

## PARARDISIA — A NEW GENUS IN THE FAMILY MYRSINACEAE WITH TWO SPECIES

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### ABSTRACT

The paper presents description of a new genus namely *Parardisia* based on *Ardisia involucrata* Kurz alongwith another new species from Borneo. Illustrations and Key for the two species is also appended here for easy identification.

### INTRODUCTION

Kurz (1871) in Journ. As. Soc. London described *Ardisia involucrata* based on specimens collected from Sikkim Himalaya which are strikingly distinct from other species of *Ardisia* by large involucre of bracts. C B. Clarke (1882) in Hook. f. Fl. Brit. India commented for this unique species as follows : "This is a striking species that has been marked as generically distinct; but is very nearly allied to *A. humilis*" Mez (1902) in his monograph while making key to the species of *Ardisia*, considered *A. involucrata* Kurz well apart from other species only due to the presence of the unique large involucre of bracts. Further critical study reveals that not only the large involucre of bracts, but the taxon in question also possesses sepals which are larger than the petals even after anthesis and remain enclosing the fruits even when the fruits are ripen. With these sharp and distinct taxonomic characters the taxon is well established and deserves a higher taxonomic rank and as such a new genus *Parardisia* is proposed herewith based on *Ardisia involucrata* Kurz.

Further, while studying the Malayan materials deposited in Central National

Herbarium (CAL), the authors noticed a large number of collections from Borneo which also possess the characters of the new genus proposed. The specimens were also studied by J.S. Gamble who remarked on the herbarium specimens (G.D. Harland & Hore 608 A) as follows : "a remarkable and interesting species, the sepals larger than petals, bracteoles persistent" The same is also described here with illustration. The name for these Bornean plants are given in honour of J.S. Gamble for his contribution on Malayan Flora and for the valuable comments he made for this plants. *Parardisia* Nayar et Giri, *Gen. nov.*

*Affinis Ardisiae* Swartz, a qua tamen differt, bracteolis involucrium maioribus, sepalis maioribus, maturate baccarum sepalis involucrium.

Frutex vel arbor, Rami glabri vel ferrugineo lepidoti; Folia simplicia, petiolata, basi attenuata, apice acuta, margine integra, brve recurvata, nervis centralis subtus prominentia, lamina foliorum profuse minute glandula coriacea vel membranacea; petiolum prominente canaliculatus. Inflorescentia lateralis, axillaris, vel terminalis, umbellata vel corymbosa; pedunculus ad apicem incrassatus; pedicellus bracteis involucrium.

rum subtendus; bracteae concave, profuse glandulea; sepala 5, late ovate, concava, petalis longiore, glandula; Stamina 5, filamentis brevi, antheris oblongo-acutis ad anguste triangularis, dorso glandula. Stylus filamentia; stigmatum inconspicuo; bacca globosa, rubra, persistente sepalis involucreta.

*Typus* : East Himalaya, Herb. Griffith, Kew Distrib. no. 3560 (K, CAL) [*Ardisia involucreta* Kurz].

*Parardisia* Nayar et Giri, *Gen. nov.*

Closely allied to *Ardisia* Swartz, but can be easily distinguished by large involucre of bracts, larger sepals covering the mature berries.

Shrubs or small trees, branches glabrous or ferrugineously lepidote; leaves simple, petiolate, base attenuate, apex acute, margin entire, slightly recurved, midrib raised beneath, profusely gland dotted, glands minute, coriaceous or membranous, petioles deeply channelled. inflorescence lateral, axillary or terminal umbellate or corymbose, peduncle thicker towards the apex, pedicels subtended by involucre of bracts, bracts concave, profusely gland dotted; sepals 5, broadly ovate, concave, larger than the petals, gland dotted; stamens 5, filaments very short, anthers oblong-acute to narrowly triangular, gland dotted on back; style thread-like, stigma inconspicuous; berry globose, reddish, remain covered with persistent sepals.

*Type* East Himalaya, Herb. Griffith, Kew Distrib. no. 3560 (K, CAL) [*Ardisia involucreta* Kurz].

*Parardisia involucreta* (Kurz) Nayar et Giri  
*Comb. nov.*

*Ardisia involucreta* Kurz in Journ. As. Soc. Bengal 40(2) : 68. 1871.

