

## REVISION OF AFRARDISIA MEZ (MYRSINACEAE)

by

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The genus *Afrardisia* was published in 1902 by C. Mez (Pflzreich IV, Fam. 236, Heft 9, 183—184). Mez found that the only difference between *Afrardisia* and *Ardisia* Sw. was in the placentation. In *Ardisia* numerous ovules are scattered or arranged in more than one row on the placenta whereas in *Afrardisia* a single whorl of a small number of ovules occurs. There are some spp. of *Ardisia* which appear to be pauci-ovulate but then the ovules are irregularly scattered and not uni-seriate.

*Afrardisia* was, according to Mez, confined to tropical West Africa. Actually, the genus is found throughout tropical Africa.

Mez referred 10 spp. to *Afrardisia*. Of these, two had been previously described (in *Ardisia*) by Baker (F. T. A. 3, 1877, 495) and eight (also in *Ardisia*) by Gilg (Engl. bot. Jhrb. 30, 1901, 97—100).

Afterwards 11 new species were added to *Afrardisia*, viz nine spp. described by Gilg and Schellenberg (Engl. bot. Jhrb. 48, 1912, 513—518), one by de Wildeman (Pl. Bequ. 3, 1925, 216), and one by R. Good (Journ. Bot. 65, 1927, suppl. 2, 69). No further spp. were added to *Afrardisia* after 1927.

A count of the collector's numbers cited by the publishing authors, reveals that the 21 spp. were represented by 26 (+ ? 2) specimens. This means that a large majority of spp. was based on one single collection and that the describing authors were unable to assess variability and distribution.

Seventeen spp. were based on specimens secured by German collectors. Of all these, the holotypes were lost when the Berlin Herbarium was destroyed and very few isotypes had been distributed. I have nearly always failed to locate any isotype.

The taxa described as species are very closely allied as may be deduced from the descriptions. The eight spp. described by Gilg (1901) were redescribed by Mez (1902), who examined the same specimens but his descriptions are not always in accordance with Gilg's descriptions. Moreover, the characters employed by Mez in his key (l. c., p. 184) are not always in accordance with the description of the species they intend to refer to (e. g. the description of *A. schlechteri* (Gilg) Mez and its position in the key, (l. c., pp. 184, 185). I felt obliged, and it seemed justified, to re-typify species I believed to have recognized from the descriptions and to reduce

others to synonymy if the descriptive data seemed insufficient to uphold them; the holotypes can never be examined.

I am greatly indebted to the Directors of the following Herbaria for the loan of specimens: Berlin-Dahlem, Brazzaville, British Museum, Nat. Hist. Dept., Brussels, Florence, Genève, Göttingen, Hamburg, Ibadan, Kew, Leiden, Lund, Munich, Paris, Upsala, U. S. Nat. Herbarium, Stockholm, Wageningen and Zürich. Miss I. Zewald made the drawings and assisted me in various matters.

### AFRARDISIA MEZ

*Afrardisia* Mez in Pflzreich IV, Fam. 236, 1902, 184; Pilger in Nat. Pflzfam. Nachtr. III, 1908, 294.

Flowers 5-merous, ♂ or ♀, the ♂ flowers with calyx, corolla and anthers (and ovary), and the ♀ consisting of calyx and ovary. Sepals imbricate. Petals very shortly connate, imbricate, often contorted in bud. Stamens 5, subsessile on the lower third of the petals. Anthers very large, longitudinally splitting, often lengthwise adnate in bud. Ovary crowned by a subulate style. Stigma punctiform, minute. Placenta with 6—8 ovules. Ovules uni-seriate, appearing (emerging) in the upper half of the placenta, attached internally at the base. Fruit globose; endocarp brittle, one-seeded. Seed globose, covered by membranous rudiments of the placenta, which intrude not into the hilum. Embryo vermiform, transverse, straight or slightly curved.

Shrubs, sometimes trees or lignescent herbs, monoecious. Leaves generally dark dotted, the dots often raised. Inflorescence axillary, a very short, bract-covered peduncle, shorter than or equalling the petioles, carrying less than a dozen of small flowers.

Type species. *Afrardisia bracteata* (Baker) Mez.

Distribution. Tropical Africa (San Tomé, Nigeria, Cameroons, French Equatorial Africa, Belgian Congo, Uganda).

Ecology. In the understorey of rain-forest, also of moist light forest, often near watercourses, always in shadow; occurring from the lowland up to 1600 m alt.

Notes. The only character by which *Afrardisia* is separated from *Ardisia* is its pauci-ovulate, uniseriate placenta. Although this seems not to be correlated with any other differential character, the position of the ovules is constant and a character of first importance in the systematy of Myrsinaceae. *Afrardisia* is geographically well defined being confined to tropical Africa.

A. Grosze studied the leaf-anatomy of the Myrsinaceae (Engl. bot. Jhrb. 41, 1908, Beibl., Heft 5). For *Ardisia* Sw. Grosze was unable to give any constant character except the presence of three thin cell-walls directed towards the stoma. This is also found in *Afrardisia* (l. c. pp. 43, 44) and the anatomy of the leaf rather stresses affinity than provides a reason for segregation.

Large prophylls, at the base of an inflorescence, may be found in many species. They have many glands in the tissue and are comparable to those

found in *Pleiomeris* Alph. DC. (cf. Bull. Rijkspl. Brussel 27, 1957, 238, tab. VI, s, t, u).

The sign ♂ indicates "hermaphrodite" flowers viz the presence of an ovary and stamens; I am not certain that these flowers always will produce viable seeds.

### Key to the species of *Afrardisia* Mez

A number of species occur twice or three times in the key. This seemed desirable as a number of characteristics ascribed to those species might or might not be present. This uncertainty was caused by the absence of type specimens and numerous discrepancies in the descriptions of the lost types by different authors. In addition some experience is needed to judge the presence or absence of some characters in these closely allied, and possibly varying or interbreeding, species. In order to provide for different possibilities and to prevent error some species were entered more than once and their position in the key should not be used to conclude the actual presence of certain characters.

1. Bracts large, flabby and leaf-like, covering the young buds. Leaf-blade narrowly auriculate . . . . . 2. *A. bracteata*
1. Bracts small, scale-like.
  2. Base of leaf-blade auriculate or narrowly cordate . . . . . 13. *A. sadebeckiana*
  2. Base of leaf-blade acute, cuneate or rounded.
    3. Mature anthers with distinct dark dots.
      4. Calyx-lobes broad, rounded. Ovules contiguous.
        5. Leaves spatulate or oblanceolate, very long tapering towards the base. Flowers blue or purple, petals white-margined . . . . . 8. *A. mayumbensis*
        5. Leaves elliptic or oblong, base rounded or acute. Flowers pink or red.
          6. Side-nerves numerous, more than 20, stout. Leaf-blade very densely and conspicuously reticulate. Pedicels 11—12 mm long. Style not punctate . . . . . 5. *A. conraui*
          6. Side-nerves not numerous, 12—16, slender. Reticulations lax, wide, evanescent. Pedicels 6—9 mm long. Style punctate 3. *A. buesgenii*
      4. Calyx-lobes acute or blunt.
        7. Leaf-margin distinctly sharply dentate or crenate.
          8. Pedicels 6—14 mm long. Anthers broad, mucronate. Petiole up to 1 cm long . . . . . 6. *A. cymosa*
          8. Pedicels c. 5 mm long. Anthers narrow, acute. Petiole 2—2½ cm long . . . . . 12. *A. polyadenia*
        7. Leaf-margin entire or shallowly denticulate or crenulate.
          9. Leaf-blade at least 3 × as long as wide.
            10. Sepals mucronate. Anthers vaguely dotted abaxially. Petioles 2—2½ cm long. Leaf-glandlets massed, abundant . . . . . 12. *A. polyadenia*
            10. Sepals acute or blunt. Anthers distinctly dark dotted abaxially. Petioles 5—13 mm long. Leaf-glandlets not massed, often sparse.
              11. Leaves lanceolate, narrowly oblong. Side-nerves few, very slender. Ovules contiguous. Style very slender, not punctate . . . . . 16. *A. zenkeri*
              11. Leaves elliptic or oblong or ovate-oblong. Side-nerves 10—16(—20). Ovary brown lepidote on top. Style stout, punctate.
                12. Side-nerves 12—16, very slender. Leaf-blade punctate. Reticulations evanescent. Placenta 8—9-ovulate, ovules contiguous . . . . . 3. *A. buesgenii*
                12. Side-nerves 10, raised on the lower surface and very conspicuous, curving and anastomosing. Leaf-blade

