McNeill, S., Ballard, G. & Wilson, P.R. 2014. Trends in the breeding population of Adélie Penguins in the Ross Sea, 1981–2012: a coincidence of climate and resource extraction effects. *PLoS ONE* **9**(3): e91188. doi:10.1371/journal.pone.0091188

Spurr, E.B., Wilson, K.-J. & Agar, P.M. 1990. Bird species recorded at Cape Bird, Ross Island, Antarctica. *Notornis* **37**(1): 37-44.

Wilson, D.J., Lyver, P.O'B., Whitehead, A.L., Greene, T.C., Dugger, K., Karl, B.J., Barringer, J.R.F., McGarry, R., Pollard, A.M. & Ainley, D.G. in prep. Adélie Penguin colony size predicts South Polar Skua abundance on Ross Island, Antarctica. The Condor.

ANT187: Cape Crozier, Ross Island

IBA criteria	A1, A4ii, A4iii
Coordinates	169°20'10" E, 77°28'56" S
Area	6973 ha
Altitude	0 to < 750 m
Protection	ASPA No. 124



Site description

Cape Crozier is located at the eastern extremity of Ross Island, southern Ross Sea, where the Ross Ice Shelf pushes up against the land at Cape Crozier and forms large pressure cracks in the shelf ice near its seaward terminus. Fast ice forms between the cracks, providing habitat suitable for breeding Emperor Penguins (*Aptenodytes forsteri*). The IBA qualifies, however, on the basis of the large Adélie Penguin (*Pygoscelis adeliae*) and South Polar Skua (*Catharacta maccormicki*) colonies that occupy ice free slopes on the coastline north of Cape Crozier. The IBA boundary is coincident with that of Antarctic Specially Protected Area No. 124: Cape Crozier, Ross Island.

The area lies at the foot of the mainly ice-free northeastern slopes of Mount Terror (3230 m). The geology is of volcanic origin, with slopes interspersed by small cones and craters of scoria and basalts. Sparse growth of various species of algae, mosses and lichens occurs across the area. Recent meteorological records from ~35 km to the east recorded December as the warmest month with a mean temperature of -5.8°C, and August the coldest with a mean temperature of -33.1°C.

A small field hut (USA) is located close to the northwestern boundary of the protected area. The nearest permanent scientific stations are Scott Base (NZL) and McMurdo (USA), situated ~80 km to the southwest on Hut Point Peninsula, Ross Island.

Birds

One of the largest Adélie Penguin colonies in Antarctica is located on the coast ~5 km north of Cape Crozier. This is divided into two colonies, commonly referred to as 'East' and 'West', which are separated by ~1 km and a prominent ridge and icefield. Over the last 50 years the colony has substantially grown, from ~65 000 breeding pairs in 1958 to ~272 340 breeding pairs in 2012 (Lyver *et al.* 2014). However several large icebergs situated in the foraging area from 2001-05 had a significant negative influence on bird breeding performance.

An Emperor Penguin colony of 1189 pairs (2012 estimate) breeds on fast ice that forms in the cracks in the Ross Ice Shelf near Cape Crozier (G. Kooyman pers. comm. 2014). The location of the breeding site varies from season to season.

South Polar Skuas breed on ice-free ground surrounding the Adélie colonies, and comprised ~1000 breeding pairs in the 1960s / 70s. More recently, Wilson *et al*. (in prep.) estimated 1361 and 1108 breeding pairs in 2011/12 and 2012/13, respectively. This represents the largest South Polar Skua colony documented in Antarctica.

Several other bird species have been recorded as non-breeding visitors to Cape Crozier, including Chinstrap Penguins (*Pygoscelis antarctica*), Wilson's Storm-petrels (*Oceanites oceanicus*), Snow Petrels (*Pagodroma nivea*), Antarctic Petrels (*Thalassoica antarctica*), Southern Fulmars (*Fulmarus glacialoides*), Southern Giant Petrels (*Macronectes giganteus*), and Kelp Gulls (*Larus dominicanus*).

Other threatened / endemic wildlife

Weddell Seals (*Leptonychotes weddellii*) have been recorded breeding in the vicinity. Leopard Seals (*Leptonyx hydrurga*) and Crabeater Seals (*Lobodon carcinophagus*) have also been observed. Several distinct types of Killer Whales (*Orcinus orca*) regularly forage nearby.

Conservation issues

The principal reason for designation of Cape Crozier as a protected area in 1966 was on the grounds that it supports a rich bird and mammal fauna, microfauna and microflora. Long-term studies of the population dynamics and social behaviour of emperor and Adélie Penguins are also reasons for protection. The Management Plan for ASPA No. 124 provides strict rules to govern the conduct of any visits to the area. Access to the area by aircraft has potential to disturb the large colonies of breeding birds, although the management plan provides strict guidance on routes, overflight and landing sites.

In 2001, the giant iceberg B15A collided with the Ross Ice Shelf near Cape Crozier and indirectly caused a total breeding failure among the Emperor Penguins that frequent the site (Kooyman *et al*. 2007). In following years, while B15A was still present, access to the Ross Sea polynya was limited and the breeding success of the Cape Crozier colony ranged from 0-40% of that in 2000. Calving events occur regularly in Antarctica, although a significant increase in their frequency may have substantial consequences for Emperor penguins, and possibly other animals.

Concerns have been expressed about changes to the Ross Sea ecosystem as a result of the Antarctic Toothfish (*Dissostichus mawsoni*) fishery, which may be contributing to an increase in regional Adélie Penguin populations and a decline and/or shift in their predator species (Lyver *et al.* 2014).

Further reading

ASPA No. 124 Cape Crozier, Ross Island: Management Plan (2014).

Barber-Meyer, S.M., Kooyman, G.L. & Ponganis, P.J. 2007. Estimating the relative abundance of Emperor Penguins at inaccessible colonies using satellite imagery. *Polar Biology* **30**: 1565-70.

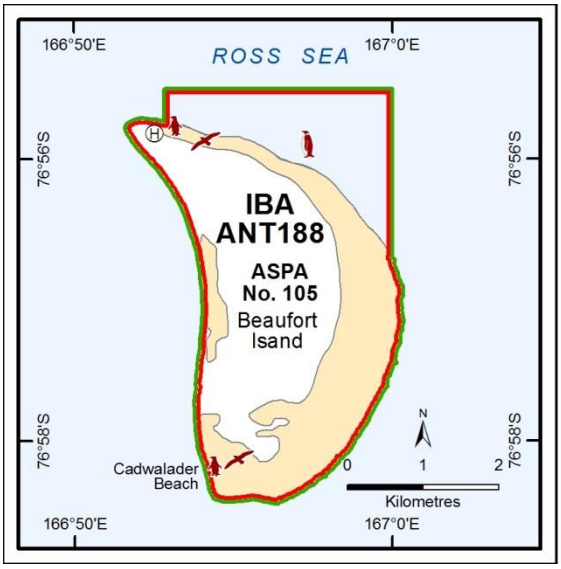
Lyver, P.O'B., Barron, M., Barton, K.J., Ainley, D.G., Pollard, A., Gordon, S., McNeill, S., Ballard, G. & Wilson, P.R. 2014. Trends in the breeding population of Adélie Penguins in the Ross Sea, 1981–2012: a coincidence of climate and resource extraction effects. *PLoS ONE* **9**(3): e91188. doi:10.1371/journal.pone.0091188

Kooyman, G.L., Ainley, D.G., Ballard, G. & Ponganis, P.J. 2007. Effects of giant icebergs on two Emperor Penguin colonies in the Ross Sea, Antarctica. *Antarctic Science* **19**: 31-38.

Wilson, D.J., Lyver, P.O'B., Whitehead, A.L., Greene, T.C., Dugger, K., Karl, B.J., Barringer, J.R.F., McGarry, R., Pollard, A.M. & Ainley, D.G. in prep. Adélie Penguin colony size predicts South Polar Skua abundance on Ross Island, Antarctica. *The Condor*.

ANT188: Beaufort Island

IBA criteria	A1, A4ii, A4iii
Coordinates	166°56'35" E, 76°56'49" S
Area	1416 ha
Altitude	0 to < 800 m
Protection	ASPA No. 105



Site description

Beaufort Island is located in the southern Ross Sea, ~22 km north of Ross Island, and is ~6 km long and ~2.8 km wide. The island is covered by a permanent ice field on the western and northwestern slopes, with ice cliffs of up to ~20 m lining the northwestern coast. The steep eastern and southern slopes are mostly ice free.