*Type* East Himalaya, Herb. Griffith, Kew Distrib. no. 3560 (K, CAL).

Shrubs or small trees, branches strong, longitudinally striate, often covered with lenticels, glabrous, greyish; lower leaves

alternate, upper leaves spiral, subfascicled or even in whorls, ovate-oblong to oblanceolate, (4-) 10-17 (-22) × (1.8) 3-5 (-6.2) cm, base gradually narrowed, apex acute or abruptly acuminate, primary nerves many pairs, nerves forming submarginal loops, reticulations prominent beneath, both surfaces glabrous, glands minute, oval, black, coriaceous, shiny, turn dull green to dark brown on drying, petioles short, sometimes curved downwards, (3-) 5-9 (-13) mm long, glabrous. Inflorescence usually lateral or axillary, rarely pseudoterminal, racemose umbellate or subcorymbose, inflorescence borne at the apex of branches, often subtended by narrowly lanceolate leaves, peduncles strong, glabrous, 2.5-4.5 cm long (extended up to 7.5 cm on fruiting), sometimes flat, pedicels 3-7 together, 0.8-2.0 cm long, glabrous (extended up to 3.8 cm on fruiting); involucre of bracts usually as many pedicels or more, bracts oblong, obovate-oblong or obovate, (1.1-) 1.5-2.2 (-2.7) × (0.6-) 0.8-1.2 (-1.7) cm, apex subrounded to rounded, rarely obtuse or acute, finely longitudinally veined, membranous, glabrous, margin entire, profusely gland dotted, glands black, caducous or persistent, sometimes remain covering the flowering pedicels or even a portion of flower bud. Calyx polysepalous, sepals broadly ovate or boat shaped, larger than the petals, 8-12 × 6.5-8.5 mm, apex subrounded or emarginate, margin entire, glabrous, profusely gland dotted, glands usually elongate, black, sepals dark purple or rose in colour, finely veined, persistent, fruiting sepals up to 1.6 cm long, remain enclosing the ripen berries or even remain attached when mature berries are fallen. Petals broadly ovate, waxy, 8.5-10.5 × 5-7 mm, purple, gland dotted, glands elongated. Filaments very small, anthers narrowly triangular 5-7 mm long, dorsally gland dotted. Ovary globose, glabrous, style 5-7 mm long, glandular throughout the length, stigma capitate. Berries globose,

