

**A REVISION OF THE GENUS *ARDISIA* SW.  
(MYRSINACEAE) IN NEW GUINEA**

H. SLEUMER

Rijksherbarium, Leiden, The Netherlands

SUMMARY

A taxonomic revision of the genus *Ardisia* Sw. in New Guinea, the Moluccas and the Aru Is. (but excluding the Bismarck Archipelago and the Solomon Is.), comprising 7 subgenera with a total of 31 species, of which 3 species are new to science. A key to the subgenera and keys to the species, full descriptions of all species, and an enumeration of the collections studied are given.

INTRODUCTION

This paper is the last in a series on selected genera of the Myrsinaceae in New Guinea, published before in *Blumea* [*Rapanea*: 31 (1986) 245–269; *Maesa*: 32 (1987) 39–65; *Embelia* & *Grenacheria*: 32 (1987) 385–396] and in this issue [*Discocalyx*, *Fittingia*, *Loheria* & *Tapinosperma*: 33 (1988) 81–107; *Conandrium*: 33 (1988) 109–113]. It deals with the genus *Ardisia*, represented in New Guinea by numerous species, 5 of which already mentioned in Mez' Monograph (1902) for that island.

An enormous handicap for a modern revision of the genus on the basis of the abundant collections made in New Guinea in the last four decennia is the loss of the complete type material in the Berlin Herbarium; few iso- or syntypes exist in other herbaria, mainly in A, BM, BO, K, P, U, and WRS�-Lauterbach, which have been received on loan; specimens from FU have not been available to the author.

The results of this revision are all but satisfactory. Quite a number of formerly described species remain incompletely known, and their position in the accepted subgenera doubtful as no new collections from their type areas have been made yet. Also rather numerous collections remained unnamed, mostly incompletely collected ones; these are listed at the end of this paper. Collections cited are deposited in the Rijksherbarium at Leiden (L) unless stated otherwise.

KEY TO THE SUBGENERA

Key to the subgenera of *Ardisia* in New Guinea and the adjacent areas, based on Mez' Monograph of the Myrsinaceae in *Pflanzenreich* 9 (1902) 12.



## KEY TO THE SPECIES IN NEW GUINEA AND THE MOLUCCAS

- 1a. Leaves tomentulose or stellately puberulous beneath . . . . . 2  
 b. Leaves glabrous (epilose) beneath . . . . . 3  
 2a. Leaves more or less densely rufous-tomentulose beneath . 2. *A. sideromalla*  
 b. Leaves stellately puberulous beneath . . . . . 3. *A. morobeensis*  
 3a. Calyx lobes ovate, apex rounded-obtuse. Inflorescences short-pedunculate. 4  
 b. Calyx lobes ovate-acuminate, apex subacute . . . . . 5  
 4a. Panicles including peduncle 5–6 cm long, all over fuscous-ferruginous-puberulous. . . . . 4. *A. meonobotrys*  
 b. Panicles shorter, pale rusty tomentellous, glabrescent, or glabrous  
     5. *A. imperialis*  
 5a. Inflorescences paniculate to corymbose, usually many-flowered. . . . . 6  
 b. Inflorescences racemose, few-flowered . . . . . 7  
 6a. Inflorescences peduncled for c. 2 cm; pedicels 10(–15) mm. Corolla 6 mm  
     6. *A. lauterbachii*  
 b. Inflorescences (sub)sessile; pedicels shorter. Corolla c. 3 mm  
     7. *A. ternatensis*  
 7a. Pedicels 10 mm long . . . . . 8. *A. myriosticta*  
 b. Pedicels to 5 mm long. . . . . 9. *A. ledermannii*

**2. *Ardisia sideromalla* K. Schum.**

*Ardisia sideromalla* K. Schum., Fl. Deutsch. Schutzgeb. Südsee, Nachtr. (1905) 343. – Type: *R. Schlechter 14497*, New Guinea, W. Sepik Dist., Torricelli Mts, 800 m, fl. Apr. 1902 (B, lost; BO, WRSL-Lauterbach, iso).

Small leaning few-branched tree, 2 m tall. Branchlets slender, subulate distally, 3–5 mm diam., covered with a dense dark rufous or copper-coloured wool of spreading hairs (1–2 mm) in the youngest parts. *Leaves* oblong-lanceolate, apex short-acuminate, tip bluntish, base broadly cuneate to obtuse or rounded, chartaceous to subcoriaceous, dull dark green above, paler beneath when fresh, dark brown above, reddish-brownish beneath in dry specimens, glabrous above the midrib excepted, densely covered with a redbrown soft tomentum all over beneath, the hairs on midrib and lateral nerves subetose-villose and spreading (1–2 mm), the ones on the intervenium much shorter, both faces densely glandular-punctate, entire, (7–)13–20(–24) by (2.3–)4–6 cm, midrib narrowly impressed above, bold beneath, lateral nerves 20–25 pairs, with additional less conspicuous and shorter ones between, all curved-ascending and subparallel to each other, excurrent before the edge, flat above, prominent beneath, reticulation of veins and veinlets finely raised on both faces (lens!); petiole robust, (2–)3–5(–7) by 2–2.5 mm. *Inflorescences* axillary, usually solitary, corymbose, few-flowered, on a short robust peduncle (rarely to 1.5 cm long), all over patently rufous-hirsutulous or -subetose, the corolla excepted; pedicels slender and 7–9(–10) mm at anthesis, more stoutish and to 12 mm in fruit. *Flowers* 5-merous. *Calyx* spreading, lobed halfway, lobes ovate-acuminate, ciliate, 1.5 mm, a little accrescent and reflexed in fruit. *Corolla* deeply lobed, lobes acumi-

nate-ovate, c. 4 mm. *Stamens* 2.5 mm, subsessile. *Ovary* conical, glabrous; style filiform, 3 mm; stigma punctiform. *Drupe* (LAE 52902) subglobose, short-apiculate and 5–6 mm in diam. in submature state.

*Distribution.* New Guinea, twice found in the W. Sepik Dist.

*Ecology.* In lowland and submontane rain forest, 300–800 m altitude.

NEW GUINEA. W. Sepik Dist., Amanab, Imonda patrol, 300 m, fr. submat., LAE 52902 *Streimann & Martin*.

### 3. *Ardisia morobeensis* Sleum., *spec. nov.*

Frutex vel arbuscula 1,5–3(–4) m alta. Ramuli graciles, compressi, obtuse angulati, in partibus recentissimis pube densa ferruginea stellato-puberula induti, ceterum glabrescentes. *Folia* oblonga usque elliptica, interdum latiora vel angustiora, apice breviter subacuta acuminata, basi manifeste in petiolum attenuata paulloque inaequilateralia, firme chartacea vel subcoriacea, in vivo supra saturate viridia et opaca, subtus viridia, in sicco saturate brunnea, subtus paullo pallidiora, supra glabra (epilosa), subtus sicut in ramulorum apicibus per faciem laxe vel imprimis ad costam densius brevissime ferrugineo-stellato-puberula, ceterum subdense glanduloso-punctulata, integra, (8–)9–13 cm longa, 3–4,5(–6) cm lata, costa supra anguste impressa, subtus prominente, nervis lateralibus c.a 10-paribus ceterisque paucis brevioribus intercalaribus additis, omnibus curvato-ascendentibus ante marginem excurrentibus vel obscure arcuato-conjunctis, supra sat obscuris, subtus parum elevatis, rete venarum venularumque denso utrinque leviter vel levissime elevato; petioli bene canaliculati, ferrugineo-puberuli, 8–12 mm longi, 1,5–2 mm crassi. *Inflorescentiae* axillares solitariae breviter corymbosae vel subpaniculatae, subsessiles, parce ramosae, totae (1–)1,5–2 cm longae, 8–12(–15)-florae, floribus apicem ramulorum lateralium versus subumbellatis 2–5 dense aggregatis, corollis exceptis omnino ferrugineo-stellato-puberulis; pedicelli sat graciles 2–3 mm longi. *Flores* 5-meri, albidii vel cremei, fragrantis. *Calyx* profunde lobatus, lobis ovato-subacuminatis dense pallide glanduloso-punctatis 1,3 mm longis. *Corolla* fere usque ad basin lobata, lobis oblongo-ovatis subacutis, glabris, dense lutescenti-glandulosis, 2,5(–3) mm longis. *Antherae* lanceolatae, subsagittatae, 2 mm longae; filamenta applanata, triangulares, albida, vix 0,5 mm longa. *Ovarium* subgloboso-conicum, lutescens, puberulum; stylus gracilis 1,8 mm longus. *Drupa* (NGF 35643) globosa, in vivo rubra vel saturate vinicolor, 6 mm diam., exocarpio tenuiter carnosum.

*Distribution.* New Guinea, only known from the Morobe Dist.

*Ecology.* In undergrowth of montane *Castanopsis* forest, 800–1800 m altitude.

NEW GUINEA. Morobe Dist., Manki Trig, Bulolo-Watut divide, 8 km SW of Bulolo, fl. 23 Jan. 1983, *H. Streimann 8714* (L, holotype; dupl. distributed sub '*Myristica*' to BFC and LAE). Nauti logging area, Upper Watut R., 1 km SSW of Bulolo, 1450 m, *Streimann 8706*. Track from Watut R. to Mt Amungwiwa, 1770 m, *van Royen 11179*. Bulolo, Mauki, 800 m, *Kairo 69*. Head of Bulolo R., 1370 m, *NGF 35643*. Edie creek road, about 4 miles SW of Wau, 1525 m, *Hartley (leg. Sayers) 12615*. Mt Missim, 1800 m, fl. 27 Feb. 1986, *van Valkenburg 497*.

#### 4. *Ardisia meonobotrys* K. Schum.

*Ardisia meonobotrys* K. Schum., Fl. Deutsch. Schutzgeb. Südsee, Nachtr. (1905) 342. – T y p e : R. Schlechter 14444, New Guinea, W. Sepik Dist., Torricelli Mts, 1000 m, fl. Apr. 1902 (B, lost; BO, K, P, WRSL-Lauterbach, iso).

