
REVISION OF *ARDISIA*
SUBGENUS *AURICULARDISIA*
(MYRSINACEAE)

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ABSTRACT

A taxonomic revision of the Neotropical *Ardisia* subg. *Auriculardisia* (Lundell) Ricketson & Pipoly is presented, and a key to the Neotropical subgenera of *Ardisia* is provided. The group comprises taxa formerly placed by Lundell in his segregate genera *Auriculardisia*, *Amatania*, and *Valerioanthus*. *Ardisia* subg. *Auriculardisia* is defined by its unique calyx lobes, which are asymmetrical, usually notched just below the apex, and always auriculate basally. Six sections are recognized within *Ardisia* subg. *Auriculardisia*, comprising 75 taxa: sect. *Auriculardisia* (Lundell) Ricketson & Pipoly (4 species), sect. *Pleurobotryae* Ricketson & Pipoly (1 species), sect. *Fagerlindia* Ricketson & Pipoly (7 species), sect. *Wedelia* Ricketson & Pipoly (8 species), sect. *Amatania* (Lundell) Ricketson & Pipoly (3 species, including 6 subspecies), and sect. *Palmanae* Ricketson & Pipoly (47 species, including 2 subspecies). Thirteen new species and two new subspecies are described and illustrated. The new combinations *Ardisia pellucida* Oerst. subsp. *pectinata* (Donn. Sm.) Ricketson & Pipoly, *Ardisia liebmannii* Oerst. subsp. *jalapensis* (Lundell) Ricketson & Pipoly, and *Ardisia croatii* Lundell subsp. *correae* (Lundell) Ricketson & Pipoly are proposed. *Ardisia carchiana* and *Ardisia zakii* are transferred to *Geissanthus* as *Geissanthus carchianus* (Lundell) Ricketson & Pipoly and *Geissanthus zakii* (Pipoly) Ricketson & Pipoly.

Key words: *Ardisia* section *Amatania*, *Ardisia*, section and subgenus *Auriculardisia*, section *Fagerlindia*, Myrsinaceae, neotropics, section *Palmanae*, section *Pleurobotryae*, section *Wedelia*.

RESUMEN -

Se presenta una revisión taxonómica del subgénero neotropical *Ardisia* subg. *Auriculardisia* (Lundell) Ricketson & Pipoly y una clave para separar a los subgéneros neotropicales de *Ardisia*. El grupo comprende taxones anteriormente segregados por Lundell en sus géneros *Auriculardisia*, *amatania* y *velerioanthus*. *Ardisia* subg. *Auriculardisia* se define por el carácter único de sus lóbulos calicinos asimétricos, normalmente incisos justo debajo del ápice y siempre auriculados en la base. Se reconocen seis secciones dentro del *Ardisia* subg. *Auriculardisia*, que comprenden 75 taxones, listado a continuación: *Auriculardisia* (Lundell) Ricketson & Pipoly (4 especies), sect. *Pleurobotryae* Ricketson & Pipoly (1 especie), sect. *Fagerlindia* Ricketson & Pipoly (7 especies), sect. *Wedelia* Ricketson & Pipoly (8 especies), sect. *4, nataloia* (Lundell) Ricketson & Pipoly (3 especies, incluyendo 6 subespecies) y sect. *Palmanae* Ricketson & Pipoly (47 especies, incluyendo 2 subespecies). Se describen e ilustran trece especies y dos subespecies como nuevas para la ciencia. Se proponen tres combinaciones nuevas: *Ardisia pellucida* Oerst. subsp. *pectinata* (Donn. Sm.) Ricketson & Pipoly, *Ardisia liebmannii* Oerst. subsp. *jalapensis* (Lundell) Ricketson & Pipoly y *Ardisia croatii* Lundell subsp. *correae* (Lundell) Ricketson & Pipoly. Se transfieren *Ardisia carchiana* y *Ardisia zakii* al género *Geissanthus*, como *Geissanthus carchianus* (Lundell) Ricketson & Pipoly y *Geissanthus zakii* (Pipoly) Ricketson & Pipoly.