Beaufort Island is of volcanic origin and is part of an extinct caldera that extends to the east as a group of submerged peaks. The formation creates a natural barrier for pack ice and grounding icebergs, which favours winter fast ice development that is important to the viability of the resident Emperor Penguin (*Aptenodytes forsteri*) colony.

A broad, flat depositional feature in the southwest, called Cadwalader Beach, provides an extensive area of habitat suitable for the large breeding colony of Adélie Penguins (*Pygoscelis adeliae*). The IBA qualifies on the basis of the Adélie Penguin colony and the boundary is coincident with that of ASPA No. 105: Beaufort Island.

The nearest scientific stations are Scott Base (NZL) and McMurdo (USA), located ~100 km to the south on Hut Point Peninsula, Ross Island.

Birds

The main Adélie Penguin colony is located at Cadwalader Beach, and comprised an average of 39 391 breeding pairs from 1981-2012 (Lyver *et al.* 2014). A smaller sub-colony of a few breeding pairs was first observed on the northern coast in 1995 (C. Harris pers. comm. 2014), and by 2008/09 this had grown to 677 breeding pairs (ASPA No. 105 Management Plan 2010).

An Emperor Penguin colony breeds on fast ice that forms in winter near the northeastern coast of the island. The population ranged from ~100 – ~2000 pairs in the period 1983 – 2005 (Barber-Meyer *et al*. 2008). Analysis of a satellite image acquired 12 Oct 2009 (Fretwell *et al.* 2012) indicated that approximately 1641 Emperor Penguins were present, although image quality was rated as Poor.

South Polar Skuas (*Catharacta maccormicki*) nest below cliffs that rise behind the Adélie Penguin colony at Cadwalader Beach. Approximately 50 pairs breed on the northern coast. Snow Petrels (*Pagodroma nivea*) are confirmed to nest in cliffs along the southern coast of the island (ASPA No. 105 Management Plan 2010).

Other threatened / endemic wildlife

Weddell Seals (*Leptonychotes weddellii*) have been observed on fast ice near the coast. Leopard Seals (*Hydrurga leptonyx*), Killer Whales (*Orcinus orca*), Minke Whales (*Balaenoptera acutorostrata*) and Arnoux's Beaked Whales (*Berardius arnuxii*) occur in the vicinity (ASPA No. 105 Management Plan 2010).

Conservation issues

In January 2001, the two giant ice bergs B15A and C16 reached the southern part of the Ross Sea. These icebergs hampered access by the Emperor Penguins to the Ross Sea polynya and chick production in 2004 was only 6% of that recorded in 2000 (Kooyman *et al.* 2007).

Further reading

ASPA No. 105 Beaufort Island, McMurdo Sound, Ross Sea: Management Plan (2010).

Barber-Meyer, S.M., Kooyman, G.L. & Ponganis, P.J. 2007. Estimating the relative abundance of Emperor Penguins at inaccessible colonies using satellite imagery. *Polar Biology* **30**: 1565-1570.

Barber-Meyer, S.M., Kooyman, G.L. & Ponganis, P.J. 2008. Trends in western Ross Sea Emperor Penguin chick abundances and their relationships to climate. *Antarctic Science* **20**(1): 3-11. doi:10.1017/S0954102007000673

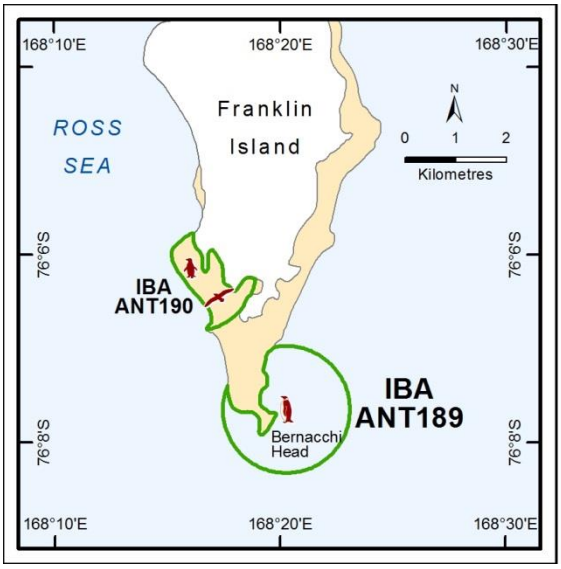
Fretwell, P.T., LaRue, M.A., Morin P., Kooyman, G.L., Wienecke, B., Ratcliffe, N., Fox, A.J., Fleming, A.H., Porter, C. & Trathan, P.N. 2012. An Emperor Penguin population estimate: the first global, synoptic survey of a species from space. *PLoS ONE* **7**(4): e33751. doi:10.1371/journal.pone.0033751

Kooyman, G.L., Ainley, D.G., Ballard, G. & Ponganis, P.J. 2007. Effects of giant icebergs on two Emperor Penguin colonies in the Ross Sea, Antarctica. *Antarctic Science* **19**: 31-38.

Lyver, P.O'B., Barron, M., Barton, K.J., Ainley, D.G., Pollard, A., Gordon, S., McNeill, S., Ballard, G. & Wilson, P.R. 2014. Trends in the breeding population of Adélie Penguins in the Ross Sea, 1981–2012: a coincidence of climate and resource extraction effects. *PLoS ONE* **9**(3): e91188. doi:10.1371/journal.pone.0091188

ANT189: Bernacchi Head, Franklin Island

IBA criteria	A1, A4ii
Coordinates	168°20'34" E, 76°07'42" S
Area	419 ha
Altitude	0 m
Protection	None



Site description

Bernacchi Head lies at the south of Franklin Island, located in the southern Ross Sea ~150 km east of the Victoria Land coast and ~140 km north of Ross Island. Franklin Island is of volcanic origin and mostly covered by permanent ice, and is ~12 km long and up to ~5 km wide. Cliffs rise up to 200 m high along the northern, eastern and southwestern coasts (Brodie 1959).

A colony of Emperor Penguins (*Aptenodytes forsteri*) breeds on sea ice that forms close off the eastern coast of Bernacchi Head. The IBA qualifies on the basis of the Emperor Penguin colony present and is entirely marine.

The nearest permanent scientific stations are McMurdo (USA) and Scott Base (NZL), situated ~200 km to the southwest on Hut Point Peninsula, Ross Island.

Birds

The population of Emperor Penguins ranged from ~1500 – ~5000 breeding pairs in the period 1983 – 2005 (Barber-Meyer *et al*. 2007, 2008). Analysis of a satellite image acquired 13 Oct 2009 (Fretwell *et al.* 2012) indicated that approximately 7561 Emperor Penguins were present at the colony.

Other threatened / endemic wildlife

None known.

Conservation issues

A small number of tourists visit Franklin Island by ship. Over 5 seasons from 2009–14 an average of 147 tourists and guides visited the island per year. Most visitors landed, except in 2012/13 when only 56 of the total of 132 visitors landed (IAATO Tourism Statistics, accessed: 15/12/2014).

Further reading

Barber-Meyer, S.M., Kooyman, G.L. & Ponganis, P.J. 2007. Estimating the relative abundance of Emperor Penguins at inaccessible colonies using satellite imagery. *Polar Biology* **30**: 1565-70.