- not punctate. Reticulations not evanescent. Placenta c. 5-ovulate, ovules not contiguous . 9. *A. mildbraedii*
12. Side-nerves 12—20, slender but distinct. Leaf-blade long tapering towards the base, punctate. Reticulations not evanescent. Petals 6 mm long 8. *A. mayumbensis*
9. Leaf-blade  $1\frac{1}{2}$ — $2\frac{1}{2}$  × as long as wide.
13. Petioles 2— $2\frac{1}{2}$  cm long. Leaves covered by masses of abundant glandlets. Anthers very narrow, top acute, abaxially sparsely punctate . . . . . 12. *A. polyadenia*
13. Petioles up to 15 mm long, usually much shorter. Leaf-blade marked by numerous, not raised, sometimes very minute dots. Anthers narrow or not, abaxially with conspicuous dark dots.
14. Petals and sepals mucronate . . . . . 10. *A. oligantha*
14. Petals and sepals blunt or acute.
15. Peduncle absent or nearly so. Pedicels 3—5 mm long. A very low, subherbaceous shrublet 14. *A. schlechteri*
15. Peduncle up to 1 cm long. Pedicels 5—8 mm long. A shrub or small tree . . . . . 15. *A. staudtii*
3. Anthers darkened or not, without distinct dark dots.
16. Calyx-lobes rounded, broad. Petals marked by dark dots. Anthers mucronate . . . . . 1. *A. bequaerti*
16. Calyx-lobes acute or blunt.
17. Leaf-blade 3 × as long as wide, or longer.
18. Leaf-blade extremely densely prominently punctate . . . . . 12. *A. polyadenia*
18. Leaf-blade without or with dark, not raised, glandular spots.
19. Petals distinctly dark dotted. Leaf-blade very laxly reticulate below, margin entire. Ovules contiguous . . . . . 16. *A. zenkeri*
19. Petals without or nearly without distinct glands. Leaf-blade laxly reticulate on both surfaces, margin irregularly crenulate. Ovules not contiguous . . . . . 4. *A. comosa*
17. Leaf-blade  $1\frac{1}{2}$ — $2\frac{1}{2}$  × as long as wide.
20. Sepals narrow, narrowing from the base to the very acute top. Petals not or very sparsely punctate. Buds twisted, narrowly conical. Anthers narrow, long tapering acute 11. *A. platyphylla*
20. Sepals ovate or triangular. Buds twisted or not, as a rule ovoid.
21. Petals not dark punctate.
22. Lower leaf-surface bearing numerous minute brown scales. Leaf-blade acute to cuneate at base. Ovary glabrous. Petals c. 5 times as long as the sepals . . . . . 7. *A. leucantha*
22. Lower leaf-surface glabrous. Leaf-blade at base rotundate-cuneate to auriculate-cordate. Ovary brown lepidote on top. Petals 3 times as long as the sepals . . . . . 13. *A. sadebeckiana*
21. Petals conspicuously dark punctate.
23. Flowers on 6—14 mm long pedicels. Leaf-margin distinctly dentate, serrate or crenate. Anthers mucronate, broad . . . . . 6. *A. cymosa*
23. Flowers on up to 5 mm long pedicels. Leaf-margin entire or very shallowly undulate-crenate. Anthers acute, narrow . . . . . 14. *A. schlechteri*

1. *Afrardisia bequaerti* de Wild., Pl. Bequaert. 3, 1925, 216 —

Fig. 1.

A shrub, with rusty tomentellous, soon glabrous branchlets. Leaves elliptic, cuneate at the base, towards the top gradually acuminate, dark punctate, membranous, glabrous, with 12—15 side-nerves, 9—20 cm long, 4—7 cm wide, margin very indistinctly undulate or crenulate.

Inflorescence consisting of 6—10 flowers, on a 2 mm long peduncle. Flowers on 5—6 mm long, minutely rusty puberulous pedicels. Calyx-lobes broad, rounded, ciliolate on edge, dotted, c. 1 mm long. Petals broadly ovate, acute, 3—5 mm long, not quite glabrous, dotted abaxially. Anthers oblong, acute or apiculate, darkened abaxially but without distinct dark dots. Ovary glabrous, punctate. Style stout. Placenta c. 8-ovulate.

Specimen examined. BELGIAN CONGO, between Lubutu and Kirundu: *Bequaert 6806* (holotype) (BR).

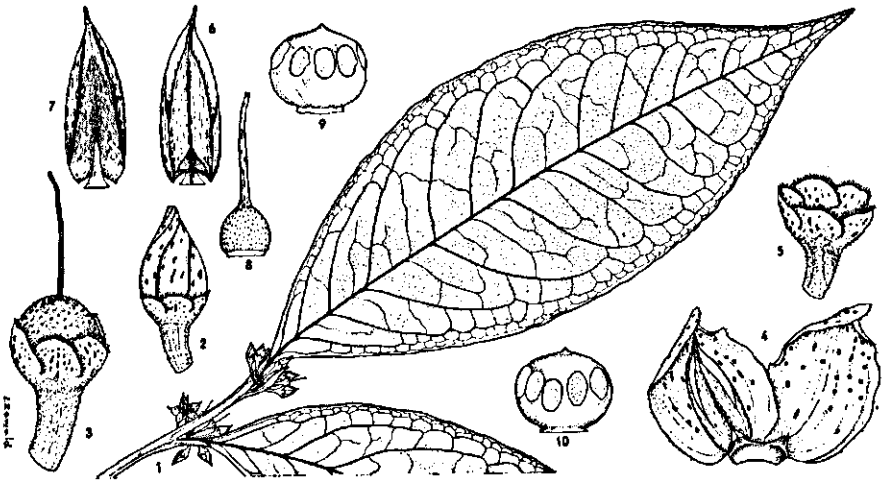


Fig. 1. *Afrardisia bequaerti*, 1. flowering branch,  $\times \frac{1}{2}$ , 2. ♀ flower bud,  $\times 3$ , 3. ♀ flower,  $\times 5$ , 4. petals and stamen,  $\times 5$ , 5. calyx of ♀ flower, 6. and 7. stamen, adaxial and abaxial,  $\times 7$ , 8. ovary of ♀ flower,  $\times 5$ , 9. placenta of ♀ flower,  $\times 12$ .

Note. *A. bequaerti* is closely allied to *A. staudtii* but seems sufficiently different in its blunt or rounded calyx-lobes, darkened but not distinctly dotted, broad and gaping anthers and very broadly ovate petals. It is also closely allied to *A. conraui* but differs by the lack of dark dots on the anther, and in the shape of the leaves. It remains to be seen whether a wider range of specimens would necessitate a reduction of *A. bequaerti* to a variety or form of *A. staudtii*.

2. *Afrardisia bracteata* (Baker) Mez in Pflzreich IV, Heft 9, Fam. 236, 1902, 184 — *Ardisia bracteata* Baker in Oliver, F. T. A. 3, 1877, 495 — *Tinus bracteata* (Baker) O. K., Rev. Gen. Pl. 2, 1891, 974 — Fig. 2.

A low shrub; twigs stout, greyish-brown, smooth-barked, glabrous. Leaves oblong to obovate, tapering towards a narrowly auriculate base and a subacuminate top, chartaceous, glabrous, 11—14 cm long,  $3\frac{1}{2}$ —4 cm wide, lower surface marked by numerous dark dots which appear on the upper like small blunt warts, both surfaces laxly reticulate, margin entire or possibly very slightly crenulate. Petiole stout, very short.

Inflorescences along the branches, mostly below the terminal cluster of

leaves, nodding, corymbose, peduncle up to c. 1 cm long, carrying up to 10 flowers. Flowers crowded, on usually recurved, stout, c.  $\frac{1}{2}$  cm long pedicels, subtended by (ob)ovate, 0.4—1 cm long, flabby bracts which are faintly marked by glands in the tissue. Calyx-lobes nearly free, very broadly triangular, rounded, c. 1 mm long, sparsely dotted, ciliate on edge. Petals obliquely ovate-elliptic, 4—5 mm long, marked on the adaxial surface by some linear or punctate glands. Anthers narrowly triangular, 3 mm long, marked by numerous dark dots. Ovary glabrous, with numerous glandlets. Style rather stout,  $3\frac{1}{2}$  mm long, rarely articulate near the base. Placenta globular-turbinate, mucronate, 8-ovulate.

Specimen examined. GABON. Sierra del Crystal, at  $1^{\circ}$ N, fl. July 1862: Mann 1660 (holotype) (K).

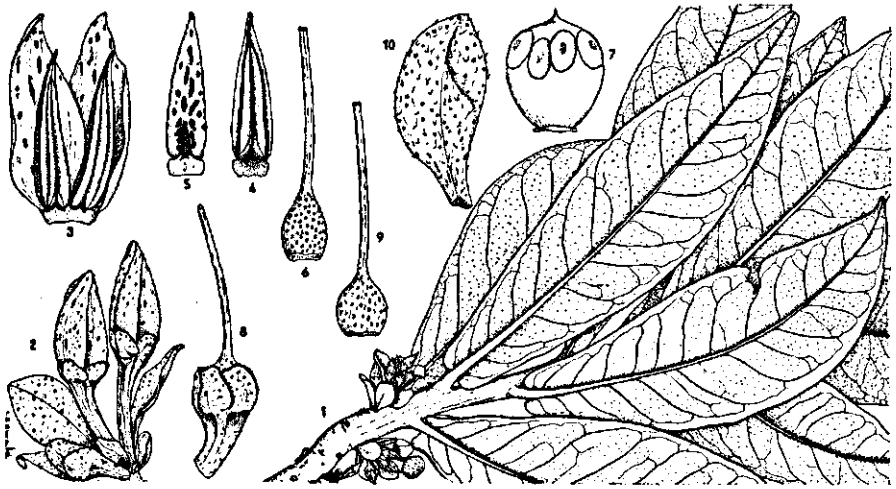


Fig. 2. *Afrardisia bracteata*, 1. flowering branch,  $\times \frac{1}{2}$ , 2. buds subtended by bracts,  $\times 3$ , 3. petals and stamens,  $\times 5$ , 4. and 5. stamen, adaxial and abaxial,  $\times 5$ , 6. pistil of  $\varnothing$  flower,  $\times 6$ , 7. placenta of  $\varnothing$  flower,  $\times 20$ , 8.  $\varnothing$  flower,  $\times 6$ , 9. pistil of  $\varnothing$  flower,  $\times 9$ , 10. bract,  $\times 5$  (from Mann 1660 (K)).