The pantropical *Ardisia* Sw. is the largest genus circumscription has been problematic owing to a in the family Myrsinaceae, containing perhaps as lack of comprehensive treatment since that of Mez many as 500 species (Chen & Pipoly, 1996). Its (1902) in Engler's *Das Pflanzenreich* a century ago.

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several nature reserves, *many* forests have been threatened by new roads, communication towers, and rural electrification projects. For these reasons, the species should be considered threatened.

Etymology. The specific epithet refers to the overall shape of the inflorescence resembling a raceme.

Within *Ardisia* subg. *Auriculardisia* sect. *Palmanae*, *Ardisia pseudoracemiflora* may be most easily confused with *A. hagenii* because of its elliptic leaves and pseudoracemiflora inflorescence. However *A. pseudoracemiflora* is easily separated from *A. hagenii* by its narrower, chartaceous calyx lobes to 2 mm wide, shorter corolla lobes to 6.6 mm long, shorter anthers to 3.2 mm long, shorter styles to 5.5 mm long, larger number of secondary veins of the leaf blades and thinner branchlets.

58. *Ardisia pulverulenta* Mez. in Engl., *Pflanzenr.* IV. 236 (Heft 9): 88. 1902. *Auriculardisia pulverulenta* (Mez) Lundell. *Phytologia* 54:285. 1983. TYPE: Panama. Veraguas: Cap Corrientes Feb. 1848 (fl), *B. Seemann 1093* (lectotype, designated by Lundell (1968), K!, LL neg. 1971-88!; isoclectotype BM!). Figure 58.

Shrubs or trees. Branchlets slender, terete. **exfoliating**, 3—3.5 mm diam., furfuraceous-lepidote. *Leaves with* blades membranous, elliptic, 18.5—20 X 6.7—7.9 cm. apically acute, with **an acumen** 5—7 mm long, basally obtuse, decurrent on the petiole, inconspicuously punctate and punctate-lineate glabrous above, furfuraceous-lepidote below, the midrib impressed above, prominently raised below, the secondary veins 36 to 42 pairs, prominent above and below, the margins minutely crenulate, revolute; petioles slender, marginate, 3—5 mm long, glabrous above, densely furfuraceous-lepidote below. *Inflorescences* erect, pinnate or bipinnately paniculate, 11—13.5 X 2.5—4.2 cm, pyramidal, shorter than the leaves, furfuraceous-lepidote, the branches loosely congested into 5- to 7-flowered corymbs; peduncles obsolete; inflorescence bracts unknown; inflorescence branch bracts caducous membranous, ovate, 1.5—2.2 X 1.2—1.3 mm, apically acute, prominently punctate and punctate-lineate, glabrous adaxially, furfuraceous-lepidote abaxially, the margins irregular, minutely erose, hyaline, sparsely glandular ciliolate; floral bracts similar to the inflorescence branch bracts, but 1—1.3 X 0.5—0.7 mm; pedicels slender, 1.5—2.5 mm long, prominently punctate and punctate-lineate, furfuraceous-lepidote. *Flowers* 5-merous, appearing light pink or red; calyx lobes membranous, ovate, 1.2—1.3 X 0.7—0.8 mm, apically acute, prominently punctate and punctate-lineate, furfuraceous-lepidote the margins irregular, minutely erose, hyaline, sparsely glandular ciliolate; corolla membranous 2.4—2.6 mm long, the tube 0.6—0.9 mm long, the lobes narrowly ovate, 1.7—1.8 X 1—1.2 mm, apically acute, prominently punctate and punctate-lineate glabrous throughout, the margins entire, hyaline; stamens 1.7—1.8 mm long, the filaments 0.7—0.3 mm long, the staminal tube 0.3—0.4 mm long, the apically free portions **0.3—0.5** mm long, the anthers ovoid, 1.1—1.2 X 0.6—0.7 mm, apically apiculate, basally lobate, the connective conspicuously punctate; pistil **1.5—1.6** mm long, glabrous, the ovary globose, 0.2—0.3 mm long, the style 1.2—1.4 mm long, prominently punctate, the ovules 12 to 16. *Fruits* unknown.