Shrub, c. 1.2 m tall. Branchlets slender, regularly here and there fusiform-thickened (apparently due to ants), glabrous. *Leaves* oblong to elliptic-oblong, apex shortly acuminate, tip acute, base cuneate to the petiole, thin-chartaceous, dark green above, paler beneath when fresh, olive-brownish to dark brown and a little shiny above when dry, edge entire or subundulate, glabrous, subdensely set with thick, dark, slightly raised glandular dots on both faces, 12–20 by (4–)5–7.5 cm, midrib narrowly impressed above, strongly raised beneath, lateral nerves 15(–20) pairs, with several rather irregular and shorter ones between, all moderately curved-ascending and excurrent towards the edge, slightly raised mainly beneath, reticulation faint on both faces; petiole 6–12 by 1.5 mm. *Panicles* solitary, lateral, i. e. from the axil of the uppermost leaf, 5–6 cm long in all, peduncled for 2–3 cm, with 3–5 branches, each of which bears towards the apex 10–15 racemously or subumbellately arranged flowers, the whole inflorescence ferruginous-puberulous, the corolla excepted; pedicels 5–8 mm at anthesis, to 13 mm in fruit. *Flowers* 5-merous, colour not known. *Calyx* deeply lobed, lobes more or less spreading in anthesis, reflexed in fruit, ovate, obtuse, ciliate, dorsally glandular-punctate, 1.2 mm. *Corolla* deeply lobed, lobes ovate, glandular-punctate, 3–3.5 mm. *Anthers* subsagittate, subsessile. *Ovary* ovoid, subglabrous, tapering to the filiform style (2.5 mm); stigma point-like. Submature *drupe* (NGF 39325) globular, apiculate by the remnant style base, light red, c. 4 mm diam.

D i s t r i b u t i o n. New Guinea, twice found in the W. Sepik Dist.

E c o l o g y. In lowland to submontane rain forest, 100–1000 m altitude.

NEW GUINEA. W. Sepik Dist., Vanimo-Krisa road, on ridge, 100 m, NGF 39325 Streimann & Kairo.

#### 5. *Ardisia imperialis* K. Schum.

*Ardisia imperialis* K. Schum., Bot. Jahrb. 9 (Nov. 1887) 213; Fl. Kaiser-Wilhelmsland (1889) 107; Fl. Deutsch. Schutzgeb. Südsee (1900) 488; Mez, Pflanzenr. 9 (1902) 98. – T y p e : M. Hollrung 256, New Guinea, Madang Dist., 'Oberlauf des Augusta Fl.' = Upper Ramu R., defl. Aug. 1886 (B, lost; BO, K, P, WRSL-Lauterbach, iso).

*Ardisia hospitans* Laut. & K. Sch., Fl. Deutsch. Schutzgeb. Südsee (1900) 490; Mez, Pflanzenr. 9 (1902) 98. – T y p e : C. Lauterbach 3106, New Guinea, Madang Dist., Lower Ramu R., 20 m, fl. fr. 1 Oct. 1899 (B, lost; WRSL-Lauterbach, iso).

Shrub or tree with horizontal branching, 2–5(–12, very rarely –25) m tall; bark greenish brown, finely fissured. Branchlets subterete to compressed, maybe partly swollen and hollow, bearing ant-holes, glabrous. *Leaves* oblong to oblong-elliptic, apex short-acuminate, tip subacute, base cuneate to the petiole, chartaceous or subcoriaceous, dull mid to dark green above, paler beneath when fresh, dull dark brown

above, paler beneath when dry, glabrous, laxly to subdensely set with dark glandular dots which are but slightly raised on both faces of the lamina, entire, (12–)18–24 (–27) by (3.5–)5–6.5(–8, –11) cm, midrib impressed above, firmly raised beneath, lateral nerves very numerous (more than 20 pairs with additional usually shorter ones between), straight to moderately curved, all close to and subparallel with each other, rather obscure above, slightly though distinctly raised beneath, ex-current along the edge, reticulation of veins and veinlets faint above, finely raised beneath; petiole canaliculate, 1–1.5(–2.5) cm by 1.5–2 mm. *Inflorescences* lateral from (often already defoliate) axils, laxly racemose, their 5–8 flowers crowded to subumbellate distally, 2.5–6(–7) cm long in all, peduncled for 1–1.5(–3) cm, very shortly puberulous or practically glabrous, laxly glandular-punctate; rhachis compressed; pedicels stoutish, at anthesis c. 1 cm, elongate in fruit to 1.5(–2) cm. *Flowers* 5-merous, mauve pink to red or purple, rarely whitish. *Calyx* more or less spreading, deeply lobed, lobes ovate, apex rounded-obtuse, ciliolate, glandular-punctate, 1.5 mm. *Corolla* lobed almost to the base, lobes ovate-elliptic, obtuse, dark glandular-punctate, 6–8(–10) by 3–4(–6) mm. *Anthers* elongately subsagittate, dorsally glandular-punctate, 3.5–4 mm; filaments triangular, coherent at base to form a kind of ring, 1.3 mm. *Ovary* ovoid, glabrous, tapering to a slender style (4 mm); stigma point-like. *Drupe* slightly depressedly globose, 5–6 mm diam., dark red to blackish, densely glandular-punctate.

*Distribution.* New Guinea.

*Ecology.* In lowland, often riverine forest which might be flooded occasionally, also in advanced secondary forest, along edge of (semi)swampy forest, 20–450 m altitude.

NEW GUINEA. W. part: Mamberamo R., Albatros bivouac, 50 m, *Docters van Leeuwen* 9593. Idenburg R., Bernhard camp, 50 m, *Brass* 13897, 14070. Jayapura, *Sosrodihardjo* 4. Sidoarsi Mts, 200 km W of Hollandia, 200 m, *BW* 8411 *Vink*. Cyclops Ra., gully running to Kotanica, 300 m, *van Royen & Sleumer* 5852. – E. part: W. Sepik Dist., Vanimo hinterland, *LAE* 52996. Ossima village, S of Vanimo, 30 m, *NGF* 13280, 46687, 46705. Amanab, Kilifas village, 350 m, *NGF* 48223. – E. Sepik Dist., Wewak-Angoram, Lower Keram R. near junction with Sepik R., 20 m, *Pullen* 1890. Black R., S of Ambunti, 50 m, *Hoogland & Craven* 10316. – W. Highl. Dist., Jimi valley, near Ruti R., 450 m, *NGF* 38820. – Madang Dist., Ramu R., *Tappenbeck* 54 (WRSL-Lauterbach). Gogol For. Station, 150–200 m, *LAE* 54699, 54701. – Western Dist., Mt Bosavi, 600–700 m, *Jacobs* 9086, 9343 (very close if not conspecific).

## 6. *Ardisia lauterbachii* Sleum., *nom. nov.*

*Ardisia melanosticta* Laut. & K. Schum. in K. Sch., *Fl. Deutsch. Schutzgeb. Südsee* (1900) 489; *Mez, Pflanzenr.* 9 (1902) 98, non Schlechtendal, *Linnaea* 8 (1833) 526 [= *Parathesis melanosticta* (Schlechtendal) Hemsley, 1882]. – *Type*: *C. Lauterbach* 1145, New Guinea, Madang Dist., Upper Gogol R., fl. 30 Nov. 1890 (B, lost; not preserved in WRSL-Lauterbach).

Shrub with slender branches, glabrous. *Flower* bearing branchlets 3 mm diam., brownish corticate. *Leaves* lanceolate or narrowly elliptic, apex attenuate-acuminate, base cuneate, membranaceous-chartaceous, glabrous, with thick blackish glandular points on the undersurface which remains green in dry specimens, 15–22 by 4–5.5 cm, lateral nerves c. 16 pairs, with a few ± distinct ones between, prominent mainly

beneath as is the reticulation; petiole 5–8 mm. *Panicles* lateral, 3 cm long in all including the peduncle (2 cm) broken in the type specimen, the real length of the inflorescence thus not known; its branches umbellately flowered; pedicels slender, ferruginous-puberulous, red, 10–15 mm. *Flowers* 5-merous. *Calyx lobes* acute ovate, dorsally minutely tomentellous, edge leprosulous, ciliolate, not glandular-punctate, 2 mm. *Corolla* pink-red, 6 mm long, lobes ovate, obtuse, densely blackish-punctulate, 5 mm. *Anthers* acuminate, 4 mm. *Ovary* subglobose, glabrous; style 4.5 mm.

**D i s t r i b u t i o n.** New Guinea, once found in the Upper Gogol R. area of the Madang Dist.

**N o t e.** Imperfectly described on basis of a badly preserved specimen not matched yet by a recent collection from the Upper Gogol R. area. The above given description is a translation of the original Latin one.

### 7. *Ardisia ternatensis* Scheff.

*Ardisia ternatensis* Scheff., Myrsin. Arch. Ind. (1867) 58; Nat. Tijd. Ned. Ind. 32 (1872) 423; Mez, Pflanzn. 9 (1902) 102. – *Tinus ternatensis* O.Ktze, Rev. Gen. Pl. 2 (1891) 975. – **T y p e:** *W.H. de Vriese s.n.*, a. 1859/60, fl., Moluccas, Ternate (L).

*Ardisia brachybotrys* Laut. & K.Sch., Fl. Deutsch. Schutzgeb. Südsee (1900) 488. – **T y p e:** *C. Lauterbach 2796*, New Guinea, Madang Dist., Ramu R., 100 m, fr. 4 Sept. 1896 (B, lost; WRSL-Lauterbach, iso).

*Ardisia subanceps* Laut. & K.Sch., Fl. Deutsch. Schutzgeb. Südsee (1900) 489. – **T y p e:** *C. Lauterbach 1113*, New Guinea, Madang Dist., Upper Gogol R., fr. 28 Nov. 1890 (B, lost; WRSL-Lauterbach, iso).

*Ardisia rumphii* Merr., Philipp. J. Sci. 11 (1916) Bot. 301. – **T y p e:** *C.B. Robinson, Rel. 1875*, Moluccas, Amboina, Wae, 20 m, fl. 29 Nov. 1913 (PNH, lost; L, iso).

*Ardisia nabirensis* Kaneh. & Hatus., Bot. Mag. Tokyo 57 (1943) 218, f. 5. – **T y p e:** *R. Kanehira & S. Hatusima 11878*, New Guinea, W. part, Chaban, 30 km inland from Geelvink Bay, 100 m, fl. 28 Feb. 1940 (FU, n.v.).