Note. *A. bracteata* is easily distinguished by its large bracts. As usual  $\varnothing$  and  $\varnothing$  flowers occur in a single inflorescence, the latter lacking corolla and anthers. The holotype is the only specimen known.

3. *Afrardisia buesgenii* (Gilg & Schellenberg in Engl. bot. Jhrb. 48, 1912, 517 — Fig. 3.

A shrub or small tree, twigs slender, subangulate, densely brown tomentellous at first, later glabrous. Leaves elliptic or elliptic-oblong, top gradually narrowing, acuminate, base acute, cuneate or rounded, membranaceous, on the lower surface very sparsely and fugaciously brown lepidote, 15—20(26) cm long, 5—8(12) cm wide, both surfaces with raised, sparse dots, very laxly and delicately reticulate, margin entire or shallowly undulate-crenulate. Petiole stout, 1— $1\frac{3}{4}$  cm long.

Inflorescences along the branches, clusters of 5—12 flowers, peduncle

1—3 mm long. Flowers ovoid-acute in bud, on 6—9 mm long pedicels, subtended by small ligulate bracts. Calyx-lobes nearly free, suborbicular, edge light coloured, ciliolate-erose, hence rounded or acutish, c. 1 mm. Petals ovate, 4—5 mm long, marked by linear or punctate glands. Anthers oblong, marked by numerous dark dots abaxially. Ovary densely brown lepidote on top. Style stout, punctate. Placenta broadly clavate, 8—9-ovulate, ovules contiguous.

Specimens examined. S. NIGERIA. Ogoja Prov. Sonkwala area, Obudu Div., river Ata, below Koloishe, at c. 1300 m alt.: *H. J. Savory and E. W. J. Keay 25057* (neotype) (K, FHI); *A.J.C. 731* (K).

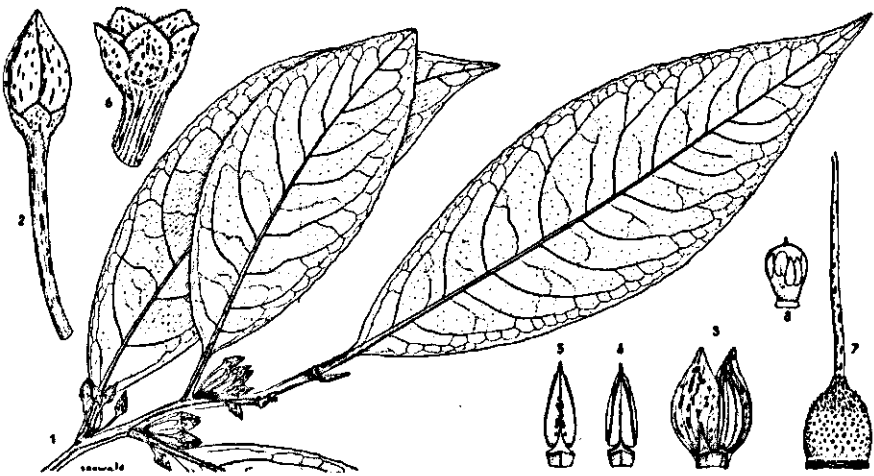


Fig. 3. *Afrardisia buesgenii*, 1. flowering branch,  $\times \frac{1}{2}$ , 2. ♀ flower bud,  $\times 3$ , 3. petals and stamen,  $\times 3$ , 4. and 5. stamen, adaxial and abaxial,  $\times 3$ , 6. calyx,  $\times 6$ , 7. ovary,  $\times 9$ , 8. placenta,  $\times 9$ .

Note. *A. buesgenii* was based on *Buesgen 229* (Fr. Cameroons, Kube Forest, Njassosso) and *Ledermann 6136* (N. Cameroons, Bare, 860 m alt.). It occurred in the understorey of forests, fruiting and flowering („roscei”) in Nov.-Dec.

The type specimens were both lost at Berlin. The publishing authors stress affinity with *A. zenkeri*. The neotype which I designated, *Savory and Keay FHI 25057* (K), was found in a ravine in high forest. It was a treelet, 2 m high, branches held horizontally in pseudo-whorls. The flowers were pendulous, pale pinkish-brown, occurring in December. The lower surface of the leaf is strikingly similar to that found in *A. zenkeri* but the leaf is very much larger.

#### 4. *Afrardisia comosa* de Wit, sp. nov. — Fig. 4.

Suffrutex ramulis gracilibus foliisque ad apicem caulis congregatis comosus. Species nova foliis anguste oblongis, parvis, margine undulato-crenulatis, petalis parce vel haud glandulosis facile distinguenda.

A lignescens herb or shrublet, c. 40 cm tall. Branchlets and leaves massed near the top; twigs or stem stout, the top branchlets very slender, glabrous, and both carrying the flowers. Leaves narrowly oblong, base acute, top long tapering, bluntish, margin shallowly and irregularly wavy or crenulate, chartaceous, glabrous, on both surfaces with numerous dark, not raised, spots, 10—12 cm long, 1½—1,8 cm wide, laxly reticulate on both surfaces; petioles brown tomentellous when young, later glabrous, 3—4 mm long.

Inflorescences axillary. Peduncle nearly absent. Pedicels c. 4 mm long, minutely puberulous. Calyx-lobes broadly ovate, blunt or acute, 1,2 mm long, ciliolate on edge, not or scarcely punctate. Petals oblong, not or scarcely punctate, acute, 5 mm long. Anthers not punctate, oblong, acuminate.

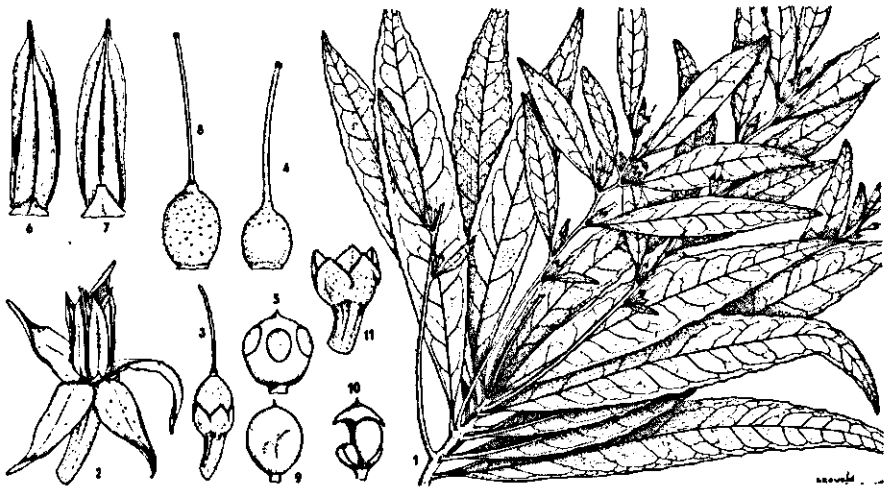


Fig. 4. *Afrardisia comosa*, 1. flowering branchlet,  $\times \frac{1}{2}$ , 2. ♀ flower,  $\times 3$ , 3. ♀ flower,  $\times 3$ , 4. pistil of ♀ flower,  $\times 5$ , 5. placenta of ♀ flower,  $\times 10$ , 6. and 7. stamen, adaxial and abaxial,  $\times 7$ , 8. pistil of ♀ flower,  $\times 5$ , 9. placenta of ♀ flower,  $\times 5$ , 10. opened placenta of ♀ flower,  $\times 5$ , 11. calyx,  $\times 10$ .

Ovary very sparsely lepidote-hairy, style (in ♀ flowers) articulate. Placenta 4—5 ovulate.

Specimen examined. GABON. Congo: *M. Thollon* s.n. (holotype) (P, 5305—71, 57).

Note. An easily distinguishable species on account of its very narrow, small leaves. Its seems to be allied to *A. schlechteri* but its leaves are very much smaller and the petals and anthers are without conspicuous glands.

5. *Afrardisia conraui* (Gilg) Mez in Pflzreich IV, Heft 9, Fam. 236, 1902, 184 — *Ardisia conraui* Gilg in Engl. bot. Jhrb. 30, 1901, 98 — *Afrardisia ledermannii* Gilg & Schellenberg in Engl. bot. Jhrb. 48, 1912, 517 — *Afrardisia rosacea* Gilg & Schellenberg in Engl. bot. Jhrb. 48, 1912, 515 — Fig. 5.

A shrub or small tree, branchlets towards the top minutely rusty



tomentellous and slightly angulate by the confluent rims of the decurrent leaf-insertions. Leaves elliptic, oblong or obovate, base shortly acute or subrotundate, top shortly acuminate, the very tip acute, submembranaceous, dull, glabrous (on the lower surface fugaciously brown lepidote), 12—18(26) cm long, 5—8(12) cm wide, on both surfaces densely and closely reticulate, with few or numerous prominent dark dots, margin entire or shallowly and wavy crenulate. Petiole 1—1½ cm long.