Distribution. *Ardisia pulverulenta* is known only from the type collection, with a vague description of location, and no elevation.

Ecology and conservation status. Because of the vague description the ecology of *Ardisia pulverulenta* is unknown. However, because it is known only from the type, it should be considered threatened.

Etymology. The specific epithet comes from Mez's description of the "Flores Pulverulento-lepidoti" meaning the lepidote scales of the flowers covered with a fine bloom or powdery matter.

Ardisia pulverulenta is most closely related to *A. knappii* (see under that species for similarities) However, *A. pulverulenta* differs from *A. knappii* by its thinner branchlets to 3.5 mm in diameter shorter and narrower leaf blades to 20 X 7.9 cm, narrower inflorescence to 4.2 cm wide, shorter and narrower calyx lobes to 1.3 X 0.8 mm, shorter and narrower corolla lobes to 1.8 X 1.2 mm, narrower anthers to 0.7 mm wide, and shorter styles to 1.4 mm long.

59. *Ardisia ruedae* Ricketson & Pipoly, sp. nov. TYPE: Nicaragua. Río San Juan: **Mpio. de San Juan del Norte**, Reserva Indio-Maiz, down river 10 km from Cerro Canta Gallo La Chiripa hunting trail, 11°07'N, 083°54'W, 100 m. 18 Sep. 1998 (fl), *R. Rueda, I. coronado, W. Velásquez & Y. Rubi* 8765 (holotype, MO!; isotype, HULE not seen). Figure 59.

Propter laminam foliarem ellipticam, pedicellos usque ad 4.5 mm longos atque stylos usque ad 3.5 mm longos *A. dunlapianae* similis, sed ab ea ramulis semiteretibus (non teretibus), laminis foliaribus coriaceis (non membraceis) nerviis secundariis 38 ad 53 (nec 23 ad 31)-jugis, lobulis calycinis ovatis (non orbicularibus) denique antheris 0.8-1.0 (non 1.1—2.1) mm latis statim cognoscitur.