Shrub or treelet, (1–)1.5–5(–8) m tall; bark smooth, gray-brown. Branchlets slender, compressed, a little angular by the decurrent petiole, densely minutely fuscous lepidote-puberulous on the youngest parts and on the petiole, glabrescent. *Leaves* oblong or elliptic-oblong, sometimes narrowly so, apex shortly subacuminate, tip subacute, base shortly attenuate to the petiole or almost obtuse, subcoriaceous, a little shining, dark green above, light green beneath when fresh, brown when dry, subdensely set with small, dark, glandular dots on both faces, very finely pellucid-punctate against strong light, entire, edge somewhat revolute in dry specimens, (9.5–)18–28(–37) by (4–)7.5–12 cm, midrib narrowly impressed above, bold beneath, lateral nerves 16–18(–20) pairs and a few less distinct and shorter ones between, all moderately curved-ascending, obscurely to more distinctly arching before the edge, sometimes so in the upper part of the lamina only, often slightly impressed above, always prominent beneath, reticulation of veins and veinlets dense, slightly but visibly (lens!) raised beneath; petiole (1–)1.7–2.5 cm by 2 mm. *Inflorescences* lateral, i.e. in the axils of several subsequent upper leaves which partly have gone already in flowering time, consisting of sessile many-flowered panicles which are composed of short corymbs or racemes, the flowers mainly congested to-

wards the ends of slender rachises (1.5–3.5 cm), the whole inflorescence densely rusty lepidote-puberulous, the corolla excepted; pedicels (1–)2–5 mm. *Flowers* 5-merous, white or cream, fragrant, subglobular-ovoid in bud. *Calyx* deeply lobed, lobes acuminate ovate, ciliate, laxly glandular-punctate, finally reflexed, 1–1.5 mm. *Corolla* deeply lobed, lobes ovate, subacuminate, glandular-punctate and -lineolate, 2.5 mm. *Anthers* ovate-lanceolate, cordate at base, 1.8 mm; filaments thick-filiform, c. 0.7 mm. *Ovary* short-conical, rusty-puberulous to glabrescent; style slender, 2.5 mm; stigma point-like. *Drupe* globular, orange, finally purple, densely verrucosely glandular-punctate, (4–)5–6 mm diam.

**Distribution.** Moluccas (Ternate, Amboina), Aru Is., New Guinea.

**Ecology.** In primary rain forest, also in disturbed forest or advanced re-growth, to 1800 m altitude.

**MOLUCCAS.** Ternate, not recollected for more than a century. Amboina, *de Vriese s.n.*, *Teijsmann s.n.* (cit. Scheffer, BO, n.v.).

**ARU ISLANDS.** *Moseley (Challenger Exp.) s.n.*, Sept. 1874, fr. (K).

**NEW GUINEA.** W. part: Salawati I., *BW 1335 p.p.* (BO). Vogelkop Peninsula, hills E of Sorong, *van Royen 3171*. Teminabuan, Wersar, 10 m, *BW 6318*. Kebar Valley, Asiti, 470 m, *BW 11406*. Wandammen Peninsula, Wondiwoi Mts, 920 m, *BW 13698*. Schouten Is., Japen I., Serui, *Aet & Idjan (Exp. van Dijk) 643*. Mamberamo R., Albatros bivouac, 50 m, *Docters van Leeuwen 9034*. Idenburg R., Bernhard camp, 850 m, *Brass 13638*. – E. part: W. Sepik Dist., Telefomin, Mt Mauwe, 1010 m, *LAE 73997*. – E. Sepik Dist., Sepik R. area, *Ledermann 7287* (E, n.v.), *7428* (K), *8918* (K), *9525* (K); *ibid.*, 'Lordberg', *Ledermann 10003* (K). 'Etappenberg' on April R., *Ledermann 9283* (L), *9525* (L). – W. Highl. Dist., Kopiago-Koroba road, 1465 m, *NGF 37284*. – S. Highl. Dist., Fara Ra., Erawe-Kagua road, 1800 m, *Streimann 8540*, *8554*. – E. Highl. Dist., Kainantu, Kassam pass area, 1280–1370 m, *Brass 32264*, *32449*, *NGF 29251*, *29285*, *32694*, *35715*, *41964*. Andarava village, 1600 m, *NGF 23983*. Omaura, 1675–1830 m, *Hartley 11972*, *12399*. Perosa, SW Okapa, 1525 m, *Hartley 13189*. Arau, 1400 m, *Brass 32008*. – Central Dist., Kokoda, 365 m, *Carr 16225*. Isuarava, 1220 m, *Carr 16439*.

## 8. *Ardisia myriosticta* K.Schum.

*Ardisia myriosticta* K.Schum. in K.Schum. & Laut., Fl. Deutsch. Schutzgeb. Südsee, Nachtr. (1905) 342. – Type: *R. Schlechter 14447*, New Guinea, W. Sepik Dist., Torricelli Mts, 1000 m, fl. Apr. 1902 (B, lost; apparently no duplicates preserved).

Flowering branchlets slender, terete, youngest parts 2–3 mm diam., compressed, glabrous, brownish-corticate. *Leaves* oblong-lanceolate, apex attenuate-acuminate, base acute, glabrous, yellowish-brownish when dry, multipunctate on both surfaces, 6–16 by 2–4.5 cm, lateral nerves numerous (more than 20), prominent mainly beneath as is the reticulation; petiole 5–10 mm. *Racemes* axillary, few-flowered; pedicels 10 mm. *Flowers* 5-merous. *Calyx lobes* acute, ovate, ciliate, 1.2 mm. *Corolla* 3.5–4 mm in bud, glandularly punctulate dorsally.

**Distribution.** New Guinea. Once found in the Torricelli Mts, apparently not recollected yet. Incompletely known.

**Note.** The above given description is a translation of the original Latin one. Gilli, Ann. Naturhist. Mus. Wien 83 (1980) 450, mentions *A. myriosticta* for Mt Kuta, near Mt Hagen, 2100–2300 m, leg. *Dosedla 181* (W). This specimen has not been studied by the present author.

### 9. *Ardisia ledermannii* Mez

*Ardisia ledermannii* Mez, Bot. Arch. 1 (1922) 126. – T y p e : *C. Ledermann 10974, 11359, 11475*, New Guinea, E. Sepik Dist., 'Hunsteinspitze' (= summit of Mt Sumset), fl. fr. (B, lost).

Treelet to 5 m tall. Branchlets tortuous, slender, finally grayish corticate. *Leaves* elliptic, apex elegantly acuminate, base acute, subcoriaceous, glabrous, shining, set with numerous minute, blackish, glandular points which are a little raised beneath, densely prominently reticulate on both faces, to 13 by 4 cm; petiole to 10 mm, mostly shorter. *Inflorescences* lateral, from normal leaf axils, subcorymbose, to 10 mm in length, few- (to 5-)flowered, glabrous all over; pedicels erect, to 5 mm. *Flowers* known in bud only (3 mm), reported to be reddish-yellowish. *Calyx lobes* ovate-triangular, acute, ciliolate, glandular-punctulate, c. 1.5 mm. *Corolla lobes* densely glandular-punctulate. *Stamens* slightly shorter than the corolla; anthers subtriangular, punctate dorsally; filaments very short. *Ovary* ovoid, glabrous; style very slender. *Drupe* pale red, set with prominent points, 5–6 mm diam.

*D i s t r i b u t i o n.* New Guinea, only known from the top of Mt Sumset in the Sepik R. area, not recollected yet.

*N o t e.* The above given description is a translation of the original Latin one.

### 3. Subgenus *Akosmos*

Subg. *Akosmos* Mez, Pflanzenr. 9 (1902) 102.

### 10. *Ardisia gjellerupii* Mez

*Ardisia gjellerupii* Mez, Bot. Arch. 1 (1922) 126. – T y p e s : *R. Schlechter 17816*, E. New Guinea, Madang Dist., Ibo Mts, 1000 m, fl. 29 May 1908 (B, lost; K, lecto); *K. Gjellerup 50*, W. New Guinea, Eti (cit. 'Eta') R., Hollandia (Jayapura) Dist., anno 1910 (B, syn, lost); *K. Gjellerup 253*, *ibid.*, Begowi (or Begoure, cit. 'Bogwri') R. (B, syn, lost). Both Gjellerup collections are missing in BO, L, and U.

*Ardisia tristanioides* S. Moore, J. Bot. 61 (1923) Suppl. 28. – T y p e : *H. O. Forbes 381*, E. New Guinea, Central Dist., Sogere, 600 m, fr. 7 Jan. 1886 (BM).

Small shrub; stem thick, tortuous, brown, with large scars of fallen leaves. Branchlets slender, tips subangular, essentially glabrous. *Leaves* ± narrowly oblong, apex gradually attenuate to subacuminate, tip a little falcate and subacute, base cuneately narrowed, chartaceous, brown and dull when dry, practically glabrous, laxly and minutely glandular-punctate beneath, entire, 10–17 by 2–4 cm, midrib impressed above in the lower half of the lamina only, prominent beneath, lateral nerves 15–20 pairs with additional shorter ones between, rather irregular, straight in the lower, curved-ascendent and anastomosing in the upper part, finely raised on both faces or mainly beneath only, reticulation of veins and veinlets rather obscure; petiole slender, 8–10 by 1–1.5 mm. *Inflorescences* solitary from the upper axils of the leaves on lateral branchlets, with few basal linear-lanceolate bracts, laxly squarrosely and bipinnately corymbose, 10–15-flowered, 5–10 cm long, on peduncle 3–7 cm long; rha-

chis very slender, at anthesis subdensely set with very short patent brownish hairs (lens!) as are the pedicels, the latter slender, 5–7 mm at anthesis, to 1.5 cm (and glabrescent) in fruit. *Flowers* 5-merous, pinkish, 5–6 mm diam. *Calyx lobes* subtriangular-ovate, very shortly connate at base and hardly imbricate, brownish-tomentellous dorsally, paucipunctate, eciliate, 1.2 mm. *Petals* elliptic, subacuminate, glabrous dorsally, blackish-punctate, c. 3 mm. *Anthers* ovate-acuminate, glandular-punctulate dorsally, c. 3 mm. *Ovary* subglobose, laxly lepidote in its upper part; style slender, elongate. *Drupe* globular, to 8 mm diam. when fresh; exocarp thin-fleshy, red, laxly glandular-punctate; endocarp thin, slightly ribbed vertically.

**Distribution.** New Guinea.

**Ecology.** In rain forest to 1000 m altitude.

NEW GUINEA. W. part: Holtekang near Hollandia (Jayapura), fl. fr. 12 Oct. 1954, *H.J. Lam* 7794. – E. part: Central Dist., Kairuku, Maipa airstrip, 45 m, fl. 18 Sept. 1962, *Darbyshire* 978.

#### 4. Subgenus *Stylardisia*

Subg. *Stylardisia* Mez, *Pflanzenr.* 9 (1902) 109.