Inflorescence a small cluster of c. 5 flowers on a 2—3 mm long peduncle. Flowers on sturdy, glabrous, 5—12 mm long pedicels. Calyx-lobes shortconnate, ovate to suborbicular, rounded to acutish, on edge densely ciliolate,

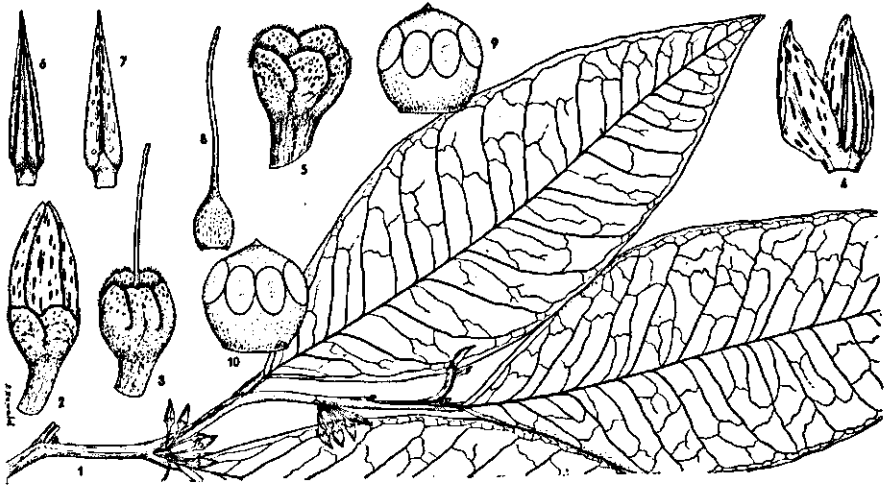


Fig. 5. *Afrardisia conraui*, 1. flowering twig,  $\times \frac{1}{2}$ , 2. ♀ flower bud,  $\times 3$ , 3. ♀ flower,  $\times 4$ , 4. petals and stamen,  $\times 3$ , 5. calyx of ♀ flower,  $\times 4$ , 6. and 7. stamen, adaxial and abaxial,  $\times 4$ , 8. ovary of ♀ bud,  $\times 5$ , 9. placenta of ♀ flower,  $\times 15$ , 10. placenta of ♀ flower,  $\times 15$ .

brown punctate, c. 2 mm long. Petals red, ovate-lanceolate, acute or short-acuminate, dotted, 6—7 mm long. Anthers gradually narrowing towards the acute top, dark dotted abaxially. Ovary glabrous. Style slender, not punctate. Placenta c. 6-ovulate, ovules contiguous.

**Specimens examined.** FRENCH CAMEROONS. Bipinde, primary forest: Zenker 4448 (BM, G, K); Dendeng-Kougola, Sansane, 5°30' N, 13°45' E: Mildbraed 8938 (B, K); Yaounde-Dendeng, S of Sanaga riv., 60 km NE Yaounde: Mildbraed 8102 (K); 1 BEL. CAMEROONS. Mayo Nolaga, Kurmi Bello: M. G. Latilo ♂ B. O. Daramola, FHI 28988 (FHI, K, WAG).

**Note.** The holotype, *Conrau 147*, of *A. conraui*, was collected at „Bangwe” in N. Cameroons. Gilg, on describing this as a new species stressed the size of the flowers and the conspicuous close reticulation on the leaf. Mez, describing the specimen again in his monograph (l. c.) made no reference either to an exceptional size of the flower or reticulation of the leaf. *Conrau 147* was lost at Berlin. *A. conraui* is closely allied to *A. staudtii* and *A. bequaerti*.

I suggest that *A. rosacea* Gilg & Schellenb. is conspecific but specimens

of both taxa (type localities) are required in order to arrive at a final decision.

*A. rosacea* was based on *Ledermann 1313*, the holotype. This was lost at Berlin. It had been collected at Bare, along the Moam brook, in



Fig. 6. *Afrardisia cymosa*, 1. flowering branch,  $\times \frac{1}{2}$ , 2. ♀ flower,  $\times 2$ , 3. petals and stamen of ♀ flower,  $\times 3$ , 4. calyx of ♀ flower,  $\times 3$ , 5. stamen, abaxial and adaxial,  $\times 5$ , 6. pistil of ♀ flower,  $\times 5$ , 7. placenta of ♀ flower,  $\times 15$ , 8. ♀ flower,  $\times 4$ , 9. pistil of ♀ flower,  $\times 4$ , 10. placenta of ♀ flower,  $\times 10$  (from Herb. Kew II 2087/57. 15, Mailand 1408).



Fig. 7. *Afrardisia cymosa*, 1. flowering branch,  $\times \frac{1}{2}$ , 2. ♀ flower bud,  $\times 3$ , 3. petals and stamen,  $\times 3$ , 4. and 5. stamen, abaxial and adaxial,  $\times 3$ , 6. calyx,  $\times 3$ , 7. ovary of ♀ flower,  $\times 6$ , 8. placenta of ♀ flower,  $\times 6$  (from Eggeling 4155).

N. Cameroons, at 860 m alt., in gallery forest, and was Nov. 26, 1908, in flower.

*A. ledermannii* was based on *Ledermann* 7, the holotype, which was lost at Berlin. It had been collected in the Congo basin, at Konduë, on the Sankuru (Lualaba, Kasai). It was found at 340 m alt., a tree in low forest in flower and fruit Febr. 1906. The publishing authors stress as differences with *A. conraui*: at base narrower leaves, smaller flowers and sepals which carry only dots of a single shape. To my mind these characters do not justify specific distinction.

6. *Afrardisia cymosa* Mez in Pflzreich IV, Heft 9, Fam. 236, 1902, 186; Hutchinson et Dalziel, F. T. W. A. 2, 1931, 15, in adnot.; Exell, Cat. Vasc. Pl. S. Tomé 1944, 233 — *Ardisia cymosa* (non Blume) Baker in Oliver, F. T. A. 3, 1877, 495; Henriq. in Bol. Soc. Brot. 10, 1893, 139; l. c. 27, 1917, 193 — *Tinus cymosa* (Baker) O. K., Rev. Gen. Pl. 2, 1891, 974 — *Afrardisia dentata* Gilg & Schellenberg in Engl. bot. Jhrb. 48, 1912, 514; Gilg & Schellenberg in Wiss. Erg. Deutsch. Zentral-Afr. Exp., 2, Bot., 1914, p. 513 — Fig. 6—7.

An erect, often low shrub, or small tree, twigs when young very short, ferruginous tomentellous, soon glabrous. Leaves elliptic, ovate, obovate or oblong, base cuneate, top acute to acuminate, (thinly) chartaceous, sparsely and fugaciously brown lepidote-pilose esp. on the lower surface, finally glabrous, 10—15 (18) cm long, 4—5 (8) cm wide, both surfaces laxly (and inconspicuously) reticulate, vaguely marked by blackish dots or lines, margin (irregularly) dentate, entire near the base. Petiole 1—1½ cm long.

Inflorescence corymbose, axillary along the branches; peduncle stout, 4—8 mm long, covered tomentose, minute bracts, later glabrous and warty by the raised insertions of the pedicels, carrying 3—8 flowers. Flowers on sparsely, minutely brown puberulous or glabrous, 6—10 (14) mm long pedicels. Calyx-lobes ovate, acutish, nearly free, distinctly dotted, 1½ mm long, ciliolate-crose on edge. Petals ovate, acute, 4—5 mm long, especially on the adaxial surface with dark lines and dots. Anthers triangular, mucronate, 2—3 mm long, punctate and/or darkened on the back, opening by a wide gaping slit. Ovary finely and fugaciously lepidote-hairy or glabrous. Style articulate or not, marked by dark glandlets. Placenta broader than long, mucronate, 6—8 ovuled. Fruit globose, 5—6 mm through.

Specimens examined. SAN TOMÉ: *Mann 1082* (holotype) (K). BR. CAMEROONS: Bamenda: *Edwin Ujor FHI 30029* (K); Bamenda, Lakom, 2000 m: *F. D. Maitland 1408* (K); Bamenda, Bali: *Edwin Ujor FHI 30372* (K, FHI); Bamenda Bafut-Ngamba Forest Res., 1600—1900 m: *C. F. A. Onochie FHI 34869* (K, FHI). BELGIAN CONGO. Avakubi: *Bequaert 1911* (BR); Kemele Riv.: *De Graer 863* (BR). UGANDA. Mawokota, 1300 m: *E. Brown 189*, culta in Bot. Gard. Entebbe (K); Mascha Rd, km 12.8, c. 1300 m: *P. Chandler 1886* (K, BR); Mulange Forest: *Dummer 4004* (K); Bunyoro, Siba Forest: *Eggeling 3342* (K); Nyebeya, Kigezi: *Eggeling 4155* (K); without loc.: *Eggeling 3248* (K).

Note. *Ardisia cymosa* Baker (1877) is a later homonym of *Ardisia cymosa* Blume (1825). Mez transferred *A. cymosa* Baker to *Afrardisia*. The resulting combination is to be treated as a new name: *Afrardisia cymosa* Mez (Code Art. 81, 2nd example).

The shrubs may reach a height of 3 m. The flowers are described as

pink, pinkish white, creamy red or pale purple, the calyx pale greenish brown, the fruits red, sometimes dark spotted (Chandler). The species is found in the understorey of high forest, on S. Tome above 600, on the continent above 1200 m alt.