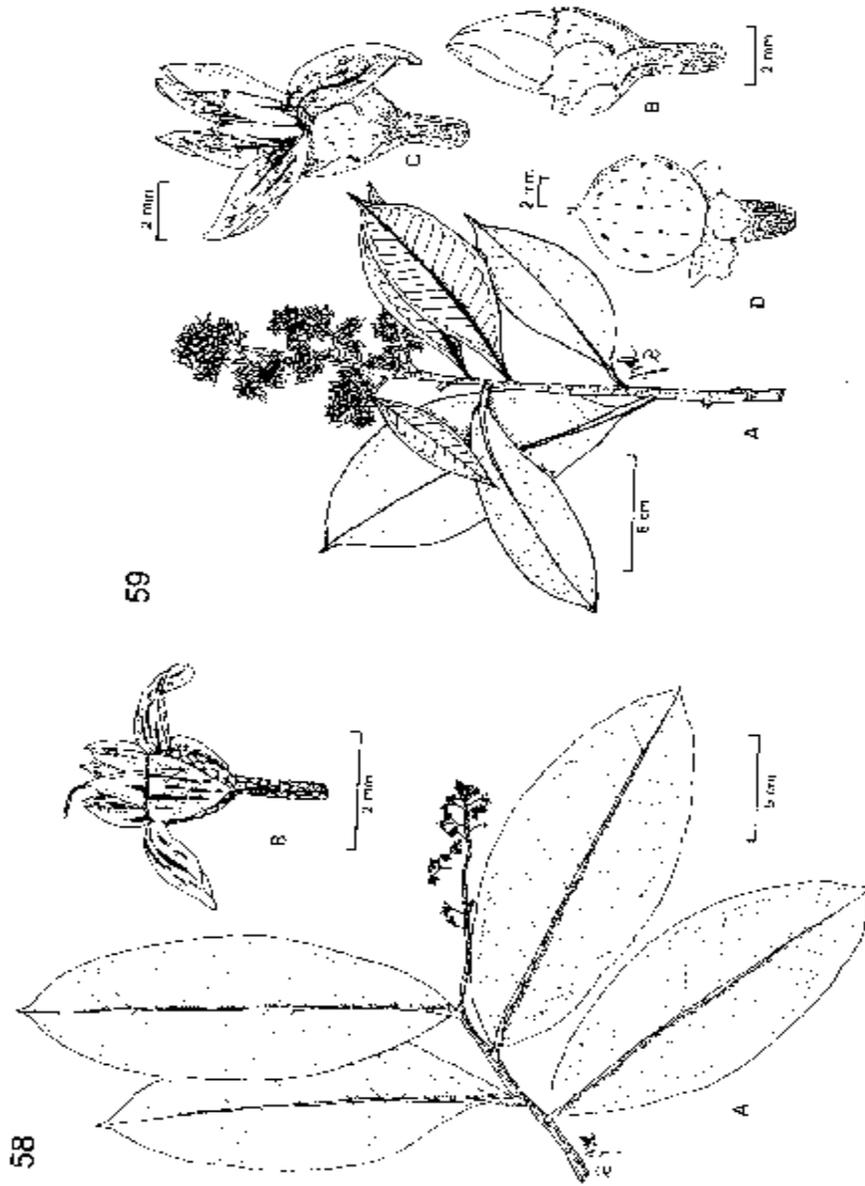


Figure 58 (left). *Ardisia puberulenta*. —A. Flowering branch. —B. Flower. (A, B drawn from B. Seemann 1893 (BM)).

Figure 59 (right). *Ardisia ruscifolia*. —A. Flowering branch. —B. Flower bud. —C. Flower. —D. Fruit. (A–C drawn from isotypes, B. Rueda et al. 8765 (MO); D from B. Rueda et al. 10022 (MO)).

Trees 5-20 m tall. *Branchlets* slender, semi-terete, 3.5-5.5 mm diam., densely and minutely appressed rufous furfuraceous-lepidote. *Leaves* with blades coriaceous elliptic, 5.5-15.6 X 2.7-7.1 cm, apically acuminate, with an acumen 5-13 mm long, basally acute, decurrent on the petiole, prominently punctate and punctate-lineate above and below, glabrous above, densely and minutely appressed furfuraceous-lepidote below, the midrib impressed above, prominently raised below, the secondary veins 38 to 53 pairs, inconspicuously raised above and below, the margins entire, flat; petioles slender, marginate, 6-14 mm long, 2-3 mm diam., glabrous above, densely and minutely appressed rufous furfuraceous-lepidote below. *Inflorescences* erect, bipinnately paniculate, 4.8x10.5x7.5 cm, pyramidal. Usually shorter to slightly longer than the leaves, the rachis, branchlets, abaxial bract surfaces, and pedicels densely and minutely rufous furfuraceous-lepidote the branches congested into 5 to 9-flowered corymbs; peduncles 1.1-2.8 cm long, the lower branches subtended by leaves; inflorescence bracts unknown; inflorescence branch bracts unknown; floral bracts caducous membranous ovate, 0.8-1.2 x 0.8-1.2 mm, apically acute, prominently punctate and punctate-lineate glabrous above, densely and minutely appressed rufous furfuraceous-lepidote below, the margins irregular, minutely erose, hyaline, sparsely glandular ciliolate; pedicels stout, 1.8-4.5 mm long, inconspicuously punctate and punctate-lineate densely and minutely appressed rufous furfuraceous-lepidote. Flowers 5-merous, yellow to purple; calyx lobes coriaceous ovate, 2.4-2.6 x 2.5-3 mm, apically rounded, prominently punctate and punctate-lineate, glabrous adaxially, densely furfuraceous-lepidote abaxially, the margins irregular, minutely erose. Hyaline, sparsely glandular ciliolate; corolla coriaceous, 6.4-6.7 mm long, the tube 2-2.1 mm long, the lobes lanceolate 4.4-4.6 x 1.8-2 mm, apically acute, prominently punctate and punctate lineate, glabrous throughout, the margins entire; stamens 5-5.5 mm long, the filaments 18-2.2 mm long, the staminal tube 0.8-1 mm long, the apically free portions 2.8-3 mm long, the anther ovate, 2.6-2.9x 0.8-1 mm, apically apiculate, basally deeply cordate the connective conspicuously punctate; pistil 4.5-5.1 mm long, glabrous, the ovary oblong, 1-1.6 mm long the style 3-3.5 mm long, prominently punctate and punctate-lineate, the ovules 38 to 44. *Fruits* globose, 7-5-8.2 mm diam., inconspicuously punctate