#### 11. *Ardisia forbesii* S.Moore

*Ardisia forbesii* S.Moore, *J. Bot.* 52 (1914) 291; op. cit. 61 (1923) Suppl. 29, p.p. – **T y p e s** : *H.O. Forbes* 120, New Guinea, Central Dist., Mt Sogere, 610 m, fl. 20 Oct. 1888 (BM, lecto); *ibid.*, *Forbes* 483 & 656, fl. fr. (BM, syn).

*Tapeinosperma papuanum* S.Moore, *Trans. Linn. Soc. Bot.* II, 9 (1916) 105. – **T y p e** : *C.B. Kloss s.n.*, S. New Guinea, Utkwa R. to Mt Carstensz, camp VIa, 945 m, fl. buds 13 Jan. 1913 (BM; K, iso).

*Ardisia inconspicua* Mez, *Bot. Arch.* 1 (1922) 127. – **T y p e** : *C. Ledermann* 9302, New Guinea, E. Sepik Dist., Upper Sepik R. area, 'Etappenberg' (B, lost; K, L, iso).

*Ardisia acutiloba* Mez, *Bot. Arch.* 1 (1922) 128. – **T y p e s** : *C. Ledermann* 11604 & 11729, New Guinea, E. Sepik Dist., Schraderberg (B, syn, lost).

*Ardisia lepidula* Mez, *Bot. Arch.* 1 (1922) 127. – **T y p e s** : *C. Ledermann* 9112, New Guinea, E. Sepik Dist., Upper Sepik R. area, 'Etappenberg' (B, syn, lost); *C. Ledermann* 10205, *ibid.*, 'Lordberg' (B, syn, lost; L, iso); *R. Schlechter* 20225, New Guinea, Madang Dist., Torricelli Mts, 800 m, fl. 16 Oct. 1909 (B, syn, lost; K, P, iso).

*Ardisia momiensis* Kaneh. & Hatus., *Bot. Mag. Tokyo* 57 (1943) 218, f. 4, 'mominensis', ex descr. & fig. – **T y p e** : *R. Kanehira* & *S. Hatusima* 13421, W. New Guinea, Vogelkop Peninsula, Momi, about 60 miles S of Manokwari, fr. 3 Apr. 1940 (FU, n.v.).

Shrub or tree, 1.5–3(–10) m tall; bark gray, smooth. Branchlets somewhat zig-zag, compressed or subterete, densely minutely papillose-lepidote in the youngest parts, glabrescent and gray corticate below, laxly foliate towards the ends. *Leaves* elliptic-oblong to oblong-lanceolate, apex more or less elongately acuminate, tip subacute or blunt, base attenuate and maybe slightly inequilateral, chartaceous to subcoriaceous, somewhat aroid in texture, dark shiny green above, paler beneath when fresh, brown to olive-blackish and dull when dry, rather densely set with raised dark glandular points on both faces at least initially or apically, entire or faintly undulately crenate (to 1 mm) mostly in the upper part, (10–)12–18(–22) by

(2.5-)3-4(-5.5) cm, midrib narrowly impressed above, strongly prominent beneath, lateral nerves 15-20 pairs, part of which shorter and intercalary, the lowest pair from the very base in a sharp angle, the upper pairs straight from the midrib, curved halfway to the edge and anastomosing there, slightly or hardly impressed above, prominent beneath, reticulation of veins faint beneath; petiole canaliculate, (5-)8-12(-15) by 1.5-2 mm. *Inflorescences* seemingly terminal (in fact from the axil of the uppermost leaf) without basal bracts, peduncled for 2-5 cm, bipinnately paniculate, pyramidal, 6-12 by 4-7 cm, branches few, more or less transversely spreading, each bearing several peduncled (to 6 mm) umbel-like partial inflorescences, all over pale ferruginous papillose-lepidote; bracts subulate, 1 mm; pedicels rather slender, reddish, (1-)2-5 mm. *Flowers* 5-merous, pink or pale mauve to waxy white. *Calyx* deeply lobed, lobes ovate, fimbriate, dorsally laxly set with dark, large, glandular points, 1.5-1.8 mm. *Corolla* deeply partite, to 6 mm in fresh, 3(-4) mm in dry specimens, lobes acuminate ovate, very laxly or not punctate. *Anthers* subsagittate, 1.5(-2) mm; filaments flattish, 0.5 mm. *Ovary* conical, glabrous; style protruding just prior to full anthesis for c. 1.5 mm, slenderly columnar or almost filiform, 2.5-3 mm, early caducous, leaving a small thick cushion on top of the ovary or very young fruit. *Drupe* globular or slightly obovoid, glandular-punctulate, red to blackish, 6-7 mm in diam., pedicel 4-5(-10) mm; exocarp thin-coriaceous; endocarp spongy; endosperm not ruminant.

**Distribution.** New Guinea.

**Ecology.** Scattered in rain forest undergrowth, also in ridge and disturbed forest, 300-1525 m altitude.

NEW GUINEA. W. part: Vogelkop Peninsula, Arfak Mts, Minjambau, *BW 12629, 13964*. Wandammen Peninsula, Wondiwoi Mts, *BW 10653, 13588, 13609*. Nassau Mts, Explor. bivouac, *Docters van Leeuwen 10664*. Cyclops Ra., Ifar, *McKee 1858*. Schouten Is., Japen I., Serui, *Aet & Idjan (Exp. van Dijk) 275 (BO)*. - E. part: Western Dist., Mt Bosavi, *Jacobs 9008*. - W. Highl. Dist., Kopiago-Koroba road, *NGF 37357*. - S. Highl. Dist., Tari-Komo road, *Vinas 140*. - Morobe Dist., Aseki area, *Craven & Schodde 1444, LAE 51976*. Mid Waria R. valley, Wakaia, *NGF 26392*. Gurakor, *Brass 29438, 29478*. Buang track above Gabensis, *NGF 7263*. Finschhafen, Manga, *LAE 70753*. Sattelberg area, Wareo, *Clemens 1581, 1676*. Garaina, Kipu, *NGF 25704, 26120*. - Northern Dist., Hydrographers Ra., Kiporu to Kari, *Hoogland 3862*. - Central Dist., Port Moresby, Owers Corner, *UPNG 1319*. Ononge road, *Brass 3993*. Mafulu, *Brass 5147 (BO)*. - Milne Bay Dist., Maneau Ra., Mt Dayman, *Brass 23014*.

## 5. Subgenus *Acrardisia*

Subg. *Acrardisia* Mez, *Pflanzenr.* 9 (1902) 116.

### KEY TO THE SPECIES IN NEW GUINEA AND THE MOLUCCAS

- 1a. Leaves more or less deeply (2-5 mm) and irregularly ascendently serrate-laciniate. . . . . **12. *A. laciniata***  
 b. Leaves entire. . . . . **2**



ulous all over, the corolla excepted; pedicels thickish, c. 1 cm. *Flowers* 5-merous. *Calyx* deeply lobed, lobes subacuminate ovate, ciliate-papillose, c. 2 mm. *Corolla* deeply lobed, lobes ovate-lanceolate, acute, shortly glandular-lineate dorsally, c. 5 mm. *Anthers* sagittate, subsessile, c. 3.5 mm. *Ovary* glabrous; style subulate, c. 3 mm.

**Distribution.** Western New Guinea, once found inland of the Geelvink Bay.

**Ecology.** In primary forest at about 150 m altitude.

**Note.** The above given description is a translation of the original Latin one.

#### 14. *Ardisia amboinensis* Scheff.

*Ardisia amboinensis* Scheff., Myrsin. Arch. Ind. (1867) 75; Mez, Pflanzenr. 9 (1902) 110; Merr., Philipp. J. Sci. 11 (1916) Bot. 301. – **Type:** E.A. Forsten s.n. anno 1842, Moluccas, Amboina, Laha, fr. (L).

Tree or shrub? Branchlets slender, terete, nigrescent, glabrous, rather sparsely lenticelled in the youngest parts. *Leaves* oblong to elliptic-lanceolate, apex gradually narrowed, tip subacute or blunt, base slightly inequilateral, broadly cuneate, firmly chartaceous, brown to nigrescent and dull when dry, entire or very shallowly undulate, subdensely fuscous glandular-lepidote mainly towards the edge beneath, subglabrous above, epilose, edge finely revolute, 12.5–18(–20) by (3–)4–5 cm, midrib a little impressed above, prominent beneath, lateral nerves 10–12 pairs, with a few less distinct ones between, all curved-ascendent, rather indistinctly arcuately joined before the edge, flat above, slightly raised beneath, reticulation of veins and veinlets obscure; petiole (5–)8–10 by 2 mm. *Panicles* terminal or seemingly so, pyramidal, widely almost horizontally branched, to 16 by 12 cm incl. peduncle 5–10 cm, the branches distally subumbellately set with (3–)5–10 flowers, finely fuscous glandular-puberulous all over; pedicels 6–12(–16) mm. *Flowers* 5-merous, colour not known. *Calyx* lobed to 2/3, lobes slightly imbricate, ovate, glandular-punctulate, ciliate, 2 mm. *Corolla* lobed almost to the base, lobes acuminate ovate, finely glandular-punctate, 5–6 by 3 mm. *Anthers* lanceolate, acute, subsessile. *Ovary* broadly ovoid, tapering to a slender style 3 mm long and remaining included in the corolla just before full anthesis. *Drupe* subglobose or subellipsoid, blackish when dry, glandular-punctate and -lineate, 5–6 mm diam., crowned by a small circular scar; pericarp thin-coriaceous; endosperm not ruminant.

**Distribution.** Moluccas, only known from Amboina.

**Ecology.** In forest, 125–200 m altitude.

MOLUCCAS. Amboina, Hitu Messen and Hitu Lama, fl., C.B. Robinson 1883.

#### 15. *Ardisia squarrosa* Mez

*Ardisia squarrosa* Mez, Pflanzenr. 9 (1902) 110; S. Moore, J. Bot. 61 (1923) Suppl. 29. – **Types:** H.O. Forbes 363, New Guinea, Central Dist., Sogere, Meroka, fl. 1885/86 (K, lecto; L, P, iso); Forbes 548, ibid., Mt Gawada, 1525 m (K, syn).