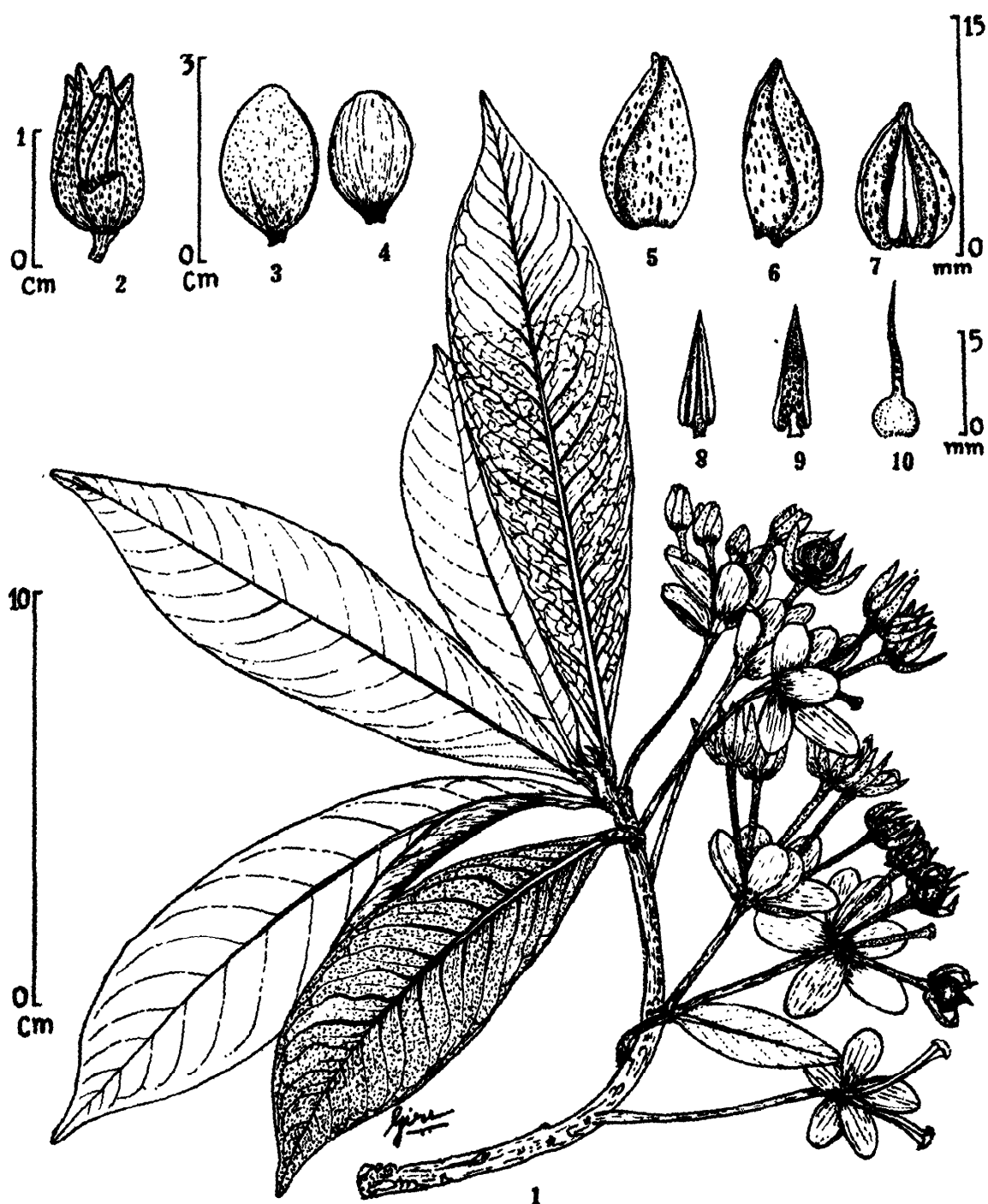


Plate 1. *P. involucrata* (Kurz) Nayar et Giri

1. Habit; 2. Flower bud; 3. & 4. Bracts; 5 & 6. Sepals; 7. Petal with stamen attached at base; 8 & 9. Stamens; 10. Gynoecium.

5-6 mm diameter, covered with globose or elongate glands often longitudinally striate, style usually remain persistent.

*Specimens examined* : East Himalaya, Herb. Griffith, Kew Distrib. no. 3560 (K, CAL); Sikkim, J.D.H., *Ardisia* 26; Bengal, Sikkim Terai, S. Kurz s. n.; Sikkim Terai, 9th Feb. 1817, Herb. Sikkimense T. Anderson s. n.; Sevoke Hills, Darjeeling, 2000 ft. Dec. 1879, J.S. Gamble 7553; Sikkim Terai, 9.2.1867, T. Anderson s. n.; Jungun Koong; Gyatong, June 1874, Gamble 2275A; Pankabari, Darjeeling, 2000 ft., Aug. 1881, Gamble 9755; Sikkim, 1879, King s. n. (CAL 278925); Sikkim, 1500 ft., 15.8.1872, King 113; Sikkim, 1800 ft., May 1862, Anderson 672; Buxa-Bhutan Road 36 mile, Jalpaiguri, 3500 ft., 16.5.1849, Narayanaswami & Party 2582; Sevoke, Bengal & Borders, 27.2.1935, K. Biswas 3210; Sevoke forest, Darjeeling, 16.5.1966, D. Das 16;

*Parardisia gamblei* Nayar et Giri, *sp. nov.*

Affinis *P. involucratae*, sed juvenile rami ferrugineo-lepidoti, foliis lanceolatis, alternatis, juvenile infra ferrugineo lepidotis, inflorescentis axillaribus vel terminalibus, bracteis brevibus ovate-acutis, dorso dense ferrugineo-lepidotis, floris subsessilibus, sepalis brevibus, ad margine minute glandulis, petalis brevibus, inconspicue glandulis differt.