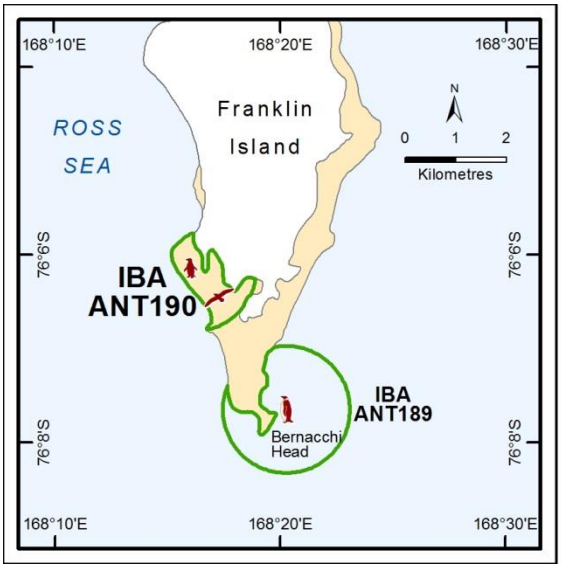
Barber-Meyer, S.M., Kooyman, G.L. & Ponganis, P.J. 2008. Trends in western Ross Sea Emperor Penguin chick abundances and their relationships to climate. *Antarctic Science* **20**(1): 3-11. doi:10.1017/S0954102007000673

Brodie, J.W. 1959. A shallow shelf around Franklin Island in the Ross Sea, Antarctica. *New Zealand Journal of Geology and Geophysics* **2**(1): 108-19. doi:10.1080/00288306.1959.10431316

Fretwell, P.T., LaRue, M.A., Morin P., Kooyman, G.L., Wienecke, B., Ratcliffe, N., Fox, A.J., Fleming, A.H., Porter, C. & Trathan, P.N. 2012. An Emperor Penguin population estimate: the first global, synoptic survey of a species from space. *PLoS ONE* **7**(4): e33751. doi:10.1371/journal.pone.0033751

ANT190: SW Franklin Island

IBA criteria	A1, A4ii, A4iii
Coordinates	168°16'54" E, 76°06'18" S
Area	129 ha
Altitude	0 to < 300 m
Protection	None



Site description

Franklin Island is located in the southern Ross Sea ~150 km east of the Victoria Land coast and ~140 km north of Ross Island. The island is of volcanic origin and mostly covered by permanent ice, and is ~12 km long and up to ~5 km wide. Cliffs rise up to 200 m high along the northern, eastern and southwestern coasts (Brodie 1959).

The IBA qualifies on the basis of the Adélie Penguin (*Pygoscelis adeliae*) and South Polar Skua (*Catharacta maccormicki*) colonies that breed on a relatively flat point on the southwestern coast of Franklin Island.

The nearest permanent scientific stations are Scott Base (NZL) and McMurdo (USA), situated ~200 km to the southwest on Hut Point Peninsula, Ross Island.

Birds

Approximately 60 540 breeding pairs of Adélie Penguin were present each season from 1981 – 2012 (Lyver *et al.* 2014).

South Polar Skuas breed at the southern end of Franklin Island, with ~184 breeding pairs observed in 1982 (Ainley *et al.* 1986). Their exact breeding location is not known, however it has been assumed that breeding is mostly in close proximity of the Adélie Penguin colony.

Other threatened / endemic wildlife

None known.

Conservation issues

See IBA ANT189 for information on tourist visits to Franklin Island.

Further reading

Ainley, D.G., Morrell, S.H. & Wood, R.C. 1986. South Polar Skua breeding colonies in the Ross Sea region. *Notornis* **33**: 155-163.

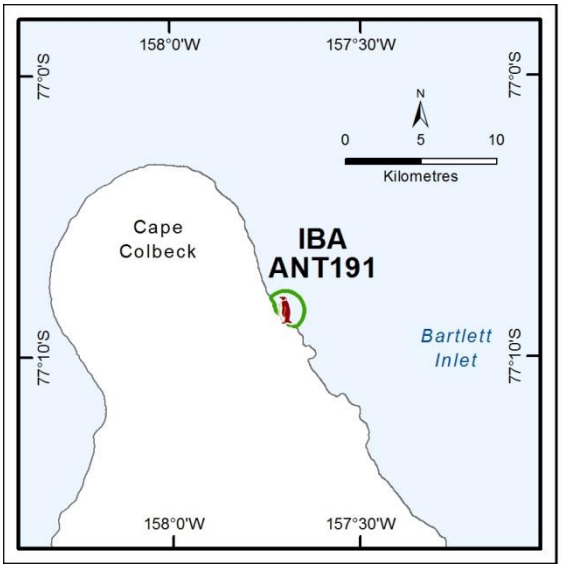
Brodie, J. W. 1959. A shallow shelf around Franklin Island in the Ross Sea, Antarctica. *New Zealand Journal of Geology and Geophysics* **2**(1): 108-19. doi:10.1080/00288306.1959.10431316

Lyver, P.O'B., Barron, M., Barton, K.J., Ainley, D.G., Pollard, A., Gordon, S., McNeill, S., Ballard, G. & Wilson, P.R. 2014. Trends in the breeding population of Adélie Penguins in the Ross Sea, 1981–2012: a coincidence of climate and resource extraction effects. *PLoS ONE* **9**(3): e91188. doi:10.1371/journal.pone.0091188

Marie Byrd Land / Amundsen Sea

ANT191: Cape Colbeck

IBA criteria	A1, A4ii, A4iii
Coordinates	157°41'20" W, 77°08'17" S
Area	351 ha
Altitude	0 m
Protection	None



Site description

Cape Colbeck lies at the northwestern extremity of the Edward VII Peninsula, Marie Byrd Land, at the entrance to Bartlett Inlet. The peninsula is largely ice-covered, apart from nunataks in the Alexandra and Rockefeller mountain ranges.

The IBA qualifies on the basis of the Emperor Penguin (*Aptenodytes forsteri*) colony that breeds on fast ice near the eastern coast of Cape Colbeck, and is entirely marine.

There are no research stations nearby. The closest permanent stations are Scott Base (NZL) and McMurdo Station (USA), ~835 km to the southwest in the southern Ross Sea.

Birds

The population of Emperor Penguins at Cape Colbeck was estimated from satellite imagery as comprising ~13 501 adults in 2005 and 12 585 adults in 2006, although high error surrounded these estimates (Barber-Meyer *et al*. 2007). In view of the uncertainty, these authors more conservatively predicted that the colony comprised “>5000 adults” in each of those years. Analysis of a satellite image acquired 13 Oct 2009 (Fretwell *et al.* 2012) indicated that approximately 11 438 Emperor Penguins were present at the colony. No other birds are known to breed in the area.

Other threatened / endemic wildlife

None known.

Conservation issues

None known.

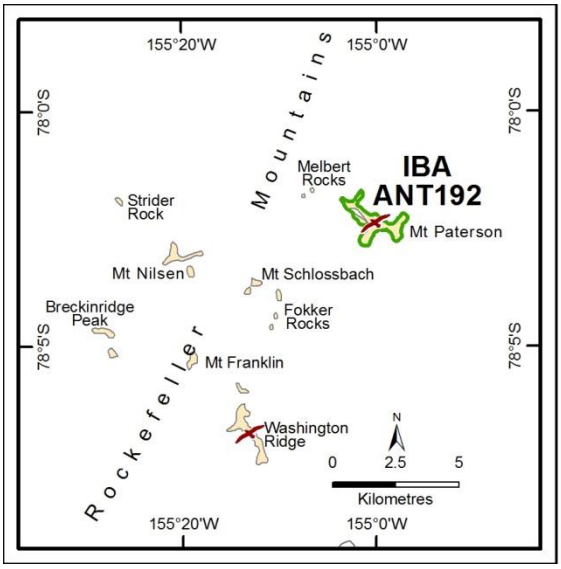
Further reading

Barber-Meyer, S.M., Kooyman, G.L. & Ponganis, P.J. 2007. Estimating the relative abundance of Emperor Penguins at inaccessible colonies using satellite imagery. *Polar Biology* **30**: 1565-1570.

Fretwell, P.T., LaRue, M.A., Morin P., Kooyman, G.L., Wienecke, B., Ratcliffe, N., Fox, A.J., Fleming, A.H., Porter, C. & Trathan, P.N. 2012. An Emperor Penguin population estimate: The first global, synoptic survey of a species from space. *PLoS ONE* **7**(4): e33751. doi:10.1371/journal.pone.0033751

ANT192: Mount Paterson

IBA criteria	A4iii
Coordinates	155°00'19" W, 78°02'22" S
Area	172 ha
Altitude	690 m
Protection	None



Site description

Mount Paterson is one of 16 nunataks situated on the eastern side of the Rockefeller Mountains, Marie Byrd Land. It is a pyramid-shaped peak that rises to ~690 m.

The IBA qualifies on the basis of the concentration of seabirds present (in particular Antarctic Petrel (*Thalassoica antarctica*)) and comprises the ice free areas at Mount Paterson.

There are no research stations nearby. The closest permanent stations are Scott Base (NZL) and McMurdo Station (USA), ~850 km to the southwest in the southern Ross Sea.

Birds

Mount Paterson was visited in 1987/88 and an Antarctic Petrel colony was observed occupying the eastern, southern and western slopes of the mountain (Broady *et al*. 1989). Approximately 10 000 pairs were breeding on the eastern and southern slopes with another 5000 pairs on the western slope. A small colony of Snow Petrels (*Pagodroma nivea*) of several hundred birds was observed on the steep upper crags of the southernmost peak (Broady *et al*. 1989). No other birds are known to breed in the area.