Two figures of *A. cymosa* have been added to the present revision to show the range of variability: e. g. anthers punctate or not, the size of the leaf and length of pedicel, etc.

In Belgian Congo (Kembale River) the vernacular name (Ibegule-di) was recorded.

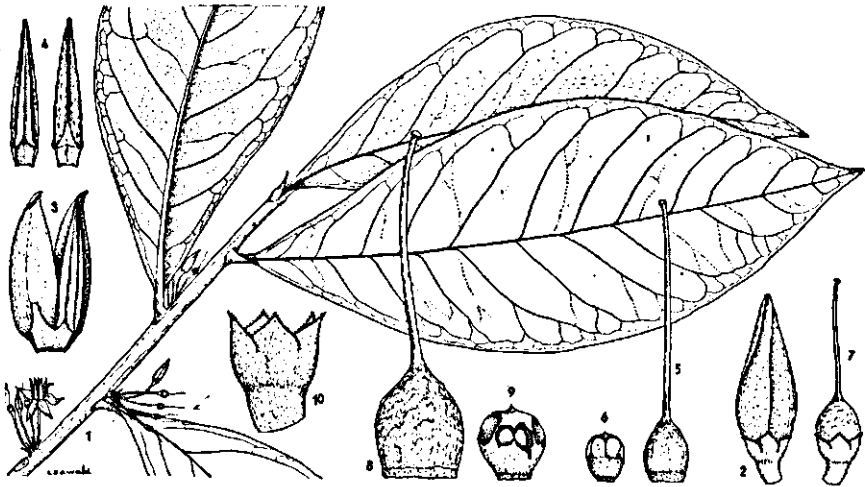


Fig. 8. *Afrardisia leucantha*, 1. flowering branch,  $\times \frac{1}{2}$ , 2. ♀ flower bud,  $\times 3$ , 3. petals,  $\times 3$ , 4. anther, adaxial and abaxial,  $\times 3$ , 5. ovary of ♀ flower,  $\times 6$ , 6. placenta of ♀ flower,  $\times 6$ , 7. ♀ flower,  $\times 3$ , 8. ovary of ♀ flower,  $\times 6$ , 9. placenta of ♀ flower,  $\times 6$ , 10. calyx,  $\times 12$ .

*Afrardisia dentata* Gilg & Schellenb. was based on *Mildbraed 1242* and *Ledermann 2726*; both specimens are lost. The first had been collected on Kwidjwi Isl. (Lake Kivu) at 1600 m alt., and the latter at Tschape Pass (Cameroon) at 1420 m alt.

The style in ♀ flowers is usually articulate at base (fig. 6: 8 and 9). The placentas in the ♀ and ♂ flower are very similar (fig. 6: 7 and 10). The anthers open by a gaping slit and are darkened or punctate on the back (fig. 6: 5). Sometimes 6 calyx-lobes occur.

**7. *Afrardisia leucantha* Gilg & Schellenberg in Engl. bot. Jhrb. 48 (1912) p. 515 — Fig. 8.**

A small, sometimes creeping shrub; twigs nearly glabrous, young tops rusty tomentellous. Leaves elliptic, towards the base tapering, top acuminate, sub-chartaceous, on the lower surface minutely lepidote, sparsely verruculose by raised dots, 14—25 cm long, 4½—9 cm wide, margin entire. Petiole 1—2 cm long.

Inflorescence few-flowered, peduncle absent or nearly so. Flowers from

the axils of small bracts, on 4—12 mm long pedicels, white, pink-speckled. Sepals half connate, broadly ovate, ciliolate, punctate. Petals elliptic to oblong, acuminate, not punctate, 6 mm long. Anthers tapering to the acute top, not punctate abaxially. Ovary ovoid-conical, glabrous. Placenta in ♂ fl. 5-ovulate, smaller than in ♀ fl. Placenta in ♀ fl. 7-ovulate, 2 ovules much larger than the others.

Specimen examined. FRENCH CAMEROONS. Bitey (Yaunde), Ebolowa: G. L. Bates 1910, in 1925 (neotype) (K).

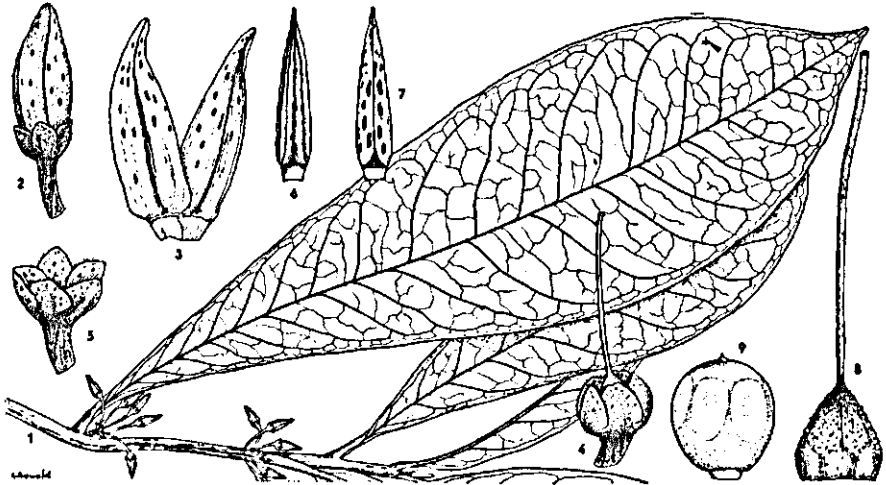


Fig. 9. *Afrardisia mayumbensis*, 1. flowering branch,  $\times \frac{1}{2}$ , 2. ♀ flower bud,  $\times 3$ , 3. petals of ♀ flower,  $\times 5$ , 4. ♀ flower,  $\times 4$ , 5. calyx of ♀ flower,  $\times 5$ , 6. and 7. stamen adaxial and abaxial,  $\times 4$ , 8. ovary of ♀ flower,  $\times 10$ , 9. placenta of ♀ flower,  $\times 15$ .

Type specimens. *Ledermann* 755; 867. The type locality is in the French Cameroons: Nkolebunde, nr Batanga, at 200 m alt. The flowers are described: „albi, roseo-maculati”. Flowers and fruits in October.

Note. The type specimens were lost at Berlin and I have decided to designate a neotype for this species. Perhaps *J. Obrunfemi*, FIII 30692, from Kumba, N Korup For. Res., Br. Cameroons (K, FIII, WAG) belongs here. This was a shrub in high forest; fruits only.

8. *Afrardisia mayumbensis* R. (Good in Journ. Bot. 65, 1927, suppl. 2, 69 — Fig. 9.

A low, soft wooded, rhizomatous shrub,  $\frac{1}{2}$  m tall; branchlets glabrous. Leaves spatulate, or narrowly oblanceolate, top acute to acuminate, base long acute, the very base sometimes abruptly narrowed, chartaceous, glabrous on both surfaces, up to 32 cm long, up to 8 cm wide, on the lower surface with numerous small raised dots, side-nerves (12—)16—20, curving and anastomosing. Petioles 1—2 cm long.

Inflorescence axillary. Flowers on 1 cm long pedicels. Sepals nearly free, suborbicular, blunt or acute, minutely fimbriate to erose, glandular,

1—1½ mm long. Petals abaxially minutely puberulous, lanceolate, acute, sparsely dotted, 6 mm long. Anthers narrowly lanceolate, dark dotted, mucronate-acute, 5 mm long. Ovary conical, minutely lepidote-hairy. Style punctate. Placenta 6-ovuled. Fruit pea-shaped, glabrous.

Specimens examined. PORTUGUESE CONGO. Mayumbe. Rio Lufo, nr Caio, Hombe region: J. Gossweiler 7674 (holotype) (BM); Buco Zau: J. Gossweiler 6898, 7091 (BM).

Note. *A. mayumbensis* is a low unbranched undershrub, ½ m tall. The corolla is violet-blue or violet-purplish, petals with a white margin. It is common in shady humid forests.

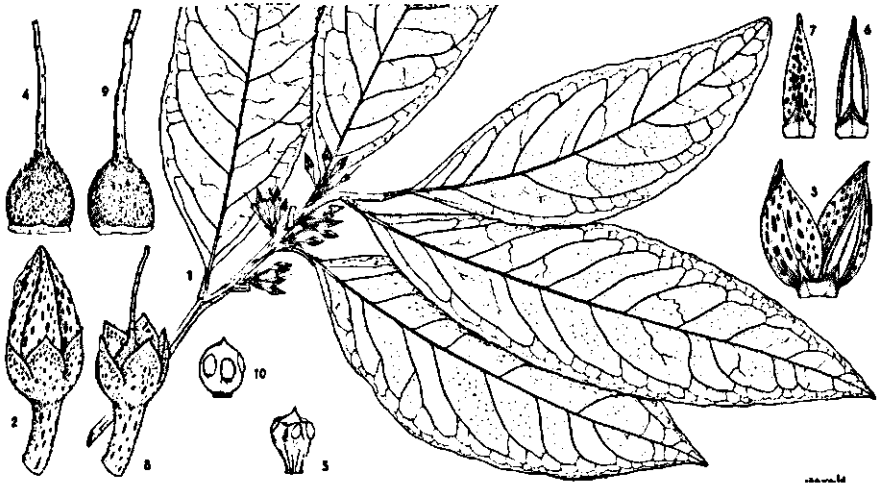


Fig. 10. *Afrardisia mildbraedii*, 1. flowering branch,  $\times \frac{1}{2}$ , 2. ♀ flower bud,  $\times 5$ , 3. petals and stamen,  $\times 5$ , 4. ovary of ♀ flower,  $\times 9$ , 5. placenta of ♀ flower,  $\times 9$ , 6. and 7. stamen, adaxial and abaxial,  $\times 5$ , 8. ♀ flower,  $\times 5$ , 9. ovary of ♀ flower,  $\times 9$ , 10. placenta of ♀ flower,  $\times 9$ .