*Parardisia gamblei* Nayar et Giri, *sp. nov.*

Shrubs or small trees, branches slender, younger parts angular, ferrugineously lepidote; leaves alternate, lanceolate or elliptic-lanceolate (5-) 10-15 (-24) × (2-) 3.5-4.5 (-5.5) cm, base gradually narrowed, apex acute or abruptly acuminate, margin entire, slightly recurved, midrib raised beneath, primary nerves many pairs, reticulations obscure, profusely gland dotted, glands minute, upper surface glabrous, lower surface glabrous or slightly ferrugineously lepidote when young, coriaceous,

turn dark brown on drying, petioles strong; (6-) 8-10 (-18) mm long, deeply channelled, glabrous or ferrugineously lepidote when young. Inflorescence from upper axiles of leaves or terminal corymbose or paniculately umbellate, ferrugineously lepidote, peduncles strong, flowers with a very short stalk of ca. 2 mm long, involucre of bracts ovate-oblong, concave, 4-5 × 2-3 mm, apex acute, margin fringed, dorsally densely ferrugineous lepidote, ventrally glabrous or ferrugineous lepidote towards the margin, persistent, minutely gland dotted. Calyx polysepalous, sepals broadly ovate, concave, 4.5-5.0 × 3.0-4.0 mm, apex acute or emarginate, margin fringed, glabrous on both surfaces, minutely gland dotted, pale pink in colour, remain covering the petals. Petals broadly ovate, concave, waxy, 3.5-4.0 × 2.5-3.0 mm, purple, margin entire, glands obscure. Stamens epipetalous, filaments very short, anthers oblong or ovate-oblong, 2.5 mm long, connective glandular dorsally; ovary globose, style thread like, up to 3 mm long, stigma inconspicuous. Fruit not seen.

*Type* : Near Kuching, Borneo, March 24, 1893, G.D. Haviland & C. Hore 608A (Holotype, CAL); *Ibid*. G.D. Haviland & C. Hore 608B, 608C, 608D, 608E (Isotypes, CAL).

*P. gamblei* Nayar et Giri is allied to *P. involucrata* but can be easily distinguished by ferrugineously lepidote branches particularly the younger parts; lanceolate, alternate leaves, ferrugineously lepidote beneath when young; axillary or terminal inflorescence; bracts small, ovate-acute, dorsally densely ferrugineous lepidote; flowers subsessile; sepals small, minutely glandular, fringed at margin and petals small, not prominently gland dotted.

A comparative study of taxonomic characters of the two species under the genus *Parardisia* is set out below in a tabular form for easy identification :

TABLE

|                     | <i>P. involucreta</i> (Kurz) Nayar et Giri                                                                                                                  | <i>P. gamblei</i> Nayar et Giri                                                                                                                           |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Plants              | Glabrous throughout.                                                                                                                                        | Ferrugineously lepidote particularly the younger parts.                                                                                                   |
| Leaves              | Ovate-oblong or oblong-lanceolate, lower leaves alternate, upper leaves spiral, subfascicled or in whorls, both surfaces glabrous, reticulations prominent. | Lanceolate or elliptic-lanceolate, alternate throughout, upper surface glabrous, lower surface ferrugineous lepidote when young, reticulations obscure.   |
| Inflorescence       | Usually lateral or axillar, rarely pseudoterminal umbellate, glabrous.                                                                                      | Axillary or terminal paniculately umbellate, ferrugineous lepidote.                                                                                       |
| Involucre of bracts | Obovate-oblong or obovate, (1.1-) 1.5-2.2(-2.7) × (0.6-) 0.8-1.2(-1.7) cm, apex subrounded or rounded, margin entire, glabrous.                             | Ovate-acute or ovate-oblong, 4.5 × 2-3 mm, dorsally dense ferrugineous lepidote, ventrally sparsely ferrugineous lepidote towards margin, margin fringed. |
| Pedicels            | Flowers distinctly pedicellate, pedicels 0.8-2.0 cm long (up to 3.8 cm long on fruiting), glabrous.                                                         | Flowers subsessile, pedicels ca. 2 mm long, ferrugineous lepidote.                                                                                        |
| Sepals              | Large, 8-12 × 6.5-8.5 mm, margin entire, glands many, elongate.                                                                                             | Small, 4.5-5.0 × 3.0-4.0 mm, margin fringed, glands few, minute, oval.                                                                                    |
| Petals              | Large, 8.5-10.5 × 5-7 mm, glands many, prominent, elongate.                                                                                                 | Small, 3.5-4.0 × 2.5-3.0 mm, glands obscure.                                                                                                              |
| Anthers             | Narrowly triangular, 5-7 mm long, prominently gland dotted on back.                                                                                         | Oblong or ovate-oblong, 2.5 mm long, sparsely gland dotted on the connective.                                                                             |