Other threatened / endemic wildlife

None known.

Conservation issues

None known.

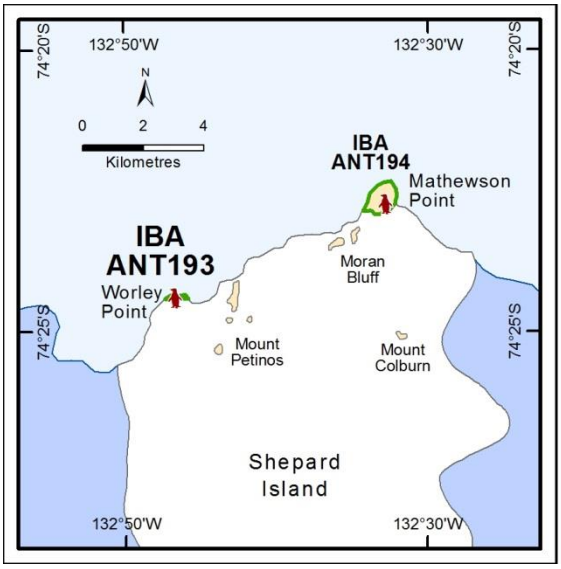
Further reading

Broady, P.A., Adams, C.J., Cleary, P.J. & Weaver, S.D. 1989. Ornithological observations at Edward VII Peninsula, Antarctica, in 1987-88. *Notornis* **36** (1): 53-61.

van Franeker, J.A., Gavrilo, M., Mehlum, F., Veit, R.R. & Woehler, E.J. 1999. Distribution and abundance of the Antarctic Petrel. *Waterbirds* **22** (1): 14-28.

ANT193: Worley Point, Shepard Island

IBA criteria	A4iii
Coordinates	132°46'32" W, 74°24'24" S
Area	8.4 ha
Altitude	0 – 200 m
Protection	None



Site description

Worley Point is a narrow, flat, rocky area extending ~1 km along the northwestern coast of Shepard Island, which lies adjacent to the Getz Ice Shelf, Marie Byrd Land. Shepard Island is of basaltic geology (Gohl 2010), is predominantly ice-covered, and rises to ~520 m at Mount Colburn.

The IBA qualifies on the basis of the concentration of seabirds present (in particular Adélie Penguin (*Pygoscelis adeliae*)) and comprises all ice free ground at Worley Point.

There are no research stations nearby. The closest permanent stations are Scott Base (NZL) and McMurdo Station (USA), located ~1570 km to the southwest in the southern Ross Sea.

Birds

Approximately 10 481 breeding pairs (95% CI: 6196, 17 123) of Adélie Penguin were present on Worley Point in December 2010, as estimated from satellite imagery (Lynch & LaRue 2014). Penguins occupy the entire ice free area in summer. No other information on birds in the area is available.

Other threatened / endemic wildlife

None known.

Conservation issues

None known.

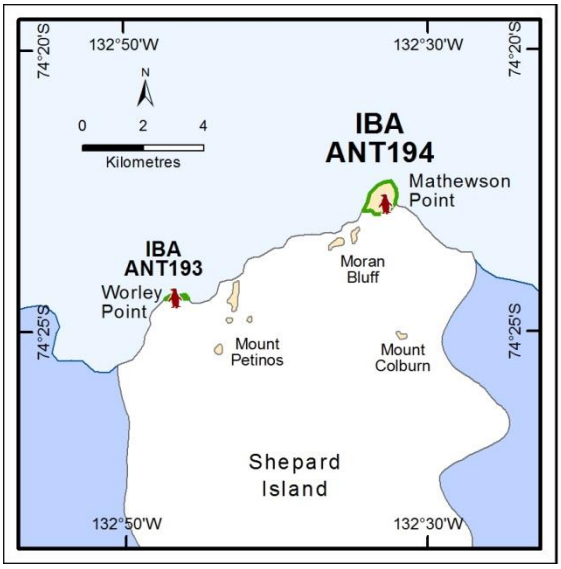
Further reading

Gohl, K. (ed.) 2010. The expedition of the Research Vessel "Polarstern" to the Amundsen Sea, Antarctica in 2010. *Berichte zur Polar- und Meeresforschung*. 617/2010.

Lynch, H.J. & LaRue, M.A. 2014. First global census of the Adélie Penguin. *The Auk* **131**(4): 457-66. doi:10.1642/AUK-14-31.1

ANT194: Mathewson Point, Shepard Island

IBA criteria	A4iii
Coordinates	132°33'02" W, 74°22'39" S
Area	80 ha
Altitude	0 – 400 m
Protection	None



Site description

Mathewson Point is a small ice free point of ~1 km across on the northeastern coast of Shepard Island, which lies adjacent to the Getz Ice Shelf, Marie Byrd Land. Shepard Island is of basaltic geology (Gohl 2010), is predominantly ice-covered, and rises to ~520 m at Mount Colburn.

The IBA qualifies on the basis of the concentration of seabirds present (in particular Adélie Penguin (*Pygoscelis adeliae*)) and comprises all ice free ground at Mathewson Point.

There are no research stations nearby. The closest permanent stations are Scott Base (NZL) and McMurdo Station (USA), located ~1570 km to the southwest in the southern Ross Sea.

Birds

Approximately 28 934 breeding pairs (95% CI: 17 454, 47 659) of Adélie Penguin were present on Mathewson Point in December 2010, as estimated from satellite imagery (Lynch & LaRue 2014). The penguins nest mainly on the eastern side of Mathewson Point. No other birds are known to breed in the area.

Other threatened / endemic wildlife

None known.

Conservation issues

None known.

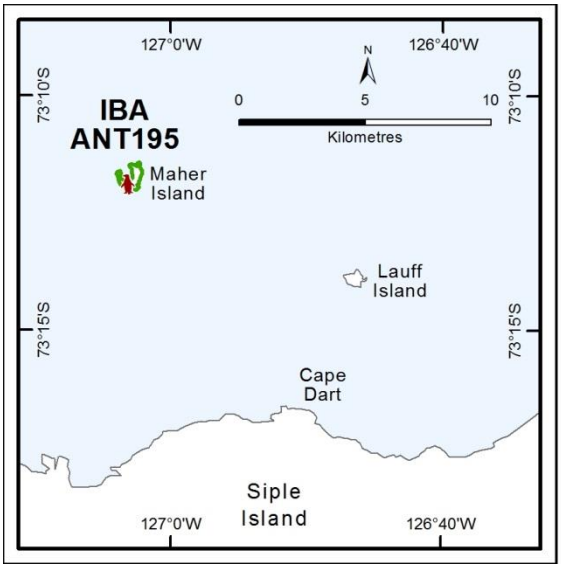
Further reading

Gohl, K. (ed.) 2010. The expedition of the Research Vessel "*Polarstern*" to the Amundsen Sea, Antarctica in 2010. *Berichte zur Polar- und Meeresforschung*. 617/2010.

Lynch, H.J. & LaRue, M.A. 2014. First global census of the Adélie Penguin. *The Auk* **131**(4): 457-66. doi:10.1642/AUK-14-31.1

ANT195: Maher Island

IBA criteria	A4iii
Coordinates	127°02'52" W, 73°11'45" S
Area	51 ha
Altitude	Not known
Protection	None



Site description

Maher Island lies ~10 km north of the northwestern coast of Siple Island, Marie Byrd Land. The island is shaped like a horseshoe, ~1 km across, and is mostly ice free in summer.

The IBA qualifies on the basis of the concentration of seabirds present (in particular Adélie Penguin (*Pygoscelis adeliae*)) and comprises all of Maher Island.

There are no research stations nearby. The closest permanent stations are McMurdo Station (USA) and Scott Base (NZL), located ~1770 km to the southwest in the southern Ross Sea.

Birds

Approximately 10 111 breeding pairs (95% CI: 5993, 16 618) of Adélie Penguin were present on Maher Island as estimated from February 2011 satellite imagery (Lynch & LaRue 2014). No other birds are known to breed in the area.

Other threatened / endemic wildlife

None known.