Shrub. Branchlets slender, terete, glabrous, early grayish-corticate. *Leaves* oblong-elliptic, sometimes rather narrowly so, apex short-acuminate, tip obtuse, base cuneate, firmly chartaceous, brown above, paler beneath when dry, laxly glandular-punctate on the undersurface, a little shining, entire, 8–10 by 2.5–3.5 cm, midrib manifestly impressed all along above, strongly raised beneath, lateral nerves 8–10 pairs, rather irregular, with a few more or less distinct shorter ones between, curved-ascending and excurrent before the edge, flat above, raised beneath, reticulation of veins and veinlets dense, slightly prominent above, much more distinctly so beneath; petiole slender, 6–8 by 1 mm. *Panicles* terminal or seemingly so, laxly squarrose-bipinnate (as in *Conandrium polyanthum*), many-flowered, 8–10 cm long and almost as broad; rachis and branches slender, more or less geniculate, glabrous; pedicels slender, 6–8 mm. *Flowers* 5-merous. *Calyx* lobed to 3/4 of its length, lobes ovate, subacuminate, blackish-punctate, ciliate, 1 mm. *Corolla* deeply lobed, lobes elliptic-ovate, obtuse, blackish-punctate, 2 by 1 mm. *Stamens* free from each other; anthers lanceolate, acute, blackish-punctate dorsally, 1.5 mm; filaments very short. *Ovary* subglobular, glabrous; style 1 mm, included in bud prior to full anthesis; stigma punctiform. *Drupe* not known.

**Distribution.** New Guinea, twice found in the Sogere area of the Central Dist., not recollected.

## 6. Subgenus *Tinopsis*

Subg. *Tinopsis* Mez, Pflanzenz. 9 (1902) 120.

### KEY TO THE SPECIES IN NEW GUINEA

- 1a. Corolla c. 20 mm diam., its lobes c. 9 by 4–6 mm . . . . . 2
- b. Corolla c. 12 mm diam., its lobes c. 6 by 4 mm. Inflorescence usually a rich-flowered panicle. Leaves (10–)12–18 by 3.5–5(–6) cm; petiole 5–10 mm. E. Highl. Dist. . . . . 16. *A. kainantuensis*
- 2a. Inflorescence few-flowered, corymbose . . . . . 3
- b. Inflorescence usually many-flowered, paniculate. Leaves 14–19 by 4.5–6 cm; petiole 6–10 mm. Central Dist. . . . . 17. *A. venusta*
- 3a. Leaves 6–12 by 2–4.5 cm; petiole 2(–4) mm. Lake Habbema area . . . . . 18. *A. brassii*
- b. Leaves 14–18 by 4–5.5 cm; petiole 20–35 mm. Madang Dist. (Kani R. area) . . . . . 19. *A. aliena*

### 16. *Ardisia kainantuensis* Sleum., *spec. nov.*

Frutex vel arbuscula 0,6–1,8(–6) m alta, cortice brunneo vel griseo leviter longitudinaliter fissio, lenticellis prominentibus. *Folia* oblonga, apice breviter acuminata, ipso apice subcuta, basi cuneata, subcoriacea, in vivo supra viridia et opaca, subtus pallidiora, in sicco saturate vel olivaceo-brunnea, utrinque laxe glandulis crasse

punctiformibus atrescentibus induta, epilosa, integra, (10-)12-18 cm longa, 3,5-5 (-6) cm lata, costa supra anguste impressa, subtus prominula, nervis lateralibus 15-20-paribus ceteris paucis brevioribus intercalaribus additis utrinque elevatulis, reticulatione venarum et venularum utrinque sat obscura; petioli 5-10 mm longi, 2 mm crassi. *Paniculae* terminales, mediocres usque amplae, raro sat parvae, pyramidales, multiflorae, (5-)8-12 cm longae, basi 6-10 cm latae, ramis 2-6 plus minus horizontalibus 3-8 cm longis, 1-6 cm longe pedunculatae, ramulis lateralibus distaliter modo racemorum vel corymborum flores (3-)5-10 gerentibus, ubique brevissime ferrugineo-papilloso-lepidotae vel -puberulae, vix glanduligerae; pedicelli sub anthesi 5-8 mm longi, sub fructu usque ad 12 mm elongati. *Flores* 5-meri, rosacei vel rubescentes. *Calyx* profunde lobatus, lobis ovato-orbicularibus bene imbricatis, rubro-viridibus, margine albido-translucentibus et ciliolatis, 3 mm diam. *Corolla* profunde fissa, lobis ovatis laxe glanduloso-punctulatis 6 mm longis, 4 mm latis. *Antherae* late ovato-acuminatae, dorso glanduloso-punctulatae, 4,5 mm longae, subsessiles. *Ovarium* anguste ovoideum, in stylum gracilem sub anthesi inclusum 2,5 mm longum extenuatum; stigma punctiforme. *Drupa* (NGF 29221, *Sayers* 191) globularis, 7-10 mm diam.; exocarpium tenuiter carnosum, purpureo-atrescens; endocarpium laeve, tenuiter coriaceum.

**D i s t r i b u t i o n.** New Guinea, only known from the Kainantu area in the E. Highl. District.

**E c o l o g y.** In montane, also disturbed forest, 1280-1645 m altitude.

NEW GUINEA. E. Highl. Dist., Kainantu, 1645 m, NGF 49104; *ibid.*, Nemuka village, *Sayers* 191; *ibid.*, Kassam Pass, top at 1448 m, fl. 22 Jan. 1973, LAE 58059 *Foreman & Stevens* (L, holotype; dupl. distributed as '*Conandrium polyanthum*' to A, BISH, BRI, CANB, K, LAE, PNH, SYD, US, all n.v.); *ibid.*, at 1280 m, NGF 29221. Wonatabe, 15 miles S of Okapa, 1525 m, NGF 17668.

## 17. *Ardisia venusta* S. Moore

*Ardisia venusta* S. Moore, J. Bot. 52 (1914) 292; *op. cit.* 61 (1923) Suppl. 29. - **T y p e s :** *H.O. Forbes* 665, New Guinea, Central Dist., Korkoko Ra., Mt. Sogere, 915 m, fl. anno 1886 (BM, holotype); *ibid.*, *Forbes* 54, 118, 364, 490, 791, Sogere region, Korkoko Ra. and Meroka, fl. fr. 1885/86 (all BM, syn).

*Ardisia poolei* White & Francis ex Lane-Poole, Rep. For. Resources Terr. Papua & New Guinea (1925) 131 and Addenda 2, nom. nud., based on *C.E. Lane-Poole* 393, New Guinea, Central Dist., Owen Stanley Ra., Laruni, 1220 m, fl. Feb. 1923 (BM, K).

Slender straggling shrub or small tree. Branchlets terete, laxly foliate, lenticellate and glandular-punctate distally. *Leaves* oblong or rarely ovately so, apex attenuate or subacuminate, tip bluntish, base broadly cuneate to the petiole, thin-coriaceous, olive-brownish and dull when dry, entire, set with prominent glandular dark points on both faces, (12-)14-19 by 4.5-6 cm, midrib impressed above, strongly raised beneath, lateral nerves about 20 pairs, close and subparallel to each other, moderately curved-ascending, obscurely inarching before the edge, generally rather obscure above, slightly prominent beneath, reticulation of veins and veinlets weak, visible beneath only; petiole (5-)6-10 by 2 mm. *Panicles* terminal or seemingly so, i.e.

from the axil of the uppermost leaf, stoutish, patently several-branched, (6–)8 by 10 cm, laxly few- to rather many-flowered, the flowers arranged towards the end of the branchlets in irregular racemes, with sparse glands on rhachis and pedicels, or practically glabrous; pedicels robust (10–)12–15 mm. *Flowers* 5-merous, a little fleshy, deep pink to red or purplish. *Calyx* deeply lobed, lobes ovate-orbicular to subcordate, strongly imbricate, obtuse, ciliolate, densely glandular-punctate, c. 3 mm. *Corolla* lobed to almost the base, lobes ovate-lanceolate, fimbriate, glandular-punctate, to 9 by 6 mm. *Anthers* orange, narrowly ovate-lanceolate, acuminate, dorsally glandular-punctate, c. 7 mm. *Filaments* broadly linear, to 1 mm. *Ovary* narrowly conical; style slender, 4–5 mm, still included before full anthesis. *Drupe* (*Forbes 54*) globose, reddish purple, 7 mm diam., glands obscure, apiculate by the style remnant (1 mm).

**Distribution.** New Guinea, only known from the Central District.

**Ecology.** In forest understory, also in secondary forest, 150–1800 m altitude.

NEW GUINEA. Central Dist., Yodda R., 1370 m, *Carr 13946*. Koitaki, 455 m, *Carr 12541*. Alola, 1800 m, *Carr 13613*. Isuarava, 150–1500 m, *Carr 15361, 15952*.

### 18. *Ardisia brassii* Sleum., *spec. nov.*

Arbuscula 3 m alta. Ramuli subteretes, cito griseo-corticati, graciles, 3 mm crassi, laxe foliati. *Folia* anguste oblonga usque elliptico-oblonga, apice breviter subacuminata, ipso apice subacuta, basi in petiolum angustata, breviter subalato-petiolata vel subsessilia, subcoriacea, utrinque laxe glanduloso-punctata, epilosa, integra vel sursum levissime glanduloso-subsinuato-dentata, in sicco brunnea et opaca, (6–)8–12 cm longa, 2–4,5 cm lata, costa supra angustissime impressa, subtus bene elevata, nervis lateralibus ca. 20-paribus inter sese subparallelis, rectiusculis, prope marginem obscure curvato-confluentibus utrinque levissime sed distincte prominulis, rete venarum sat obscuro; petioli 2(–4) mm longi, 1,5 mm crassi. *Inflorescentiae* terminales, corymbosae, (2–)4–5-florae, breviter pedunculatae, totae 4–5 cm longae; rhachis sat robusta, 2–3 cm longa, glabra; pedicelli validi, distaliter paullo incrassati, laxissime glanduloso-punctati, 1,5–3 cm longi, basi bractea oblonga ca. 5 mm longa fulti. *Flores* 5-meri, rosacei. *Calyx* profunde lobatus, lobis ovato-orbicularibus bene imbricatis dorso glandulis punctiformibus minutis adspersis 3 mm longis. *Corolla* fere usque ad basin lobata, lobis imbricatis ovato-acuminatis carnosulis dorso laxe glanduloso-punctulatis 9 mm longis, 4–5 mm latis. *Antherae* lanceolatae, subsagittatae, 5 mm longae; filamenta late linearia, 1 mm longa. *Ovarium* ovoideum; stylus gracilis, ca. 4 mm longus, sub anthesi inclusus, stigmatum punctiformi. *Drupa* depresso-globosa, ca. 8 mm diam.; exocarpium tenue, carnosum, rubrum; endocarpium verticaliter costulatum.