## REFERENCES

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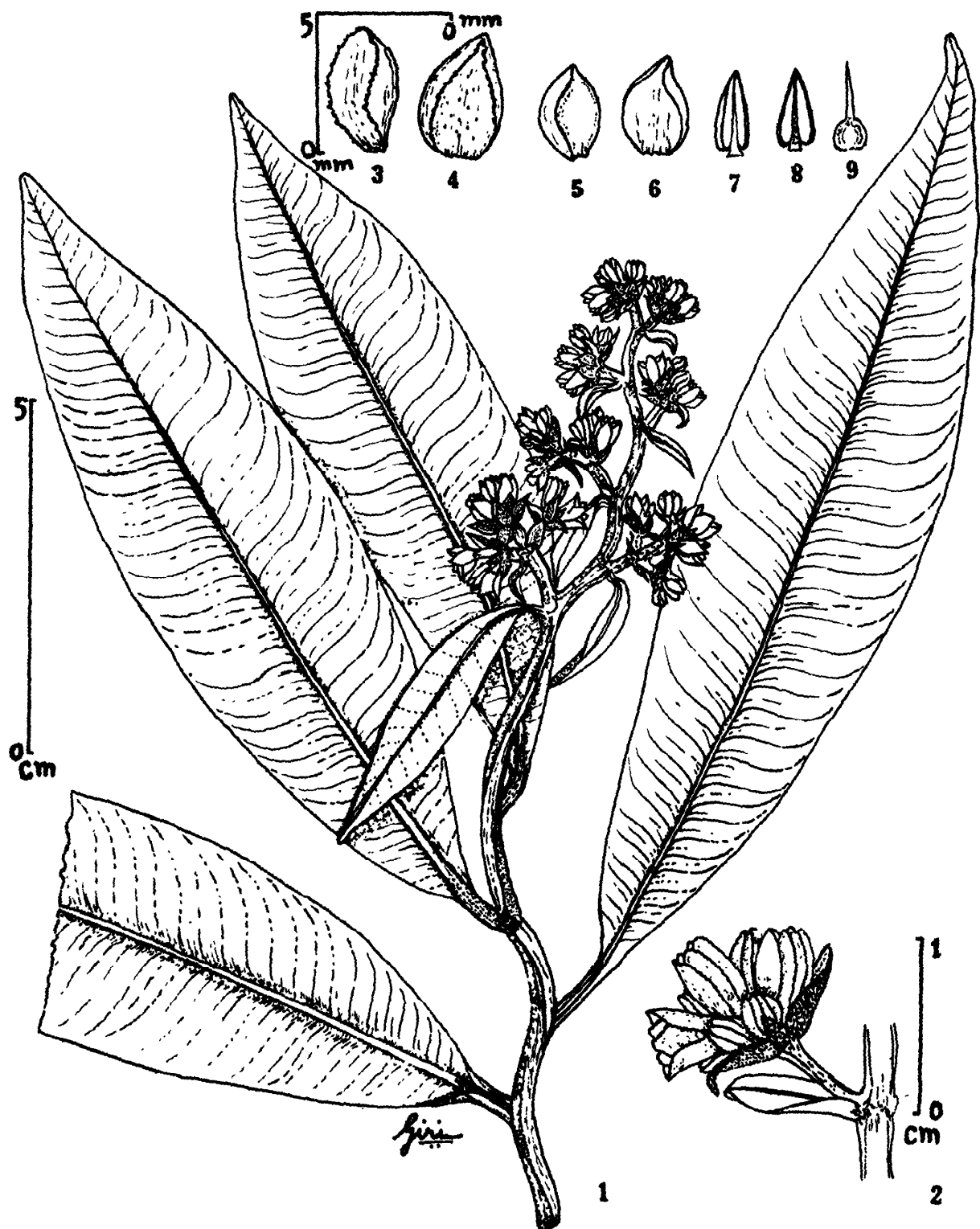


Plate 2. *P. gamblei* Nayar et Giri

1. Habit; 2. Part of inflorescence showing involucre of bracts and sessile or subsessile flowers; 3 & 4. Sepals; 5 & 6. Petals; 7 & 8. Stamens, 9. Gynoecium.