Conservation issues

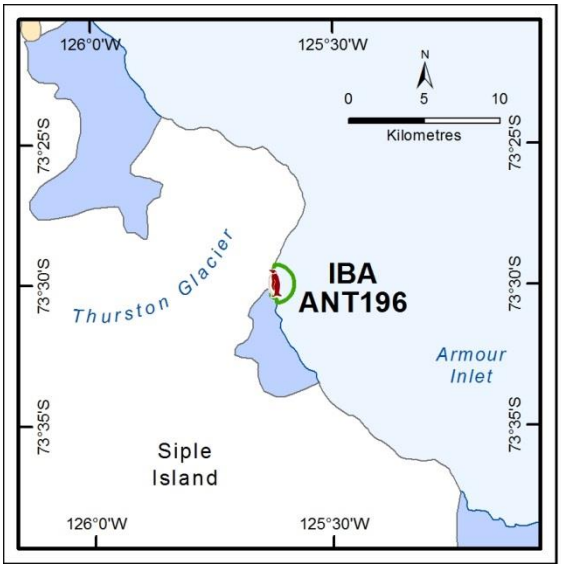
None known.

Further reading

Lynch, H.J. & LaRue, M.A. 2014. First global census of the Adélie Penguin. *The Auk* **131**(4): 457-66. doi:10.1642/AUK-14-31.1

ANT196: Thurston Glacier

IBA criteria	A1, A4ii
Coordinates	125°36'25" W, 73°30'00" S
Area	293 ha
Altitude	0 m
Protection	None



Site description

Thurston Glacier descends from Mount Siple, draining the northern slopes of Siple Island, which is adjacent to the Getz Ice Shelf on the Bakutis Coast, Marie Byrd Land.

The IBA qualifies on the basis of the Emperor Penguin (*Aptenodytes forsteri*) colony present and comprises the marine area and fast ice that forms near the terminus of Thurston Glacier.

There are no research stations nearby. The closest permanent stations are Rothera (GBR) and San Martín (ARG), in Marguerite Bay, Antarctic Peninsula, ~1800 km to the east.

Birds

Analysis of a satellite image acquired 17 Oct 2009 (Fretwell *et al.* 2012) indicated that approximately 2989 Emperor Penguins were present at the colony. No other birds are known to breed in the area.

Other threatened / endemic wildlife

None known.

Conservation issues

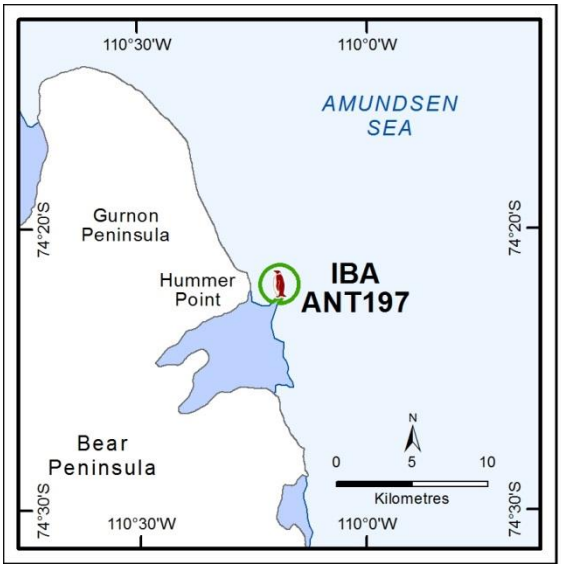
None known.

Further reading

Fretwell, P.T., LaRue, M.A., Morin P., Kooyman, G.L., Wienecke, B., Ratcliffe, N., Fox, A.J., Fleming, A.H., Porter, C. & Trathan, P.N. 2012. An Emperor Penguin population estimate: The first global, synoptic survey of a species from space. *PLoS* ONE **7**(4): e33751. doi:10.1371/journal.pone.0033751

ANT197: Hummer Point, Bear Peninsula

IBA criteria	A1, A4ii
Coordinates	110°11'30" W, 74°22'00" S
Area	490 ha
Altitude	0 m
Protection	None



Site description

Hummer Point is located on the eastern coast of Gurnon Peninsula, which is the northeastern arm of Bear Peninsula, a predominantly ice covered promontory extending into the Amundsen Sea on the Walgreen Coast, Marie Byrd Land.

The IBA qualifies on the basis of the Emperor Penguin (*Aptenodytes forsteri*) colony present and comprises fast ice in the marine area several km east of Hummer Point.

There are no research stations nearby. The closest permanent stations are Rothera (GBR) and San Martín (ARG), located ~1250 km to the northeast in Marguerite Bay, Antarctic Peninsula.

Birds

Analysis of a satellite image acquired 18 Nov 2009 (Fretwell *et al.* 2012) indicated that approximately 9457 Emperor Penguins were present at the colony. No other birds are known to breed in the area.

Other threatened / endemic wildlife

None known.

Conservation issues

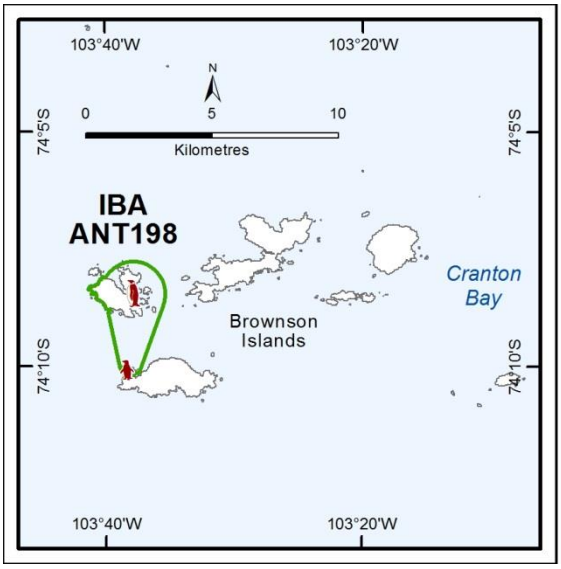
None known.

Further reading

Fretwell, P.T., LaRue, M.A., Morin P., Kooyman, G.L., Wienecke, B., Ratcliffe, N., Fox, A.J., Fleming, A.H., Porter, C. & Trathan, P.N. 2012. An Emperor Penguin population estimate: The first global, synoptic survey of a species from space. *PLoS ONE* **7**(4): e33751. doi:10.1371/journal.pone.0033751

ANT198: Brownson Islands

IBA criteria	A1, A4ii, A4iii
Coordinates	103°37'58" W, 74°08'49" S
Area	792 ha
Altitude	0 – 20 m
Protection	None



Site description

Brownson Islands are situated approximately 30 km south of the northern extremity of Canisteo Peninsula, which projects into the eastern Amundsen Sea between Ferrero and Cranton Bays on the Walgreen Coast, Marie Byrd Land. The island group comprises four main islands surrounded by numerous smaller islets and rocks. Brownson Islands are largely ice-free in summer and consist of granites cut by thick basaltic dykes (Gohl 2010). Emperor Penguins (*Aptenodytes forsteri*) breed on fast ice that forms between two small islands separated by ~200 m in the northwest of the group, and Adélie Penguins (*Pygoscelis adeliae*) breed on an ice free point at the west of the most southerly island of the group

The IBA qualifies on the basis of the Emperor Penguin colony present and the concentration of seabirds (in particular Adélie Penguin) and includes the breeding sites and the surrounding marine area extending between these islands.

There are no research stations nearby. The closest permanent stations are Rothera (GBR) and San Martín (ARG), located approximately 1450 km to the northeast in Marguerite Bay, Antarctic Peninsula.

Birds

Analysis of a satellite image acquired 18 Nov 2009 (Fretwell *et al.* 2012) indicated that approximately 5732 Emperor Penguins were present at the colony, although image quality was rated as Poor. The colony was identified for the first time by Fretwell *et al*. (2012). Approximately 15 962 breeding pairs (95% CI: 9438, 26 013) of Adélie Penguin were present on the ice free point on the most southerly of the Brownson Islands in December 2011, as estimated from satellite imagery (Lynch & LaRue 2014). No other birds are known to breed in the area.

Other threatened / endemic wildlife

None known.

Conservation issues

None known.