9. *Afrardisia mildbraedii* Gilg & Schellenberg in Engl. bot. Jhrb. 48, 1912, p. 518 — Fig. 10.

A shrub, ½—1 m tall or taller, with cylindrical glabrous (when young rusty puberulous) twigs which spread horizontally. Leaves elliptic to ovate-oblong, base euneate, top long tapering, acute or slenderly acuminate, margin laxly undulate; chartaceous, on the lower surface somewhat fugaciously, minutely brown lepidote, 11—16 cm long, 4—5 cm wide, on both surfaces reticulate, without dark dots although raised blunt glands are present, 10 very conspicuous side-nerve on either side of the midrib, curving and anastomosing distantly from the margin; petioles 5—7 mm long. Pedicels stout,  $\pm 4$  mm, dotted, puberulous.

Inflorescences nodding, c. 5-flowered. Sepals ovate, triangular, acute or bluntish, 1 mm long, ciliolate, punctate, minutely lepidote-hairy. Petals narrowly ovate, punctate, acute, 3½ mm long. Anthers conspicuously dotted abaxially, not marked adaxially, ovate-oblong, submucronate. Ovary punctate.

tate, lepidote hairy in upper half. Style stout, punctate. Placenta turbinate, c. 5-ovulate, ovules widely protruding (♂ flower). ♀ flower: ovary fugaciously lepidote-hairy, punctate, placenta broadly ellipsoid, 4—5-ovulate. Fruit glistening red, 8 mm in diam., punctate.

Specimen examined. BELGIAN CONGO. Bumbuli, Lake Leo II: J. Lebrun 6534 (neotype) (BR).

Note. The holotype, *Mildbraed 5051*, collected at Assobam on the Bumba, Lomic, 3° 18'N, 14° 3'E, French Cameroons, was lost at Berlin. It is reported to have been without flowers. A specimen (leaves) of unknown origin is at Kew, on the same sheet as one leaf of the type number of *A. staudtii*. The neotype fruited in April, the flowers were pink.

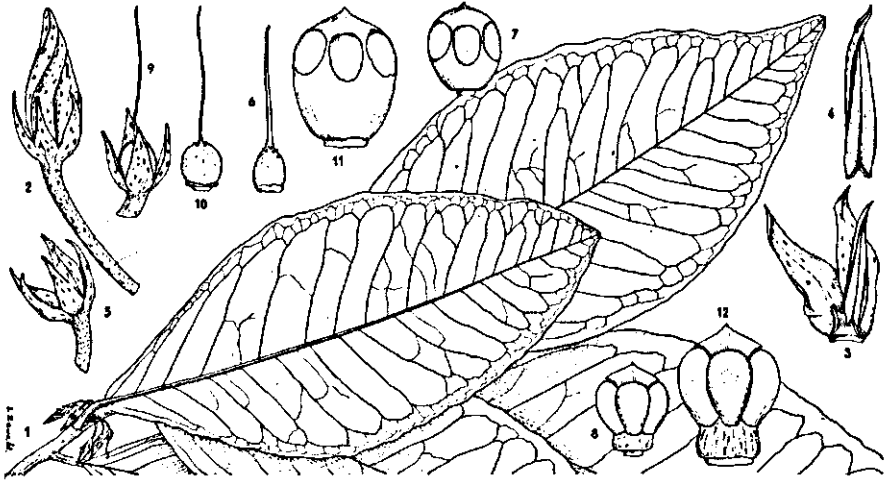


Fig. 11. *Afrardisia platyphylla*, 1. flowering twig,  $\times \frac{1}{2}$ , 2. ♀ flower bud,  $\times 3$ , 3. petals and stamen,  $\times 3$ , 4. anther,  $\times 4$ , 5. calyx of ♀ flower,  $\times 3$ , 6. ovary of ♀ flower,  $\times 4$ , 7. placenta of ♀ flower,  $\times 18$ , 8. opened placenta of ♀ flower,  $\times 18$ , 9. ♀ flower,  $\times 3$ , 10. ovary of ♀ flower,  $\times 3$ , 11. placenta of ♀ flower,  $\times 18$ , 12. opened placenta of ♀ flower,  $\times 18$ .

10. *Afrardisia oligantha* Gilg & Schellenberg in Engl. bot. Jhrb. 48, 1912, p. 517; Moss in F. W. T. A. 2, 1931, p. 15.

Probably a shrub; branchlets slender, glabrous, the young tops puberulous. Leaves elliptic, base acute or broadly cuneate, top shortly acuminate, nearly the whole margin repandingly crenulate, membranous, on the lower surface very sparsely lepidote, 8—14 cm long, 3½—5½ cm wide, with numerous small dark dots. Petioles 1—1½ cm long.

Inflorescence nodding, consisting of 10—12 flowers, equalling the petioles. Flowers in bud ovoid from the axils of small bracts, on 6—8 mm long pedicels. Sepals free, broadly ovate, mucronate, on edge denticulate-ciliolate, punctate. Petals elliptic, mucronate, punctate, 4—5 mm long. Anthers tapering to the mucronate top, punctate on the back. Ovary ovoid, on top lepidote.

Type specimen. *Weberbauer 48* (holotype) (B).

Note. The holotype originated from Mt Cameroons and was lost at Berlin. The publishing authors stress affinity to *A. huemantha* (on account of the mucronate anther) but *A. oligantha*, they say, has smaller flowers and in addition mucronate sepals and petals. I have seen no specimen belonging to *A. oligantha*.

**11. *Afrardisia platyphylla*** (Gilg & Schellenberg in Engl. bot. Jhrb. 48, 1912, 514 — Fig. 11.

A small shrub, up to 1 m tall, branchlets glabrous, slender. Leaves elliptic, base acute, top shortly acuminate to blunt, glabrous but the lower surface fugaciously sparsely brown lepidote, membranaceous, laxly but distinctly reticulate and prominently punctate on both surfaces, 12—20 cm long, 6—9 cm wide, 24—26 slender side-nerves anastomosing, margin wavy or crenulate-dentate. Petiole  $\frac{1}{2}$  cm long. Inflorescence nodding, as long as the petioles. Flowers on 8 mm long pedicels. Sepals lanceolate, very acute, ciliolate on edge, punctate,  $2\frac{1}{2}$  mm long. Petals lanceolate, acute, sparsely dotted, 5—6 mm long, white. Anthers gradually and long acute, narrow, not punctate abaxially. Ovary minutely fugaciously and sparsely brown lepidote on top. Placenta 5-ovuled, ovules nearly contiguous.

Specimen examined. FRENCH CAMEROONS. Bipinde, primary forest: Zenker 4592 (G, neotype; HBG, BM).

Note. *A. platyphylla* was based on *Ledermann 939*, collected at Nkolebunde, nr Batanga, in inundated parts of the forest in dense undergrowth. It fruited and flowered in October. The holotype was lost at Berlin. I designated *Zenker 4592* as the neotype (G).

**12. *Afrardisia polyadenia*** (Gilg) Mez in Pflzreich IV, Heft 9, Fam. 236, 1902, 185 — *Ardisia polyadenia* Gilg in Engl. bot. Jhrb. 30, 1901, 98.

Branchlets stout, young shoots appressedly rusty tomentellous. Leaves elliptic, top and base suddenly narrowed (sec. Gilg: ovate-lanceolate, top long and broadly acuminate, finally acute, base gradually narrowed, cuneate), subchartaceous (sec. Gilg: chartaceous), glabrous, 12—16 cm long, 4—6 cm wide, on the lower surface with numerous small prominent dots (sec. Gilg: on both surfaces), closely reticulate, margin conspicuously crenate (sec. Gilg: entire or unevenly and vaguely crenulate). Petiole 2— $2\frac{1}{2}$  cm long.

Inflorescences nodding, axillary, along the branches, not exceeding the petioles, consisting of c. 10 (sec. Gilg: few) crowded flowers. Flowers on c. 5 mm long, nearly glabrous pedicels. Calyx-lobes connate in the lower  $\frac{1}{4}$ , triangular-ovate, acutish, glabrous but on edge very shortly and densely ciliolate, obscurely punctate (sec. Gilg: patent or reflexed before anthesis). Petals oblong, somewhat oblique, top acuminate, c. 5 mm long, marked by dark lines and dots. Anthers very narrow, gradually narrowing to the acute top, abaxially not or scarcely punctate.

Type specimen. *Conrau 215* (B; holotype).

Distribution. N. Cameroons, nr Kebo.

Ecology. Flowers in June, red.

Note. Gilg, the first author to describe the species, and Mez, the monographer, had one collector's number at their disposal, the holotype.