**Distribution.** New Guinea, once found.

**Ecology.** Occasional in young secondary forest, at 2200 m altitude.

NEW GUINEA. W. part: Bele R., 18 km NE of Lake Habbema, fl. fr. Nov. 1938, *L.J. Brass 11482* (A, holo; BM, BO, iso).

**19. *Ardisia aliena* Mez**

*Ardisia aliena* Mez, Bot. Arch. 1 (1922) 255. – Type: R. Schlechter 17831, New Guinea, Madang Dist., ‘in den Wäldern am Kani’, 500 m, fl. & defl. 18 July 1908 (B, lost; K, P, iso).

Tree. Branchlets terete, glabrous, early covered with shiny vernicose cork, 5 mm diam. *Leaves* elliptic to elliptic-oblong, apex shortly (sub)acuminate, tip blunt, base cuneate, coriaceous, brown and dull when dry, subdensely set with flattish rather small glandular dots on both faces, entire, (14–)15–18 by 4.5–5.5 cm, midrib narrowly impressed above, strongly raised beneath, lateral nerves 20–25 pairs, with as many additional shorter or less obvious ones between, all in a wide angle straight from the midrib and subparallel to each other, curved before the edge and more or less confluent there, slightly raised on both faces, reticulation of veins somewhat prominent mainly beneath, that of veinlets obscure; petiole subquadrangular in dry specimens, 2–2.5 cm by 2.5 mm. *Inflorescences* originally described as lateral from the axil of squamular bracts, but in fact terminal, 2–6 cm long, racemose, laxly patently few-flowered, on stout peduncle to 4 cm long, laxly glandular-punctulate all over; pedicels robust, 10–15 mm. *Flowers* 5-merous, somewhat fleshy, c. 2 cm diam. at full anthesis. *Calyx lobes* suborbicular, distinctly imbricate, ciliate, glandular-punctate, 2–2.5 mm, finally reflexed. *Corolla* deeply lobed, lobes broadly elliptic, obtuse, rather obscurely glandular-punctate, c. 10 by 4 mm. *Anthers* narrowly sagittate, glandular-punctulate dorsally, 5–6 mm; filaments broadly linear, c. 1 mm. *Ovary* subglobose; style slender, included in the corolla just before full anthesis; stigma point-like.

*Distribution.* New Guinea, once found in the Kani area.

*Ecology.* In forest at 500 m.

Apparently close to *A. aliena* or perhaps conspecific:

NEW GUINEA. W. Sepik Dist., Amanab near Kilifas village, 275 m, fl. bud pink, NGF 48243. – Madang Dist., Ramu, N of Walium Patrol post, 290 m, LAE 75111.

**7. Subgenus *Tinus***

Subg. *Tinus* Mez, Pflanzenr. 9 (1902) 124.

**KEY TO THE SPECIES IN NEW GUINEA, MOLUCCAS, AND THE ARU ISLANDS**

- 1a. Branchlets rusty-tomentellous, or at least with scattered patent hairs at tips initially. . . . . 2
- b. Branchlets glabrous even at tips . . . . . 4
- 2a. Leaves 10–16 by 2.5–4 cm . . . . . 20. *A. lauracea*
- b. Leaves larger, to 25 by 9 cm . . . . . 3
- 3a. Leaves laxly glandular-lineolate along midrib beneath, additional to glandular points . . . . . 21. *A. novoguineensis*
- b. Leaves glandular-punctate only . . . . . 22. *A. schultzei*

- 4a. Anthers more or less halfway transversely septate (not glandular-punctate dorsally; inflorescences racemose). Cult. . . . . 23. *A. elliptica*  
 b. Anthers not septate . . . . . 5  
 5a. Inflorescences (sub)umbellate . . . . . 6  
 b. Inflorescences shortly to elongately racemose or essentially so . . . . . 7  
 6a. Umbels (sub)sessile . . . . . 24. *A. bisumbellata*  
 b. Umbels shortly pedunculate . . . . . 25. *A. dasyneura*  
 7a. Flowers 5–6 mm diam. . . . . 8  
 b. Flowers 9–10 mm diam. . . . . 9  
 8a. Leaves 5–10 by 1.5–3 cm. . . . . 26. *A. denhamioides*  
 b. Leaves 14–23 by 5.5–9 cm. . . . . 27. *A. racemigera*  
 9a. Pedicels distinctly recurved, c. 3 mm . . . . . 28. *A. decurviflora*  
 b. Pedicels suberect or spreading. . . . . 10  
 10a. Leaves c. 12 by 2.5 cm, hardly or not reticulate . . . . . 29. *A. pustulata*  
 b. Leaves c. 17 by 5 cm, distinctly reticulate . . . . . 30. *A. laxa*

## 20. *Ardisia lauracea* Mez

*Ardisia lauracea* Mez, Bot. Arch. 2 (1922) 174. — T y p e : *C. Ledermann* 9482, New Guinea, E. Sepik Dist., 'Etappenberg' on April R., fl. (B, lost; K, L, iso).

*Ardisia rigidula* Mez, Bot. Arch. 2 (1922) 34, and partly again on p. 230. — T y p e s : *C. Ledermann* 9295, New Guinea, E. Sepik Dist., 'Etappenberg' on April R., fl. (B, syn, lost; L, isolecto); *C. Ledermann* 9972, *ibid.*, 'Lordberg' (B, syn, lost; L, isosyn).

Treelet, 4–8 m tall, with thick branches. Branchlets slender, tips with scattered patent hairs, lower parts glabrescent, gray- to brownish-corticate. *Leaves* narrowly elliptic to oblong, apex gradually attenuate, tip bluntish, base attenuate, chartaceous to subcoriaceous, glabrous, glaucous-green in the dry state, with numerous rather thick glandular points beneath (one such point in each areola of the venation), edge entire in general, 10–14(–16) by 2.5–4 cm, lateral nerves very numerous, close and parallel to each other (remembering those found in *Conandrium polyanthum*), rather flat above, slightly raised beneath, reticulation of veins and veinlets dense, finely prominent on both faces; petiole a little alate in its upper part by the decurrent leaf-blade, 5–8(–10) mm. *Inflorescences* 1 or 2 from the upper axils of the leaves on a lateral branchlet (which bears normal leaves and such reduced in size), laxly squarrose and bipinnately paniculate, 2–3 cm long in all, few-flowered, glabrous, known only in immature state; pedicels slender, 5–8 mm. *Flowers* 5-merous. *Sepals* connate in their lower fourth, suborbicular, at apex incise-emarginate, laxly glandular-punctate, ciliate, c. 1.5 mm. *Petals* oblong, acute, laxly glandular-punctulate, c. 1.5 mm. *Filaments* very short; anthers glandular-punctulate dorsally. *Ovary* ellipsoid, glabrous; style rather short; stigma point-like. *Fruit* not known.

*D i s t r i b u t i o n.* New Guinea, so far known only from the E. Sepik Dist., apparently not yet recollected. Imperfectly known.

## 21. *Ardisia novoguineensis* Mez

*Ardisia novoguineensis* Mez, Bot. Arch. 1 (1922) 255. – T y p e : C. Ledermann 10556, New Guinea, E. Sepik Dist., Middle Sepik (= Kaiserin Augusta) R., Malu camp (near Ambunti), c. 80 m, fl. (B, lost; K?, n.v.). – P a r a t y p e s : C. Ledermann 6786, ibid. (B, lost), and 12320, 'Hüggellager am Sepik' (B, lost).

Treelet 4–5 m tall. Branchlets thickish, tortuous, youngest parts minutely ferruginous-tomentellous, lower ones glabrescent and covered with grayish cork. *Leaves* elliptic, apex shortly and broadly acuminate, base acute, subcoriaceous, entire, glabrous, laxly glandular-punctate and moreover set with blackish prominent glandular lines along the midrib, to 25 by 7 cm, lateral nerves dense, prominent on both faces as is the lax reticulation. *Inflorescences* lateral, basal bracts almost none, few- to 8-flowered, corymbose, short-peduncled, much shorter than the leaves; pedicels patent in anthesis, very slender, glabrous, to 20 mm long. *Flowers* pink, glabrous, in bud acute and to 8 mm long. *Calyx lobes* suborbicular, shortly connate at base, imbricate, emarginate, ciliate, densely glandular-punctate, patent-reflexed at anthesis. *Corolla lobes* shortly connate at base, apex acute, set with point-like and lineolate glands dorsally. *Stamens* manifestly shorter than the corolla; filaments very short; anthers subtriangular, densely blackish glandular-punctate dorsally. *Ovary* globose, glabrous; style slender; stigma point-like. *Drupe* globose, blackish, to 6 mm in diam., prominently glandular-punctate.

*Distribution.* New Guinea, only known from the Middle Sepik R. area, apparently not yet recollected.

*Note.* The above given description is a translation of the original Latin one.

## 22. *Ardisia schultzei* Mez

*Ardisia schultzei* Mez, Bot. Arch. 1 (1922) 256. – T y p e : L. Schultze(-Jena) 122, New Guinea, E. Sepik Dist., Sepik (= Kaiserin Augusta) R. area (B, lost).

Shrub or treelet. Branchlets subangular, initially ferruginous-tomentellous at tips, glabrescent. *Leaves* elliptic, apex broadly and very shortly acuminate, base shortly acute, chartaceous, glabrous, entire, minutely glandular-punctulate mainly above, to 25 by 9 cm, lateral nerves very numerous, close and parallel to each other, somewhat prominent on both faces, reticulation obscure; petiole c. 10 mm. *Inflorescences* lateral from the youngest branchlets, no basal bracts, densely and squarrosely subumbellate, to 10-flowered, glabrous, much shorter than the leaves, shortly pedunculate; pedicels patent, or lower ones reflexed, to 12 mm. *Flowers* known in bud state only, to 7 mm long. *Calyx lobes* almost free, distinctly imbricate, ovate-acuminate, ciliate, densely blackish glandular-punctate. *Corolla lobes* shortly connate at base, broadly elliptic, tip bluntish, very laxly blackish glandular-punctulate dorsally. *Stamens* much shorter than the corolla lobes; filaments very short; anthers elliptic-acuminate, dorsally set with a few verrucose black glandular points. *Ovary* globose, glabrous; style a little shorter than the anthers.

*Distribution.* New Guinea, once found in the Sepik R. area, not recollected.