Further reading

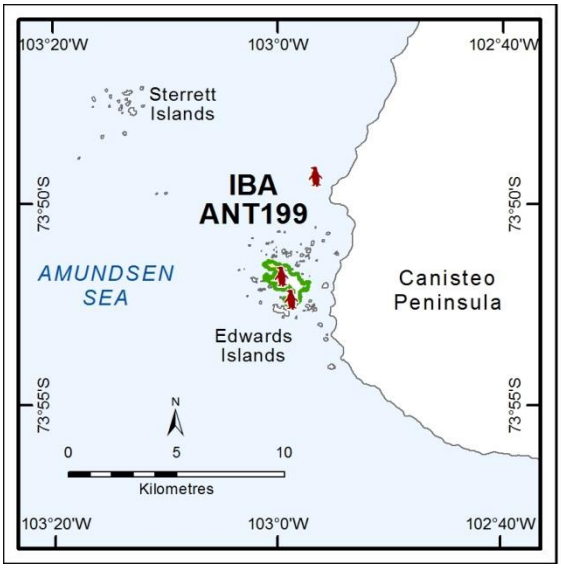
Fretwell, P.T., LaRue, M.A., Morin P., Kooyman, G.L., Wienecke, B., Ratcliffe, N., Fox, A.J., Fleming, A.H., Porter, C. & Trathan, P.N. 2012. An Emperor Penguin population estimate: The first global, synoptic survey of a species from space. *PLoS ONE* **7**(4): e33751. doi:10.1371/journal.pone.0033751

Gohl, K. (ed.) 2010. The expedition of the Research Vessel "Polarstern" to the Amundsen Sea, Antarctica in 2010. *Berichte zur Polar- und Meeresforschung*. 617/2010.

Lynch, H.J. & LaRue, M.A. 2014. First global census of the Adélie Penguin. *The Auk* **131**(4): 457-66. doi:10.1642/AUK-14-31.1

ANT199: Edwards Islands

IBA criteria	A1, A4ii, A4iii
Coordinates	102°59'14" W, 73°51'57" S
Area	178 ha
Altitude	Not known
Protection	None



Site description

Edwards Islands are situated west of the southwestern extremity of Canisteo Peninsula, which projects into the eastern Amundsen Sea between Ferrero and Cranton Bays on the Walgreen Coast, Marie Byrd Land. The island group consists of ~20 small islands, many of which are mainly ice free in summer. Available mapping incorrectly shows many of the islands within the group as merged together.

The IBA qualifies on the basis of the Adélie Penguin (*Pygoscelis adeliae*) colony present and comprises the larger ice free islands that are part of the Edwards Islands group and the intervening marine area.

There are no research stations nearby. The closest permanent stations are Rothera (GBR) and San Martín (ARG), ~1420 km to the northeast in Marguerite Bay, Antarctic Peninsula.

Birds

Approximately 58 058 breeding pairs (95% CI: 35 879, 95 740) of Adélie Penguin were present on Edwards Islands as estimated from January 2010 satellite imagery (Lynch & LaRue 2014). The birds breed on the larger ice free islands of the island group. No other birds are known to breed in the area.

Other threatened / endemic wildlife

Southern Elephant Seals (*Mirounga leonina*) haul out in the area (http://geotracerkitchen.org/ocean2ice/ accessed on 04 Nov 2014).

Conservation issues

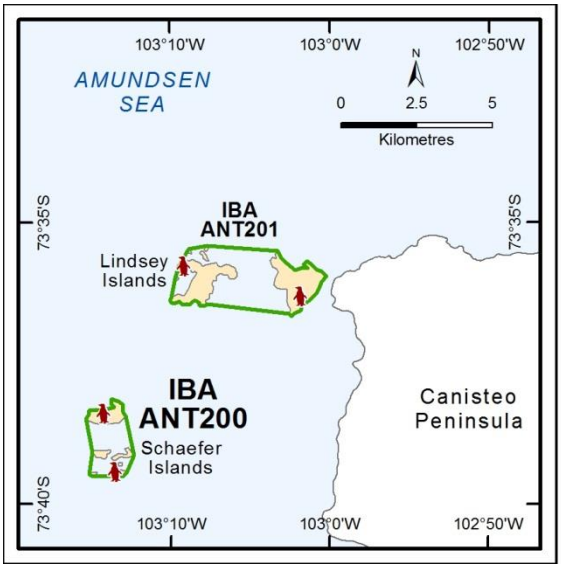
None known.

Further reading

Lynch, H.J. & LaRue, M.A. 2014. First global census of the Adélie Penguin. *The Auk* **131**(4): 457-66. doi:10.1642/AUK-14-31.1

ANT200: Schaefer Islands

IBA criteria	A4iii
Coordinates	103°13'52" W, 73°38'54" S
Area	300 ha
Altitude	Not known
Protection	None



Site description

The Schaefer Islands are situated southwest of the northern extremity of Canisteo Peninsula, which projects into the eastern Amundsen Sea between Ferrero and Cranton Bays on the Walgreen Coast, Marie Byrd Land. Schaefer Islands are situated ~4 km south of Lindsey Islands.

The island group consists of one larger island, ~0.5 km by ~1 km, and several smaller islands and islets. The islands are relatively flat and mostly ice free during summer.

The IBA qualifies on the basis of the concentration of seabirds present (in particular Adélie Penguin (*Pygoscelis adeliae*)) and comprises all of the Schaefer Islands group and the intervening marine area.

There are no research stations nearby. The closest permanent stations are Rothera (GBR) and San Martín (ARG), located approximately 1420 km to the northeast in Marguerite Bay, Antarctic Peninsula.

Birds

Approximately 28 033 breeding pairs (CI not available) of Adélie Penguin were present on Schaefer Islands as estimated from March 2011 satellite imagery (unpublished data, H. Lynch & M. LaRue pers. comm. 2014). The colony breeds on most of the larger islands, mostly on the northern coast. No other birds are known to breed in the area.

Other threatened / endemic wildlife

No information on other wildlife in the area is available. However, given its close proximity to Lindsey Islands (IBA ANT204) where Southern Elephant Seals (*Mirounga leonina*) and Leopard Seals (*Hydrurga leptonyx*) occur (Lindsey 1995), these species are also likely to be observed in the Schaefer Islands area.

Conservation issues

None known.

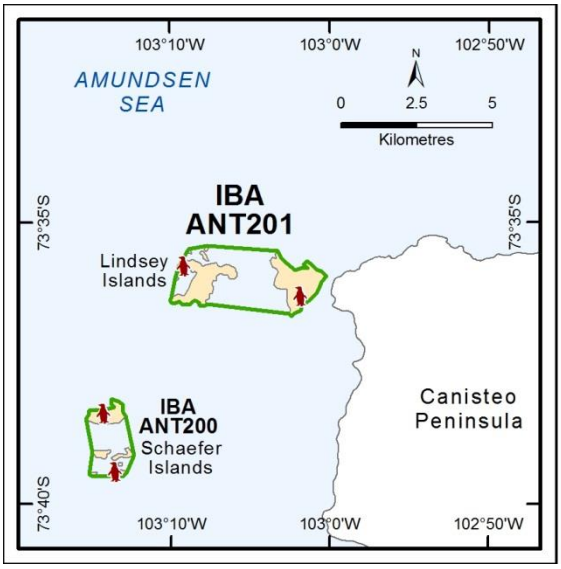
Further reading

Lindsey, A.A. 1995. The exploration history of the Lindsey Islands, Antarctica, 1928-1994. *Proceedings of the Indiana Academy of Science* **104:** 85-92.

Lynch, H.J. & LaRue, M.A. 2014. First global census of the Adélie Penguin. *The Auk* **131**(4): 457-66. doi:10.1642/AUK-14-31.1

ANT201: Lindsey Islands

IBA criteria	A1, A4ii, A4iii
Coordinates	103°05'21" W, 73°36'02" S
Area	841 ha
Altitude	0 – 40 m
Protection	None



Site description

The Lindsey Islands are situated west of the northern extremity of Canisteo Peninsula, which projects into the eastern Amundsen Sea between Ferrero and Cranton Bays on the Walgreen Coast, Marie Byrd Land. The island group consists of one island of several km across in the east, and a smaller island with several nearby outliers in the west. Some descriptions (e.g. Lindsey 1995) include the island group ~5 km to the southwest as within the Lindsey group. However, these are named as the Schaefer Islands, distinct from the Lindsey Islands, by US place naming authorities and this convention is followed here. Available mapping incorrectly shows many of the individual islands within the group as merged together.

The IBA qualifies on the basis of the Adélie Penguin (*Pygoscelis adeliae*) colony present, and comprises all of the (more narrowly defined) Lindsey Islands group and the intervening marine area.

The island group is the emergent part of a shelf that is less than 200 m deep, and is formed of granitic rocks. The islands are relatively flat, the highest point being ~40 m on the largest island. The islands are mostly ice free in summer (Lindsey 1995), and two small freshwater ponds are present on the largest island.

There are no research stations nearby. The closest permanent stations are Rothera (GBR) and San Martín (ARG), located ~1450 km to the northeast in Marguerite Bay, Antarctic Peninsula.