Possibly this was a single specimen. This holotype was lost at Berlin and the two descriptions differ in several points, as indicated above. I have put *A. polyadenia* in the key but suggest conspecificity with *A. staudtii*. Should this suggestion prove to be correct (after collections are made in the type locality) the name *A. staudtii* ought to be used for the species and *A. polyadenia* reduced to synonymy. I have seen no specimen referable to *A. polyadenia* and the present description was composed from the combined data supplied by Gilg and by Mez.

13. *Afrardisia sadebeckiana* (Gilg) Mez in Pflzreich IV, Heft 9, Fam. 236, 1902, 187 — *Ardisia sadebeckiana* Gilg in Engl. bot. Jhrb. 30, 1901, 97 — Fig. 12.

Herbaceous or a low shrublet, with a long creeping fibrous rhizome,

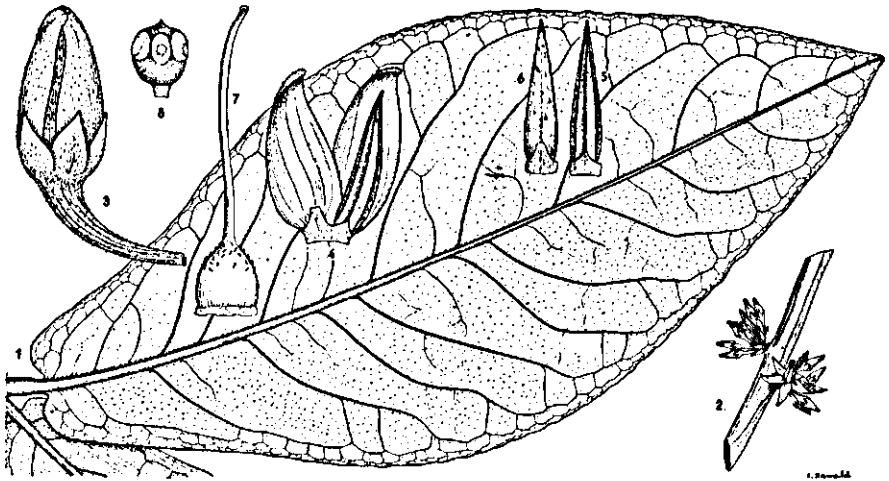


Fig. 12. *Afrardisia sadebeckiana*, 1. leaf,  $\times \frac{1}{2}$ , 2. inflorescences,  $\times \frac{1}{2}$ , 3. ♀ flower bud,  $\times 4$ , 4. petals and stamen,  $\times 4$ , 5. and 6. stamen, adaxial and abaxial,  $\times 4$ , 7. ovary of ♀ flower,  $\times 8$ , 8. placenta of ♀ flower,  $\times 8$ .

finally the flowering, leafy stem ascendent, at first very densely, if shortly, brown hairy, soon glabrous. Leaves broadly ovate, 6—12 (23) cm long, 5—8 (12) cm wide, (very broadly elliptic to suborbicular: fide Mez), top acutish, base subrotundate or towards the 1,2—2 cm long petiole rotundate-cuneate or narrowly cordate-auriculate, membranaceous, entire, completely glabrous, dull on either surface and marked by very numerous, dark dots. Side-nerves 6—8 (12), slightly depressed on the upper surface, prominent on the lower, the veins very laxly reticulate and on both sides scarcely visible. Flowers axillary, in very short, 2—3 mm long cymes, seemingly in few-flowered fascicles, distinctly pedicellate, pedicels 8—10 mm, recurved. Sepals ovate-triangular, ciliolate on edge, punctate, acute, c. 2 mm long. Petals not quite glabrous, c. 3 times as long as the sepals. Anthers not punctate, narrow, long-acute. Ovary lepidote on top. Placenta c. 5-ovulate.

Specimen examined. GABON. Mfoa, 136 km E of Gabon: *G. L. Bates 532* (neotype) (K).

Note. *Afrardisia sadebeckiana* (Gilg) Mez was based on *Dinklage 902*, the only specimen known. This was collected S of Kribi, Grand Batanga, Fr. Cameroons in October 1890, in marshy deeply shadowed forest soil, creeping, and occurring in small groups. Mez said that the petals were not punctate, Gilg placed it close to *A. schlechteri*. *Dinklage 902* was lost at Berlin.

The only specimen I have seen which seemed to belong in *A. sadebeckiana* is *Bates 532*. Bates described the stem as „succulent”, the flowers as „red-purple”. I designated this as the neotype.

14. *Afrardisia schlechteri* (Gilg) Mez in *Pflzreich IV*, Heft 9, Fam. 236, 1902, 185; *M. B. Moss* in *Hutch. & Dalz. F. W. T. A.* 2, 1931, 15 — *Ardisia schlechteri* Gilg in *Engl. bot. Jhrb.* 30, 1901, 97; in *Schlechter, West Afr. Kautsch. Exp.* 1900, 303 (*nomen*).

A  $\pm$  30 cm high, subherbaceous shrublet, with fibrous rhizomatous stems, at first very densely shortly brown tomentose, later glabrous. Leaves oblong, obovate-elliptic or broadly elliptic, broadly cuneate or tapering towards the base, top shortly acuminate, thinly membranaceous, glabrous, 8–12 cm long,  $4\frac{1}{2}$ –5 cm wide, very minutely though densely punctate below and strongly reticulate above with 10–14 side-nerves, margin entire or very vaguely undulate-crenate. Petiole 10–13 mm long.

Inflorescence very short, 3–6 flowered, the peduncle absent or nearly so. Flowers on glabrous, 3–5 mm long, recurved pedicels, in bud very narrow and acute, the petals spirally twisted. Calyx-lobes triangular-ovate, acute,  $\pm$  2 mm long ciliate (hairs capitate) on edge. Petals shortly and obliquely acuminate,  $4\frac{1}{2}$ –5 mm long, like the sepals punctate. Anthers narrow, acute.

Type specimen: *Schlechter 12117* (B, holotype).

Note. I have seen no specimen referable to *A. schlechteri*. The holotype, *Schlechter 12117*, disappeared when the Berlin Herbarium was destroyed. There are, however, three descriptions available, one by Gilg, a second by Mez, and a third by Moss. The three describers do not agree. Mez's description, moreover, did not agree with the characters ascribed to *A. schlechteri* in his key to the species. (cf. l.c. pp. 184, 185). Under these circumstances I have composed a fourth description, based on and including all characters clearly mentioned by Gilg, Mez, and Moss.

The holotype was found at Bibundi, SW of Cameroons Mountain, close to the present Cameroons frontier in S Nigeria.

15. *Afrardisia staudtii* (Gilg) Mez in *Pflzreich IV*, Heft 9, Fam. 236, 1902, 187; *Pl. Bequaert.* 3, 1925, 215 — *Ardisia staudtii* Gilg in *Engl. bot. Jhrb.* 30, 1901, 99 — *Ardisia brunneo-purpurea* Gilg in *Engl. bot. Jhrb.* 30, 1901, 98 — *Afrardisia brunneo-purpurea* (Gilg) Mez in *Pflzreich IV*, Heft 9, Fam. 236, 1902, 186 — *Ardisia haemantha* Gilg in *Engl. bot. Jhrb.* 30, 1901, 99 — *Afrardisia haemantha* (Gilg) Mez in *Pflzreich IV*, Heft 9, Fam. 236, 1902, 186 — *Fig. 13*.

A shrub, 1—2 m tall. Twigs slender, young tops rusty tomentellous. Leaves ovate-elliptic or oblong or narrowly (ob)ovate, tapering to the acute or cuneate base and the slender, acute or subacuminate top, chartaceous, glabrous but, when young, fugaciously brown lepidote on the lower surface, 13—18 cm long and 4.5—7(8) cm wide, with numerous, rather large, dark dots and both surfaces laxly reticulate, margin subentire or shallowly crenulate. Petiole slender, 4—6(15) mm long.

Inflorescences along the branches, axillary, corymbose, up to 8 flowers on stubby, warty, up to 1 cm long peduncles. Flowers on brown tomentellous or glabrous, 5—8 mm long pedicels, which thicken slightly towards the top, subtended by brown tomentellous, acute, 2 mm long bracts. Calyx-lobes

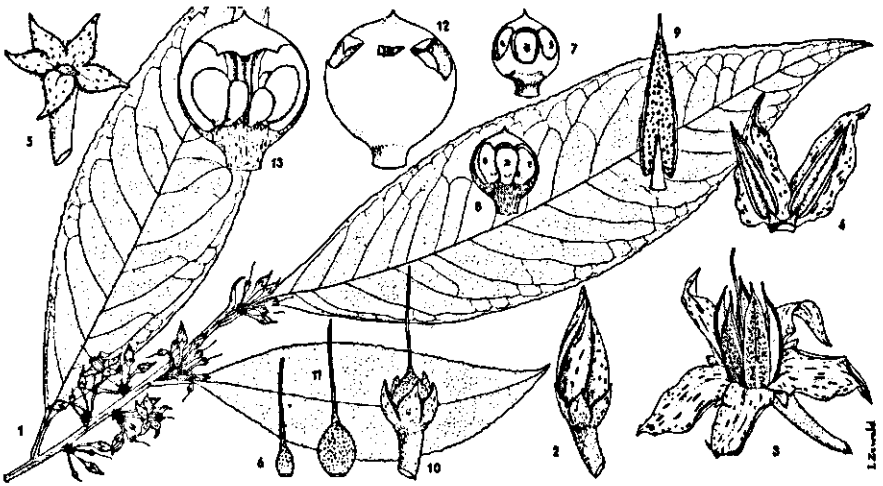


Fig. 13. *Afrardisia staudtii*, 1. flowering branch,  $\times \frac{1}{2}$ , 2. ♀ flower bud,  $\times 3$ , 3. ♀ flower,  $\times 3$ , 4. petals and stamens,  $\times 3$ , 5. calyx of ♀ flower,  $\times 3$ , 6. pistil of ♀ flower,  $\times 3$ , 7. placenta of ♀ flower,  $\times 12$ , 8. section through placenta of ♀ flower,  $\times 12$ , 9. stamen,  $\times 5$ , 10. ♀ flower, 11. pistil of ♀ flower,  $\times 3$ , 12. placenta of ♀ flower,  $\times 12$ , 13. section through placenta of ♀ flower,  $\times 12$ .

