to describe low to high diversity. Our approach focuses on the probability of being in a defined range of species numbers, i.e. class, if a certain indicator species occurs. Only few indicators can be found for the low ranges of species numbers. In addition, there are only a few species groups and stand types having indicators for all three classes. Various species have multiple indicator functions, e.g. with regard to the investigated species groups. The catalogue of indicators resulting from the investigation can help to facilitate and accelerate biodiversity evaluations of forest stands.

6.16.5. Besides plants, soil organisms provide added value as indicators for conservation and restoration success

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Conversion of arable land into semi-natural grassland or heath land is a major practice for restoring and conserving plant diversity, but little is known about the restoration of taxonomic and functional diversity in the soil. In a chronosequence of abandoned fields we determined how plant and soil communities develop along a secondary succession gradient. Plant community development proceeded according to a clear succession towards the theoretical plant associations *Galio hercynici-Festucetum ovinae* and *Genisto anglicae-callunetum*. However, succession of the nematode community was less well predictable. For nematodes, theoretical references are far less well developed than for plants, but similarity with a theoretical community indicative of arable land significantly declined with time since abandonment. Moreover, regarding similarity to natural reference sites, our results show that plant and soil nematode communities have individual trajectories of secondary succession after land abandonment. Therefore we argue that besides plants soil organisms provide added value as indicators for conservation and restoration success.

6.16.6. When two is better than one: a global analysis of complementarity patterns in flowering plant families

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An important focus of current conservation biology is the use of indicator taxa for rapid biodiversity assessments. However, an understanding of the efficacy of indicator taxa for biodiversity conservation is hampered by a lack of information on the distribution of biodiversity as a whole. Without this information, it is difficult to know whether patterns in the diversity of indicator taxa truly mirror such patterns in all of biodiversity. We used a unique database, developed and maintained at the Royal Botanic Gardens, Kew, which records presence or absence of all 14274 vascular plant genera across 52 major regions of the world to establish whether some plant families are more representative of global diversity patterns than are other families. Patterns of complementarity between large, widely-distributed families of flowering plants result in remarkably high correlations between global distributions of certain pairs or triplets of plant families and total genus-level flowering plant diversity across the regions studied. Conservation inventories focusing on these few families might therefore accurately reflect the total biodiversity of the region.

6.16.7. Life history characters and phylogeny are correlated with rarity in the australian angiosperms.

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An exploration of four life-history traits (habit, life span, sexual system, fruit type) in the Australian flora (18 822 spp.) was undertaken to determine whether patterns can be extracted from our recently extinct and endangered species. Within the 31 extinct species we detected a significant departure from the expected values only for habit. There are significantly fewer trees on the extinct list than expected, reflecting perhaps the resilience of trees to extinction processes. Within the 450 endangered species we found significant differences within sex systems and fruit types. There are more monoecious species than expected by chance among the trees listed as endangered but fewer in the herbs and endangered herbaceous species are less likely to have dry-indehiscent fruit types. A supertree analysis and character tracing showed that rarity was non-randomly clustered and occurs in some genera more often than expected by chance. This indicates that phylogeny is also an important component of rarity. We suggest that specific life history traits could be used in conservation planning and as an early warning sign for detecting vulnerability in lists of species.

6.17.1. Tropical ethnobotany

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Ethnobotany, the science of 'the botany of the people', explores the knowledge of people about plants - their types and how they are seen to be related, their uses and other properties, and how they live and can be managed. In principle, ethnobotany as carried out in the tropics is no different from ethnobotany carried out anywhere else, but the tropics tend to have certain features which make the subject especially apposite: the richness of the flora, a wealth of related folk knowledge of plants, the close dependency of many rural people on a diversity of local plants, both wild and cultivated, and the paucity of scientific knowledge of plants, giving added value to other traditions of botanical knowledge. Ethnobotany is emerging as a key subject for conservation and sustainable development in the tropics. This is leading to a more problem-centred and participatory approach to research, with local people and ethnobotanists working together to define the research questions, gather and analyse data, and explore the practical implications of the results. Applied ethnobotany is continuing to actively evolve. Some examples are given from the People and Plants Initiative.

6.17.2. Variation of traditional knowledge of the plant element among Zapotecs of three municipalities at t he Sierra Madre del Sur, Oaxaca

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Traditional knowledge is the result of perception and interpretation of natural environment. Different expresions reflect the way native cultures develop traditional knowledge. One of this expressions correponds to the folk nomenclature applied to natural elements like plants and animals. Zapotec group represents one of the most important ethnic group at the Sierra Madre del Sur, state of Oaxaca. As a consequence of thousand of years of interaction with local environment and, throughout a process of oral transmition, Zapotec people has developed a complicated folk system of the plant element. We interviewed 200 persons from three municipalities with different levels of aculturation, to know how many plants they know, Zapotec names, uses, where are they obtained and what part of the plant they use. We obtained 649 plant records, 10 plant communities and 11 plant life-forms. Levels of acculturation determined the variety of Zapotec names applied to plant life-form, vegetation types, number of plants species they recognized and uses they have. Keystone plant species were also those prominent species of the different ecosystems were people obtain plant species.

6.17.3. Naga home gardens & traditional knowledge of biodiversity conservation, Nagaland, India.

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Nagaland is one of north eastern states of India with wide range of cultural as well as biological diversity. Nagas have elaborated tradition of maintaining home gardens. These home gardens have been responsible for conserving valuable biodiversity. It is important to know the role of these traditional systems in conservation. In depth analysis of home gardens of Angami and Konyak Nagas and their relationship with higher biodiversity is presented in the paper.
Angami and Konyak Naga home gardens have many similar features as well as differences. It is attempted to define the linkages of these features and number of species that are cultivated and maintained through the indigenous knowledge of communities. Various functions of the home gardens, diversity within and among the home gardens, role of home gardens in domestication of wild species and development of varieties has been discussed in details.