Birds

Approximately 52 670 breeding pairs of Adélie Penguin were present on Lindsey Islands as estimated from March 2011 satellite imagery (unpublished data, H. Lynch & M. LaRue pers. comm. 2014). The colony occupies the eastern and southeastern coasts of the eastern island, and most of three main outliers and the northern half of the largest of the western group of islands. South Polar Skuas (*Catharacta maccormicki*) are reported to breed on the islands, although numbers are not known (Lindsey 1995). No other birds are known to breed in the area.

Other threatened / endemic wildlife

Southern Elephant Seals (*Mirounga leonina*) and Leopard Seals (*Hydrurga leptonyx*) have been reported in the area (Lindsey 1995).

Conservation issues

None known.

Further reading

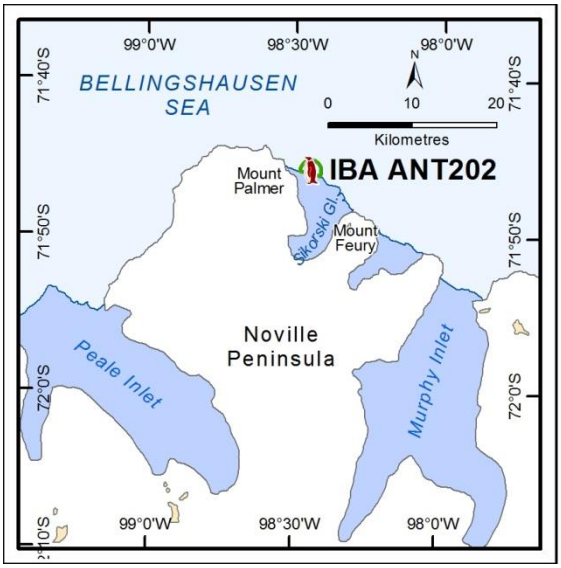
Lindsey, A.A. 1995. The exploration history of the Lindsey Islands, Antarctica, 1928-1994. *Proceedings of the Indiana Academy of Science* **104:** 85-92.

Lynch, H.J. & LaRue, M.A. 2014. First global census of the Adélie Penguin. *The Auk* **131**(4): 457-66. doi:10.1642/AUK-14-31.1

Ellsworth Land / Bellingshausen Sea

ANT202: Sikorski Glacier, Noville Peninsula

IBA criteria	A1, A4ii
Coordinates	98°26'39" W, 71°45'44" S
Area	316 ha
Altitude	0 m
Protection	None



Site description

Sikorski Glacier is located on Noville Peninsula, and flows into the Bellingshausen Sea between Mount Palmer and Mount Feury. Noville Peninsula is an ice-covered promontory of ~45 km in length situated on the northern coast of Thurston Island, Ellsworth Land, and lies between Peale Inlet and Murphy Inlet, Bellingshausen Sea. An Emperor Penguin (*Aptenodytes forsteri*) colony breeds on fast ice north of Sikorski Glacier.

The IBA qualifies on the basis of the Emperor Penguin colony present and is entirely marine.

There are no research stations nearby. The closest permanent stations are Rothera (GBR) and San Martín (ARG), located approximately 1250 km to the north in Marguerite Bay, Antarctic Peninsula.

Birds

Analysis of a satellite image acquired 17 Nov 2009 (Fretwell *et al.* 2012) indicated that approximately 3568 Emperor Penguins were present at the colony, although image quality was rated as Poor. No other birds are known to breed in the area.

Other threatened / endemic wildlife

None known.

Conservation issues

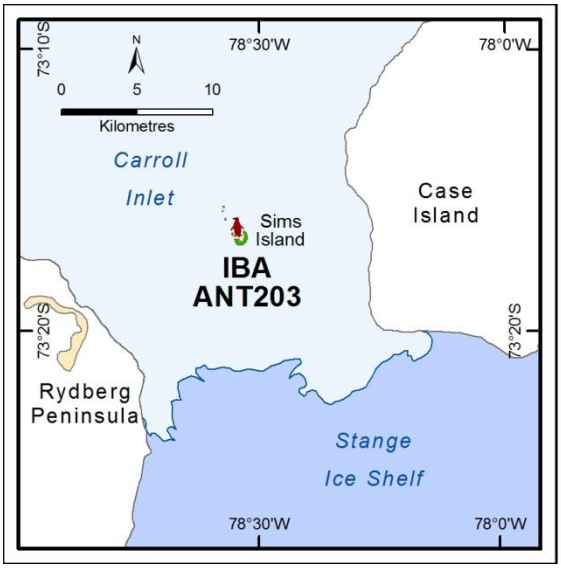
None known.

Further reading

Fretwell, P.T., LaRue, M.A., Morin P., Kooyman, G.L., Wienecke, B., Ratcliffe, N., Fox, A.J., Fleming, A.H., Porter, C. & Trathan, P.N. 2012. An Emperor Penguin population estimate: The first global, synoptic survey of a species from space. *PLoS ONE* **7**(4): e33751. doi:10.1371/journal.pone.0033751

ANT203: Sims Island

IBA criteria	A4iii
Coordinates	78°32'26" W, 73°16'38" S
Area	70 ha
Altitude	0 - 380 m
Protection	None



Site description

Sims Island is a small ice free island of ~1.5 km by ~0.8 km situated south of Smyley Island and about half-way between Case Island and Rydberg Peninsula in Caroll Inlet, Bellingshausen Sea.

The IBA qualifies on the basis of the concentration of seabirds present (in particular Adélie Penguin (*Pygoscelis adeliae*)) and comprises all of Sims Island.

Sims Island is of volcanic origin. The southern coast is dominated by cliffs rising up to 380 m and a small beach on the northeastern coast provides the only flat ground on the island (Hathway 2004).

Convey *et al.* (2011) suggested the island may possess habitat suitable for vegetation communities, although this needs to be confirmed by ground survey.

There are no research stations nearby. The closest permanent stations are Rothera (GBR) and San Martín (ARG), located approximately 710 km to the northwest in Marguerite Bay, Antarctic Peninsula.

Birds

Approximately 14 784 breeding pairs (95% CI: 8888, 24 254) of Adélie Penguin were present on Sims Island as estimated from December 2012 satellite imagery (Lynch & LaRue 2014). The penguins breed along the beach on the northeastern coast of the island. This colony was reported for the first time by Lynch & LaRue (2014), and it is unknown how long the colony has existed. South Polar Skuas (*Catharacta maccormicki*) breed on the island, but numbers are unknown (Convey *et al.* 2011). No other birds are known to breed in the area.

Other threatened / endemic wildlife

None known.

Conservation issues

None known.

Further reading

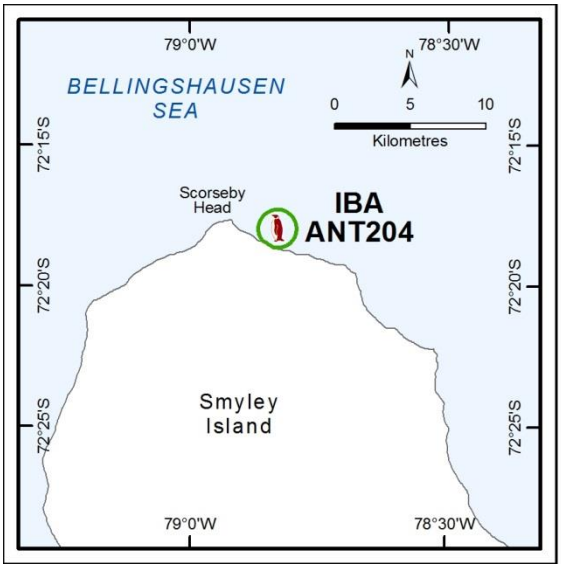
Convey, P., Hopkins, D.W., Roberts, S.J. & Tyler, N. 2011. Global southern limit of flowering plants and moss peat accumulation. *Polar Research* **30**. DOI: 10.3402/polar.v30i0.8929.

Hathway, B. 2004. Sims Island: first data from a Pliocene alkaline volcanic centre in eastern Ellsworth Land. *Antarctic Science* **13**(01): 87-89. doi:10.1017/S095410200100013X

Lynch, H.J. & LaRue, M.A. 2014. First global census of the Adélie Penguin. *The Auk* **131**(4): 457-66. doi:10.1642/AUK-14-31.1

ANT204: Scorseby Head, Smyley Island

IBA criteria	A1, A4ii
Coordinates	78°49'47" W, 72°18'00" S
Area	497 ha
Altitude	0 m
Protection	None



Site description

Scorseby Head lies on the northern coast of Smyley Island, between Stange Sound and Carroll Inlet, Trathan Coast, Bellingshausen Sea. The Stange Ice Shelf connects the island in the east with the English Coast, Palmer Land. An Emperor Penguin (*Aptenodytes forsteri*) colony breeds on fast ice that forms on the northern coast of Smyley Island several km east of Scorseby Head.