*Note.* The description given above is a translation of the original Latin one.

### 23. *Ardisia elliptica* Thunb.

*Ardisia elliptica* Thunb., Nov. Gen. Pl. 8 (1798) 119; Merr., Lingn. Sci. J. 11 (1932) 54; Comm. Loureiro (1935) 299.

*Ardisia humilis* auct., non Vahl s.str. 1794; Mez, Pflanzenr. 9 (1902) 127, f. 20, c. syn. cet.; A.C. Smith, J. Arn. Arbor. 54 (1973) 41.

Treelet to tree, (1-)4-10 m tall. Branchlets robust, glabrous; bark brown. *Leaves* obovate-oblong to oblong, apex shortly subacuminate or obtuse, base gradually attenuate, chartaceous to subcoriaceous, brown when dry, rather laxly set with glandular points mainly beneath, entire, 8-12 by 3-4(-5) cm, lateral nerves numerous, close and parallel to each other, slightly prominent on both faces, reticulation of veins and veinlets rather dense and finely raised on both faces; petiole 10-15 mm. *Inflorescences* lateral, laxly short-racemose, rather shortly peduncled. *Flowers* pale violet to pinkish, 10-12(-15) mm in diam. when expanded. *Calyx lobes* semi-orbicular, imbricate, ciliate, with numerous minute dark glandular dots, 2.5 mm. *Corolla lobes* shortly connate at base, acuminate-ovate, with few to numerous short glandular lines. *Stamens* a little shorter than the corolla; anthers narrowly ovate-acuminate; thecae incompletely transversely septate, not glandular-punctate dorsally; filaments very short. *Ovary* subglobose, glabrous; style slender; stigma point-like. *Drupe* slightly depressedly globose, violet-blackish when ripe, to 10 mm in diam. when fresh.

**D i s t r i b u t i o n.** SE. Asia to Malesia, tropical Australia, and the Pacific, apparently in the eastern part of its distributional area known in cultivated or naturalized state only.

**E c o l o g y.** In lowland vegetation, also scrubland, abandoned gardens, often along coast, also cultivated.

MOLUCCAS. Buru, *Maskuri 1150*.

### 24. *Ardisia bisumbellata* Mez

*Ardisia bisumbellata* Mez, Bot. Arch. 1 (1922) 230. — **T y p e** : *C. Ledermann 3016*, New Guinea, W. Sepik Dist., 'Felsspitze' (West Ra.) (B, lost).

Treelet to 8 m tall. Branchlets terete, robust, glabrous, lower parts covered with gray cork. *Leaves* elliptic, apex very shortly acuminate, tip obtuse, base acute, firm, entire, glabrous, very laxly glandular-punctate, though more densely so towards the edge, to 12 by 5 cm, lateral nerves numerous, close to each other and slightly raised, reticulation lax, a little prominent; petiole to 10 mm. *Inflorescences* lateral from ultimate branchlets, with callous base, the flowers arranged in several (sub)sessile umbels, each of which bears up to 6 flowers, quite glabrous, much shorter than are the leaves; pedicels suberect, thickened distally, to 20 mm long. *Flowers* brownish green, about 6 mm long. *Calyx lobes* depressedly suborbicular, emarginate, sinistrorsally imbricate, glandular-ciliate, minutely glandular-punctulate dorsally. *Corolla lobes* shortly connate at base, broadly acute, densely minutely glandular-punctulate. *Stamens* shorter than the corolla; filaments very short; anthers subtriangular, acute,

with a few glandular points dorsally. *Ovary* ovoid, glabrous; style longer than the ovary; stigma point-like.

*Distribution.* New Guinea, once found in the Upper Sepik R. area, not yet recollected.

*Note.* According to Mez related to *A. elliptica*. The description given above is a translation from the original Latin one.

## 25. *Ardisia dasyneura* Mez

*Ardisia dasyneura* Mez, Bot. Arch. 1 (1922) 230. – *Type*: *M. Moszkowski 185*, New Guinea, W. part, Samberi (probably in the Mamberamo R. area), anno 1910 (B, lost).

Shrub or treelet. Branchlets robust, tortuous, subangular and glabrous at tips. *Leaves* elliptic, apex shortly and broadly acuminate, base acute, chartaceous, dull, entire, glabrous, sparsely and prominently glandular-punctulate, to 14 by 4.5 cm, lateral nerves numerous, close together, raised on both faces, reticulation rather obscure; petiole to 10 mm long. *Inflorescences* lateral from ultimate branchlets, basal bracts obscure, flowers to 8 in number arranged to shortly peduncled quite glabrous umbels, the latter much shorter than are the leaves; pedicels to 7 mm long. *Flowers* known in bud stage only, to 6 mm long. *Calyx lobes* shortly connate at base, imbricate, ovate-rotundate, not emarginate, distinctly ciliate all along the edge, dorsally set with numerous blackish small glands. *Corolla lobes* thick-coriaceous, very broadly ovate-elliptic, obtuse, with thick dorsal glandular points. *Stamens* much shorter than the corolla; anthers subtriangular, set with dorsal, blackish, large verrucose glandular points. *Ovary* glabrous; style almost 4 times longer than the ovary; stigma point-like.

*Distribution.* New Guinea, once found in the (Lower) Mamberamo R. area, not yet recollected.

*Note.* The description given above is a translation from the original Latin one.

## 26. *Ardisia denhamioides* S. Moore

*Ardisia denhamioides* S. Moore, Trans. Linn. Soc. Bot. II, 9 (1916) 104. – *Type*: *C. Boden Kloss s.n.*, anno 1912, S. New Guinea, Utaqua R. to Mt Carstensz, camp 1, 120 m, fl. (BM; K, iso).

*Ardisia myrcioides* S. Moore, Trans. Linn. Soc. Bot. II, 9 (1916) 104. – *Type*: *C. Boden Kloss s.n.*, S. New Guinea, Utaqua R. to Mt Carstensz, camp 6a, 945 m, fl. 5 Jan. 1913 (BM; K, iso).

Shrub or shrublet. Branchlets slender, early gray-corticate, completely glabrous, laxly foliate. *Leaves* oblong-lanceolate, apex attenuate to subacuminate, tip bluntish, base attenuate and a little decurrent on the petiole, subcoriaceous, glabrous, brownish olivaceous and dull when dry, entire, edge a little revolute, laxly glandular-punctate (one gland per areola) on both faces, 5–9(–10) by 1.5–3 cm, midrib narrowly impressed above, prominent beneath, lateral nerves 10–15 pairs, with additional shorter ones between, rather irregularly curved-ascendent, excurrent before the edge, very slightly raised above, much more distinctly so beneath, reticulation of veins and veinlets dense, finely prominent on both faces (lens!); petiole 6–8 by 1 mm. *Inflo-*

*rescences* lateral; racemes simple or rarely short-branched, solitary, from the axils of the upper leaves, slender, rather long pedunculate, few-flowered distally, completely glabrous, 3–5 cm long in all; pedicels spreading, 7–10 mm. *Flowers* 5-merous. *Calyx lobes* suborbicular, imbricate below, ciliate, glandular-punctulate dorsally, c. 1.3 mm. *Corolla* c. 2.5 mm long, deeply partite, lobes oblong, obtuse to subacuminate, rather coarsely glandular-punctate, c. 2.5 mm. *Anthers* almost sessile, 2 mm. *Ovary* ovoid; style c. 1.5 mm. *Drupe* not known.

**Distribution.** New Guinea, only known from the southern coast of the Western part, not yet recollected.

## 27. *Ardisia racemigera* Mez

*Ardisia racemigera* Mez, Pflanz. 9 (1902) 125. — **Type:** *O. Warburg 18051*, Moluccas, Batjan, fl. juven. (B, lost).

Shrub or treelet, c. 2 m tall. Branchlets somewhat compressed or subangular in the youngest, terete and pustular-lenticellate in the older parts, glabrous. *Leaves* elliptic to oblong-elliptic, sometimes subobovately so, apex short-acuminate or obtuse, base cuneate to the petiole, chartaceous to subcoriaceous, pale greenish cream above, tinged red beneath when fresh, brownish when dry, glabrous, subdensely blackish glandular-punctate, entire, 14–23 by 5.5–9 cm, midrib narrowly impressed above, robust and strongly raised beneath, lateral nerves 18–25 (or more) pairs, with several additional shorter or less distinct ones between, all moderately curved-ascending and subparallel to each other, rather flat above, raised beneath, reticulation of veins and veinlets dense, slightly prominent on both faces; petiole rugulose, 1–1.5(–2) cm by 1.5–2 mm. *Inflorescences* from the upper foliate or not rarely already defoliate axils, horizontally spreading, 3–4 cm long in all (peduncle 1–2 cm), bearing in the upper part 5–15 flowers, these racemose-corymbosely arranged, all over minutely pale lepidote, though ultimately glabrous; pedicels horizontally spreading (*de Vogel 3913*), 5–8 mm at anthesis, to 12 mm in fruit. *Flowers* 5-merous, dark to purplish red. *Calyx* deeply lobed, lobes imbricate below, ovate, obtuse, edge translucent and fimbriate, otherwise densely dark glandular-punctate, early reflexed, 2–2.5 mm. *Corolla* deeply lobed, lobes ovate-acuminate, blackish glandular-punctate dorsally, c. 3 mm. *Anthers* lanceolate, free, 2.5 mm; filaments connate, very short. *Ovary* slightly obovoid, suddenly narrowed to a short style; stigma punctiform. *Drupe* (*de Vogel 3850*) depressed-globose, pinkish red when fresh, 6–7 mm in diam. in the dry state.

**Distribution.** Moluccas, only known from Batjan.

**Ecology.** Solitary shrub in understory of lowland rain forest, on sloping hill ridge, or alluvial valley flats, on loamy soil with little humus, sometimes on places with stagnant water, 5–100 m altitude.

**MOLUCCAS.** Batjan, near Amasing Kali (0° 35' S–127° 28' E), *de Vogel 3850, 3913*. Maluku, *Whitmore et al. 3579*.

## 28. *Ardisia decurviflora* Mez

*Ardisia decurviflora* Mez, Bot. Arch. 2 (1922) 173. — **T y p e** : *L. von Roemer 1012*, New Guinea, W. part, foot of Mt Hellwig, anno 1909 (B, lost; not at BO or L).