nearly free, ovate, acute or acuminate, 1—2 mm long, marked by dark dots and lines, ciliolate on edge. Petals twisted in bud, ovate-oblong, 5—6 mm long, acute, marked by numerous dark lines and dots. Anthers narrowly ovate-oblong, 4 mm long, abundantly dark punctate on the abaxial, slightly so on the adaxial side. Ovary dotted, in the ♀ flowers minutely fugaciously brown lepidote on top. Berries 6—9 mm through, regularly studded with blunt, rounded glands.

Specimens examined. NIGERIA (North), Dogon Kurmi nr. Kafanchan, c. 500 m alt.: *H. J. Killick 6* (K). FR. CAMEROONS, Yaunde Station 1890—1894: *Zenker and Staudt 382* (lectotype, BR) (P, US); Bipinde: *Zenker 4243* (BR, GOET, HBG, L, M, P, S); *Zenker 3499* (BR, GOET, HBG, L, M, P, US, Z); *Zenker 3143* (M, P); Bibundi: *Jungner 114* (UPS). BELGIAN CONGO, Yangambi, réserve Isalowe, 470 m alt.: *Jean Louis 6366* (BR), *9671* (BR), *12769* (BR); Yalibwa: *Jean Louis 9963* (BR); Source of Mbutu River: *Jean Louis 1823* (BR); Boende: *Hulstaert 377* (BR); Stanleyville: *Bequaert 6965* (BR); Banks of Bomokundu: *Claessens 991* (BR); Irumu: *Bequaert*

2967 (BR); Eala (Baluki), Route de Bolombo: *Robijns 348* (BR); Route de Coq: *Leonard 835* (BR).

Note. *A. staudtii* occurs at low or medium altitudes (up to c. 500 m) in the undergrowth of primary forests, e. g. on "terre ferme" of *Scorodophloeus zenkeri* forest, or on moist, periodically submerged, humous sands. It is a treelet with orange leaf-glands and pink or purple or red flowers. Fruits geranium red, glossy, nearly 1 cm through, containing one cinnamon-coloured seed. In Congo the vernacular name "Inaolo a okukuluka" (Turumbu) in several variations is recorded.

*A. brunneo-purpurea* was based on *Buchholz s. n.* collected in May 1874, nr Mungo, Fr. Cameroons. This was the (now lost) holotype and the only specimen ever put on record. Judging from the description it is only a

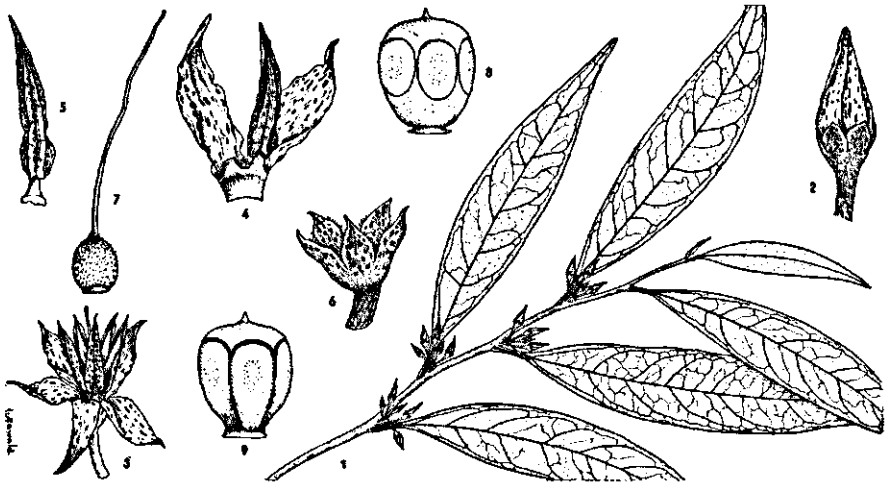


Fig. 14. *Afrardisia zenkeri*, 1. flowering branch,  $\times \frac{1}{2}$ , 2. ♀ flower bud,  $\times 3$ , 3. ♀ flower,  $\times 2$ , 4. petals and stamen,  $\times 4$ , 5. stamen,  $\times 5$ , 6. calyx of ♀ flowers,  $\times 5$ , 7. pistil of ♀ flower,  $\times 6$ , 8. placenta of ♀ flower,  $\times 20$ , 9. opened placenta of ♀ flower,  $\times 20$ .

form of *A. staudtii*, and it may also be conspecific with *A. polyadenia* (see note under that species).

The names *Ardisia haemantha* and *A. staudtii* were published simultaneously and the combinations *Afrardisia haemantha* and *Afrardisia staudtii* also were published at the same moment. I selected *Afrardisia staudtii* as the correct name.

*Ardisia haemantha* Gilg was based on *Dinklage 871* and *1053*. The type locality is in the French Cameroons, in moist forest along the Lobe river and near Ebea.

Both specimens were destroyed at Berlin. I have failed to locate any duplicate and have seen no other specimen so named by Mez, who had a knowledge of the syntypes.

The species had to be interpreted from the original description by Gilg. Mez's later description (l. c. 1902) differed in a few points.

16. *Afrardisia zenkeri* (Gilg) Mez in Pflzreich IV, Heft 9, Fam. 236, 1902, 186 — *Ardisia zenkeri* Gilg in Engl. bot. Jhrb. 30, 1901, 100 — *Afrardisia hylophila* Gilg & Schellenberg in Engl. bot. Jhrb. 48, 1912, 513 — Fig. 14.

An up to 1 m high shrub, branchlets slender, the tops appressedly brown tomentellous. Leaves lanceolate, long tapering towards both acute ends or the top slenderly acuminate, chartaceous, lower surface sparsely and fugaciously brown lepidote esp. on the midrib, finally glabrous, (8)10—14(23) cm long, 2—3(5) cm wide, nerves very slender and inconspicuous, the lower surface very laxly and delicately reticulate, dark dots sparse. Petiole slender, 0,8—1,3 cm long.

Inflorescences along the branchlets, axillary, shorter than the petioles, rhachis covered by minute, ovate bracts. Flowers on sturdy, 2—3 mm long, glabrous pedicels. Closed corolla narrowly conical, acute. Calyx-lobes  $\frac{1}{4}$  connate, ovate, very acute,  $1\frac{1}{2}$  mm long, ciliolate on edge, otherwise glabrous. Petals lanceolate-oblong, narrowing from the base, acute, glabrous, marked by dark dots and lines, 5 mm long. Anthers narrowly triangular, vaguely dotted, 4—5 mm long, gradually acute. Ovary ovoid, when young brown lepidote-hairy. Placenta 5-ovulate, ovules contiguous.

Specimens examined. NIGERIA. Benin distr., Sapeba: *J. Obrunfemi FII 34174* (K, FII, WAG). FR. CAMEROONS. Mimfia: *Zenker s.n.* (P 5308, 71, 57); *Zenker 590* (BR, FI, G, LD, P, US); *Zenker ed. Weigel 137* (G, FI); Bipinde: *Zenker s.n.* (G); *Zenker 3143* p.p. (GOETT); *Zenker 1160* (K, „*Ardisia staudtii* Gilg. n. sp.”); *Zenker 4611* (G); Lolodorf: *Staudt 299* (G) (lectotype). GABON. Libreville distr.: *E. P. Klaine 2816* (P, US).

Note. Apparently, the plants may be found in flower throughout the year, at low altitudes, in the understorey of rain forest. Fruits orange.

Mez's description (l. c., p. 186—187) refers to more crowded raised black dots near the leaf-margin. This is clearly demonstrated in *Klaine 2816* („*A. klaineana* Pierre”, a msc. name, not intended to be published), but often not evident.

*A. hylophila* Gilg & Schellenb. was based on *Ledermann 790* (Fr. Cameroons, nr Batanga, Nkolobunde). It flowered in October, flowers white. *Ledermann 790* was lost at Berlin. I find insufficient evidence in the description to distinguish between *A. zenkeri* and *A. hylophila*.

### REJECTED SPECIES

*Afrardisia didymopora* H. Perr. (Mém. Inst. Sci. Madag. sér. B, IV, 1952, 207) described for West Madagascar (see also Fl. Madag. fam. 161, 1953, 14—16) is rejected. This species is distinguished by long peduncled, corymbose-cymose inflorescences, biporous anthers, and deciduous leaves. It may represent an undescribed genus.