Distribution *Ardisia ruedae* is endemic to the Atlantic Slope of Nicaragua, in Rio San Juan and Zelaya, growing at 50 to 412 m in elevation.

Ecology and conservation status. *Ardisia ruedae* occurs in tall, pluvial forests on lateritic soils, and label data indicate that it is locally common. Rainfall in this area of Central America is comparable only to the wettest area of the Chocó Floristic Province of Colombia. Because of the remoteness of the Populations, and the fact that the land it occurs on is protected, it is probable that this species does not face immediate threat.

Etymology. It is our pleasure to name this species in honor of Ricardo Rueda, dean of arts and sciences at the Universidad Nacional Autónoma de Nicaragua-León, who is a specialist in Verbenaceae.

Within *Ardisia* subg. *Auricularidisia* sect. *Palmanae*, *Ardisia ruedae* is similar to *A. dunlapiana* because of its elliptic leaves, pedicels up to 4.5 mm long, and styles up to 3.5 mm long, but may be separated from it by the semiterete branchlets, coriaceous leaf blades with more secondary veins, ovate calyx lobes, and shorter anthers to 2.9 mm long.

Paratypes. NICARAGUA Rio San Juan: Mpio de San Juan del Norte, Reserva Indio-Maíz, Cerro El Gigante, 24 July 1996 (ster.), *R. Rueda et al.* 4458 (HULE, MO), 25 July 1996 (8), *R. Rueda et al.* 4528 (HULE, MO). 26 Sep. 1998 (ster.). *R. Rueda et al.* 9005 (HULE, MO). Zelaya: Mpio. de Nueva Guinea. Reserva Indio-MAÍZ, Rio Pijibaye entre el caño Bijagua y El Cerro Chiripa, 13 Jan. 1999 (fr), *R. Rueda et al.* 10022 (FIULE, MO). (0). *R. Rueda et al.* 10027 (HULE, MO), 15 Jan. 1999 (fr). *R. Rueda et al.* 10131 (HULE MO).

60. *Ardisia smurfitana* Ricketson & Pipoly, sp. nov. TYPE: Colombia Valle del Cauca: Bajo Calima Concesión Pulpapel. Buenaventura, carretera Nacional km 28, ca. 100 m, 03°55'N, 077°W 26 July 1989 (fl, fr), *M. Monsalve B.* 3111 (holotype, CUVCI; isotypes, FTCL, MO!). Figure 60.

Propter lobulos calycinis 0.9-1.3 x 0.7-1.1 mm, atque laminam foliarem ellipticam vel oblongam A. pulverulentae similis sed ab ea laminis foliaribus coriaceis (non membranaceis) inflorescentiis 2.5-3.2 (non 2.5-4.2) cm latis atque lobulis calycinis 0.8x1.0x0.6-1.1 (non 1.2-1.3 x 0.7-0.8) mm praecclare distat

Unknown habit or height. *Branchlets* stout, terete, horizontally checking and exfoliating, 8-11 mm diam., densely furfuraceous-lepidote. *Leaves* with blades coriaceous elliptic to oblong, 2.3-23.5 x 5-5.6 cm, apically acute, with an acumen 5-7 mm long, basally acute to cuneate, decurrent on the petiole, inconspicuously punctate and punctate-lineate, glabrous above, furfuraceous-lepidote below,