Shrub or treelet. Branchlets rather robust, terete, glabrous even at tips, older parts covered with gray cork. *Leaves* broadly lanceolate, apex elegantly and narrowly acuminate, base gradually acutely attenuate, chartaceous, glabrous, densely, minutely, blackish glandular-punctulate, to 15 by 3 cm, very laxly and rather obscurely prominent-reticulate on both faces; petiole to 8 mm long. *Inflorescences* lateral, base ebracteolate and efoliate, densely racemose, to 10-flowered, quite glabrous, hardly longer than 4.5 cm, on elongate peduncle; pedicels markedly recurved or nodding, to 3 mm long. *Flowers* known in bud state only, decurved from the pedicels, to 6 mm long. *Calyx lobes* almost free, imbricate, suborbicular, apex rounded, ciliate by blackish glands all along the edge, dorsal glandular points small. *Corolla lobes* shortly connate at base, asymmetric, set with a few glandular points or short lines. *Anthers* subsessile, subtriangular-acuminate, with a few or one single dorsal glandular point(s). *Ovary* ellipsoid, glabrous; style almost twice as long as the ovary; stigma punctiform.

**D i s t r i b u t i o n.** New Guinea, once found in the southern part of the Orange Mts, on foot of Mt Hellwig, not recollected.

**N o t e.** According to Mez close to *A. pendula* Mez from Java. The description given above is a translation of the original Latin one.

## 29. *Ardisia pustulata* Mez

*Ardisia pustulata* Mez, Bot. Arch. 2 (1922) 174. — **T y p e s** : *L. von Roemer 722*, New Guinea, S. coast, Lorentz (Noord) R., fl. anno 1909 (B, holo, lost); *L. von Roemer 1441*, ibid. (B, para, lost). Both collections missing in BO and L.

Shrub or treelet. Branchlets slender, terete, glabrous, older parts covered with brown cork. *Leaves* lanceolate, apex elegantly acuminate, base acute, coriaceous, dull, entire, quite glabrous, densely set with large prominent glandular dots, to 12 by 2.5 cm, lateral nerves obscurely raised above, flat beneath; petiole c. 5 mm. *Inflorescences* lateral, much shorter than are the leaves, practically ebracteate, on long peduncle, quite glabrous, in short few-flowered racemes; pedicels slender, patent or curved-ascending, to 10 mm long. *Flowers* to 9 mm in diam. at anthesis. *Calyx lobes* almost free, acuminate-ovate, densely ciliate, with numerous glandular dots on the dorsal midline. *Corolla lobes* shortly connate at base, asymmetrical, with thick glandular dots and lines on the dorsal midline. *Anthers* shorter than the corolla lobes, triangular-elliptic, apex narrowly acuminate, blackish at back but only obscurely glandular-punctate there. *Ovary* subglobose, glabrous; style slender, 4 times longer than the ovary; stigma punctiform.

**D i s t r i b u t i o n.** New Guinea. Once found in flat country of the Lorentz R. of the southern coast, not recollected.

**N o t e.** The description given above is a translation of the original Latin one.

### 30. *Ardisia laxa* Mez

*Ardisia laxa* Mez, Bot. Arch. 2 (1922) 173. — T y p e : *L. von Roemer 812*, New Guinea, S. coast, Lower Lorentz (Noord) R. anno 1909 (B, lost; not in BO or L).

Shrub or treelet. Branchlets rather robust, terete, quite glabrous, older parts covered with gray cork. *Leaves* broadly oblong-lanceolate, apex elegantly acuminate, base gradually attenuate, chartaceous, glabrous, dull, densely set with minute blackish glandular dots beneath, to 17 by 5 cm, lateral nerves numerous and close together; petiole to 10 mm long. *Inflorescences* lateral, from the youngest branchlets, ebracteate, few- (to 5-)flowered, laxly short-racemose, long-peduncled, much shorter than the leaves; pedicels suberect to more patent, slender, glabrous, to 10 mm. *Flowers* c. 10 mm in diam. *Calyx lobes* almost free, imbricate, suborbicular, apex rounded, edge densely glandular-ciliate, with a few small glandular dots dorsally. *Stamens* shorter than the corolla, but as long as the style; anthers thick, triangular, subacuminate, not properly glandular-punctate dorsally; filaments very short. *Ovary* ellipsoid, glabrous; style slender; stigma punctiform.

*D i s t r i b u t i o n.* New Guinea, once found on low mountains at the Lorentz R. on the southern coast, not recollected.

*N o t e.* The description given above is a translation of the original Latin one.

#### INCOMPLETELY KNOWN

### 31. *Ardisia arcuata* Kaneh. & Hatus.

*Ardisia arcuata* Kaneh. & Hatus., Bot. Mag. Tokyo 57 (1943) 215, f. 2. — T y p e : *R. Kanehira & S. Hatusima 11646*, New Guinea, W. part, Geelvink Bay, Nabire, fr. 27 Feb. 1940 (FU, n.v.; A, BO, iso); *Kanehira & Hatusima 11524*, *ibid.* (FU, n.v.).

Shrub, 1–2 m tall. Branchlets very slender, terete, glabrous, covered with fuscous-grayish cork. *Leaves* oblong-lanceolate to oblong, apex  $\pm$  slenderly acuminate, tip bluntish, base gradually acute, membranaceous, glabrous, dull brownish olivaceous when dry, edge shallowly subsinuate-dentate, rather thickly blackish glandular-punctate beneath (one gland per areola), 10–16 by 3–4 cm, midrib impressed above, prominent beneath, lateral nerves c. 15 pairs, moderately curved-ascendent and a little irregular, almost flat above,  $\pm$  raised beneath, reticulation of veins and veinlets rather obscure (lens!); petiole verruculose, 5–10 mm. *Flowers* not known. *Infructescence* terminal, sparsely fuscous-puberulous, laxly paniculate, its primary branches much divaricate and curved, few-flowered, c. 5 cm long incl. peduncle 2–3 cm; pedicels c. 7 mm. *Calyx lobes* below the fruit rounded ovate, obtuse, ciliate, dorsally ferruginous puberulous and blackish glandular-punctate, c. 1 mm. *Drupe* (loose from the specimen!) globose, red; exocarp (not mentioned in the original description) thin-fleshy, wing-like (2–3 mm) by pressure during preparation for herbarium specimens; endocarp hard, slightly vertically ribbed, 5–6 mm in diam.

*D i s t r i b u t i o n.* New Guinea, only known from the coast of the Geelvink Bay, not recollected.

*E c o l o g y.* In rain forest at 10 m altitude.

*List of Ardisia collections not identified down to the species*

NEW GUINEA. W. part: Vogelkop Peninsula, *BW* 344, 5563, 6798, *Kostermans* 2614, 2823, 4742 (BO), *van Royen* 3065, 3145, 3920, *van Royen & Sleumer* 6801, 6868, 6873, 7100, 7310. Wandammen Peninsula, *BW* 13361, 13668, 13733. Geelvink Bay, *Ijiri & Niimura* 336, 365. McCluer Gulf, *Aet* 139, 167. Southern coast, *Aet* 374. Nassau Mts, *Docters van Leeuwen* 10808. Mamberamo R. area, *Docters van Leeuwen* 9451, 11073, 11141. Numfur I., *BW* 1082. Japen I., *Aet & Idjan* 195 (BO), 223 (BO), 538, 594. Idenburg R., *Brass* 12812, 13677 (A, BM), 13767. *Meijer Drees* 467. Baliem R., *BW* 12526. Star Mts, *Kalkman* 4374. Hollandia, *Meijer Drees* 177. Mt Cyclops, *van Royen* 3671. – E. part: W. Sepik Dist., *LAE* 64649, *NGF* 20895, 41614. – E. Sepik Dist., *LAE* 73549, *Ledermann* 10004 (B; L, fragm.). – W. Highl. Dist., *NGF* 39922, 42068 (distr. '*Horsfieldia*'), 43768 (BO). – E. Highl. Dist., *ANU* 5915, 5915A, *Brass* 31891, 32200, 32409, *NGF* 24645, 29190 (BO), 29220, 32692, 32693 (BO), *Robbins* 948, *Stauffer & Sayers* 5570, 5594. – S. Highl. Dist., *LAE* 60859, *Vinas* 122. – Gulf Dist., *Jacobs* 8812, 9401, 9437. – Madang Dist., *LAE* 50128, *Robbins* 1444. – Morobe Dist., *Clemens* 568a, 1434, 3827(A), 8626(B), *Craven & Schodde* 1208, *Hartley* 11124A & B (A), 11749, 11900 (distr. '*Phyllanthus*'), *LAE* 50472, *NGF* 8362, 17545, 17890, 21535, 27643, 29054, 42463, 44466, *Schodde* 5042. – Central Dist., *Brass* 3841 (A, BO), *Carr* 13589, 13667, 13878 (BM), 14634, *NGF* 34793, 38528, 41865. – Northern Dist., *Darbyshire* 1161. – Milne Bay Dist., *Brass* 23054, 23088, 23146, 23291, 23403, *LAE* 54048, 54084, 54150, 55652. Misima I., *LAE* 74605. Normanby I., *LAE* 67901. Woodlark I., *Brass* 28769 (distr. '*Myrtac.*'). Ferguson I., *LAE* 71023. Tagula (Sudwest) I., *Brass* 27825, 27844, 27954.

## DOUBTFUL

*Ardisia lanceolata* Roxb., *Fl. Ind.* 2 (1824) 73; *Mez*, *Pflanzenr.* 9 (1902) 122; *Holtuis*, *Blumea* 5 (1942) 224.

According to *Holtuis*, *A. lanceolata* is present on Morotai and Ceram. The Morotai specimen (*H.J. Lam* 3583, L) is very poor and apparently has lateral inflorescences; its leaves do not correspond with such of other specimens preserved at L from W. Malesia. The Ceram specimens (*de Vriese s.n.*, all in fruit) also do not belong to *A. lanceolata*; they have been seen by *Mez* for his monograph, but were not annotated by him or mentioned at all in his work.

## EXCLUDED

*Ardisia speciosa* auct., non *Blume* 1826; *Warburg*, *Bot. Jahrb.* 18 (Dec. 1893) 204, from the Finschhafen area (*Hellwig* 181, 461 & 464) = *Conandrium polyanthum* (*Laut. & K. Schum.*) *Mez*.

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*subanceps* Laut. & K. Schum. 7  
*ternatensis* Scheff. 7  
*tristanioides* S. Moore 10  
*venusta* S. Moore 17  
Tapeinosperma  
*papuanum* S. Moore 11  
*Tinus*  
*ternatensis* O. Ktze 7