The IBA qualifies on the basis of the Emperor Penguin colony present and is entirely marine.

There are no research stations nearby. The closest permanent stations are Rothera (GBR) and San Martín (ARG), located approximately 650 km to the northwest in Marguerite Bay, Antarctic Peninsula.

Birds

Analysis of a satellite image acquired 12 Nov 2009 (Fretwell *et al.* 2012) indicated that approximately 6061 Emperor Penguins were present at the colony. No other birds are known to breed in the area.

Other threatened / endemic wildlife

Southern Elephant Seals (*Mirounga leonina*) fitted with satellite transmitters at King George Island have been observed travelling towards the Bellingshausen Sea and remaining on sea ice near Smyley Island (Bornemann *et al*. 2000).

Conservation issues

None known.

Further reading

Bornemann, H., Kreyscher, M., Ramdohr, S., Martin, T., Carlini, A., Sellmann, L. & Plötz, J. 2000. Southern elephant seal movements and Antarctic sea ice. *Antarctic Science* **12**(1): 3-15.

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Online resources

Agreement on the Conservation of Albatrosses and Petrels (ACAP) Data Portal – Southern Giant Petrel.
URL: http://data.acap.aq/taxon_profile.cfm?taxa_code=MAI#P16 – Accessed 02/09/2010.

Antarctic Treaty System Visitor Site Guidelines, *Brown Bluff*:
URL http://www.ats.aq/siteguidelines/documents/Brown_e.pdf – Accessed 10/05/2011.

Antarctic Treaty System Visitor Site Guidelines, *Cuverville Island*:
URL: http://www.ats.aq/siteguidelines/documents/Cuverville_e.pdf – Accessed 13/08/2010.

Antarctic Treaty System Visitor Site Guidelines, *Devil Island*:
URL http://www.ats.aq/siteguidelines/documents/Devil_e.pdf – Accessed 10/05/2011.

Antarctic Treaty System Visitor Site Guidelines: *Half Moon Island*:
URL: http://www.ats.aq/siteguidelines/documents/Half_moon_e.pdf – Accessed 06/08/2010.

Antarctic Treaty System Visitor Site Guidelines: Mawson's Huts and Cape Denison.
URL: http://www.ats.aq/siteguidelines/documents/2014/Mawson's Huts and Cape Denison_e.pdf – Accessed 06/04/2015.

Antarctic Treaty System Visitor Site Guidelines, *Paulet Island*:
URL: http://www.ats.aq/siteguidelines/documents/Paulet_e.pdf – Accessed 06/08/2010.

Antarctic Treaty Visitor Site Guidelines, *Penguin Island*:
URL: http://www.ats.aq/siteguidelines/documents/Penguin_e.pdf – Accessed 06/08/2010.

Antarctic Treaty System Visitor Site Guidelines, *Petermann Island*:
URL http://www.ats.aq/siteguidelines/documents/Petermann_e.pdf – Accessed 10/05/2011.

Antarctic Treaty System Visitor Site Guidelines, *Shingle Cove*:
URL: http://www.ats.aq/siteguidelines/documents/shingle_cove_e.pdf – Accessed 05/04/2015.

Antarctic Treaty System Visitor Site Guidelines: *Stonington Island*:
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URL: http://www.ats.aq/siteguidelines/documents/Yankee_e.pdf – Accessed 04/08/2010.

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Palmer LTER project:
URL: http://pal.lternet.edu/ – Accessed 04/08/2010.

Protected and Managed Area Management Plans

Antarctic Specially Managed Area (ASMA)

ASMA No. 1 Admiralty Bay, King George Island: Management Plan 2014.

ASMA No. 4 Deception Island, South Shetland Islands: Management Plan 2005. Includes Conservation Strategy for Historic Site and Monument No. 71, Whalers Bay, Deception Island 2005.

ASMA No. 7 Southwest Anvers Island and Palmer Basin: Management Plan 2009.

Antarctic Specially Protected Area (ASPA)

ASPA No. 101 Taylor Rookery, Mac.Robertson Land: Management Plan 2010.

ASPA No. 102 Rookery Islands, Holme Bay, Mac.Robertson Land: Management Plan 2010.

ASPA No. 103 Ardery Island and Odbert Island, Budd Coast, Wilkes Land: Management Plan 2010.

ASPA No. 104 Sabrina Island, Balleny Islands: Management Plan 2015.

ASPA No. 105 Beaufort Island, McMurdo Sound, Ross Sea: Management Plan 2010.

ASPA No. 106 Cape Hallett, Northern Victoria Land, Ross Sea: Management Plan 2010.

ASPA No. 107 Dion Islands, Marguerite Bay, Antarctic Peninsula: Management Plan 2002.

ASPA No. 109 Moe Island, South Orkney Islands: Management Plan 2007.

ASPA No. 111 Southern Powell Island and adjacent islands, South Orkney Islands: Management Plan 2012.

ASPA No. 113 Litchfield Island, Arthur Harbour, Anvers Island, Antarctic Peninsula: Management Plan 2014.

ASPA No. 116 New College Valley, Caughley Beach, Cape Bird: Management Plan 2011.

ASPA No. 117 Avian Island, off Adelaide Island, Antarctic Peninsula: Management Plan 2013.

ASPA No. 120 Pointe-Géologie Archipelago, Terre Adélie: Management Plan 2011.

ASPA No. 124 Cape Crozier, Ross Island: Management Plan 2014.

ASPA No. 126 Byers Peninsula, Livingston Island, South Shetland Islands: Management Plan 2002

ASPA No. 127 Haswell Island: Management Plan 2011.

ASPA No. 128 Western shore of Admiralty Bay, King George Island: Management Plan 2014.

ASPA No. 132 Potter Peninsula, King George Island, South Shetland Islands: Management Plan 2013.

ASPA No. 133 Harmony Point, Nelson Island, South Shetland Islands: Management Plan 2005.

ASPA No. 134 Cierva Point and offshore islands, Danco Coast, Antarctic Peninsula: Management Plan 2006.

ASPA No. 136 Clark Peninsula, Budd Coast, Wilkes Land, East Antarctica: Management Plan 2014.

ASPA No. 140 Parts of Deception Island, South Shetland Islands: Management Plan 2005.

ASPA No. 142 Svarthamaren: Management Plan 2014.

ASPA No. 145 Port Foster, Deception Island, South Shetland Islands: Management Plan 2005.

ASPA No. 148 Mount Flora, Hope Bay, Antarctic Peninsula: Management Plan 2002.

ASPA No. 149 Cape Shirreff, Livingston Island, South Shetland Islands: Management Plan 2011.

ASPA No. 150 Ardley Island, Maxwell Bay, King George Island: Management Plan 2009.

ASPA No. 151 Lions Rump, King George Island, South Shetland Islands: Management Plan 2000.

ASPA No. 152 Western Bransfield Strait off Low Island, South Shetland Islands: Management Plan 2010.

ASPA No. 159 Cape Adare, Borchgrevink Coast: Management Plan 2010.

ASPA No. 162 Mawson's Huts, Cape Denison, Commonwealth Bay, George V Land, East Antarctica: Management Plan 2014.

ASPA No. 164 Scullin and Murray Monoliths, Mac.Robertson Land: Management Plan 2010.

ASPA No. 165 Edmonson Point, Wood Bay, Victoria Land, Ross Sea: Management Plan 2011.

ASPA No. 169 Amanda Bay, Ingrid Christensen Coast, Princess Elizabeth Land, East Antarctica: Management Plan 2014.

ASPA No. 173 Cape Washington and Silverfish Bay, Northern Terra Nova Bay, Ross Sea: Management Plan 2013.

CCAMLR Ecosystem Monitoring Program (CEMP)

CEMP No.1 Seal Islands: Management Plan 2004. CCAMLR Conservation Measure 91-03. (Lapsed 2007).

CEMP No.2 Cape Shirreff and the San Telmo Islands: Management Plan 2004. CCAMLR Conservation Measure 91-02. (Lapsed 2009).

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