

CYRTANDRA AND CYRTANDROMOEAE ON THE NICOBAR ISLANDS, INDIA

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ABSTRACT. A new species of *Cyrtandra* (Gesneriaceae), *C. burtii* Balakr., is described, and illustrated, from Great Nicobar Island in the Bay of Bengal, India. On the same island, the genus *Cyrtandromoea* (Scrophulariaceae) has been re-discovered; the species, originally described as *Cyrtandra acuminata* Kurz, has no name in *Cyrtandromoea* and is now designated *C. nicobarica* Balakr. A detailed description and illustration are given.

A NEW SPECIES OF CYRTANDRA

While surveying the flora of Great Nicobar, the southernmost island of the Andaman and Nicobar group, lying about 125 miles northwest of Sumatra in the Bay of Bengal, an undescribed species of *Cyrtandra* was collected. On detailed study this was found to be related to *C. sulcata* Bl. of Java but differed in being a shorter and scarcely branched plant with mainly terete stems, longer creamy-white corolla and with longer linear-ellipsoid berries. This is described below with illustrations prepared mainly from liquid-preserved material.

Cyrtandra burtii Balakr., sp. nov. Fig. 1.

Differt a *C. sulcata* Bl., planta brevior; caule praecipue tereti apicibus exceptis, vix ramoso; corolla longior, 1.6–1.8 cm longa, cremeo-albida; baccis lineari-ellipsoideis, 2.5–3.0 cm longis.

Suffrutex, 40–60 cm altus; caulis lignosis, glaber et teres ad partem infernam subquadrangularis et dense adpresse aureo-pubescent ad apicem; cortex longistrorsum et irregulariter rugosa. *Folia* opposita, subaequalia, elliptica, oblanceolata, inaequilateralia, oblique cuneata ad bases, longe acuminata ad apices, grosse serrulata ad margines, 11–29 × 5–10 cm, supra glabra, infra pallido-brunneola lepidota et disperse hispida; nervi laterales 12–15 binati; nervi infra prominentes et dense longi-hirsuti; petiolus 1–2 cm longus, peranguste alatus ad apicem tantum, pubescens pilis aureo-brunneis. *Umbellae* axillares; pedunculi 5–10 mm longi, dense adpressi aureo-pubescentes; bractae verticillatae circa pedicellos, lineari-lanceolatae, acuminatae, 1–1.5 cm longae, infra ciliis aureo-brunneis dense tectae supra raro ciliatae; pedicelli 4–8 mm, pubescentes. *Calyx* campanulatus, ± 1 cm longus, adpresse aureo-hirsutus; tubus ± 5 mm longus; lobi ovati, caudato-acuminati, ± 5 mm longi. *Corolla* infundibularis, bilabiata, 1.6–1.8 cm longa, ± 1.2 cm lata ad orem, externe pubescens; lobi 5, rotundati, ± 4 mm longi. *Stamina* 2, inclusa; filamenta ± 5 mm longa, ± 5 mm e corollae basi affixa, inflexa glabra; antherae inter se cohaerentes ad apices; thecae oblongae, longitudinaliter dehiscentes. *Discus* unilateralis, erectus, squamiformis, ad apicem minute 3-dentatus, ± 2 mm longus, glaber. *Ovarium* lineari-ellipsoideum, 8–9 × ± 2 mm, breviter stipitatum, rare hispidum ad

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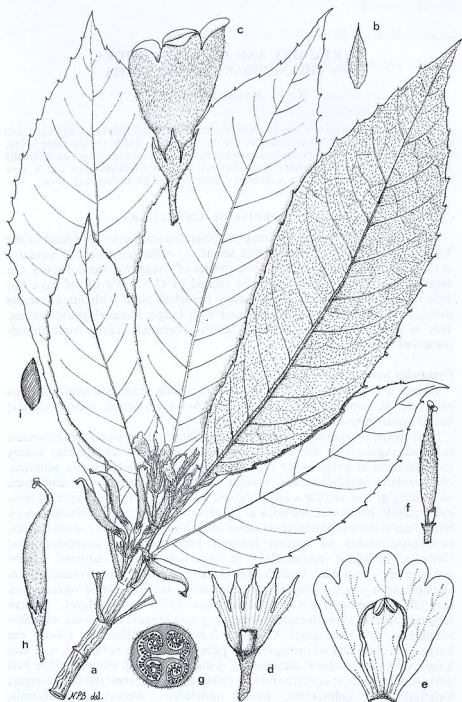


FIG. 1. *Cyrtandra burttii* Balakr.: a, habit $\times \frac{1}{2}$; b, bract $\times 1$; c, flower $\times 2$; d, calyx spread out showing disc $\times 2$; e, corolla opened out showing stamens $\times 2$; f, gynoecium with disc $\times 2$; g, t.s. of ovary $\times 15$; h, fruit $\times 1$; i, seed $\times 16$.

superiorem partem; stylus ± 4 mm longus, curvatus, hispidus; stigma 2-lobatum, ± 2 mm latum; ovula numerosa, stipitata; placentae 2, parietales, ramosae, recurvatae. *Bacca* indehiscens, lineari-ellipsoidea, curvata, 2.5–3 cm longa, ± 4 mm crassa, calycis lobis et stylo persistentibus; semina numerosa, in pulpa inclusa, ellipsoidea, 0.7–0.8 mm longa, oblique minute striata, rubrobrunnea.

INDIA, GREAT NICOBAR ISLAND. Habitat ad umbrosos riparios rivulorum in sylvis sempervirentibus collinis, 17 km ex sinu Campbello ad flumen Alexandram insulae magnae Nicobaris ad 75 m supra mare, 21 viii 1975, Balakrishnan 3025 A–E (holo.—3025A—CAL; iso.—3025B—CAL, 3025C–D—PBL*, 3025E–E).

Undershrub, 40–60 cm high; stem woody, terete and glabrous below, sub-quadrangular and densely appressed golden hairy at apex; bark longitudinally and irregularly rugose. *Leaves* opposite, subequal, elliptic-oblancoate, unequal-sided, obliquely narrowly cuneate at base, acuminate at apex, coarsely distantly serrulate at margins, 11–29 cm \times 5–10 cm, glabrous above, pale brownish lepidote and scattered hairy beneath; lateral nerves 12–15 pairs; nerves prominent and densely long hairy beneath; petiole 1–2 cm long, very narrowly winged at apex only, pubescent with golden brown hairs. *Umbels* axillary; peduncles 5–10 mm long, densely appressed golden-hairy; bracts in a whorl around pedicels, linear-lanceolate, acuminate, 1.0–1.5 cm long, covered with dense golden-brown hairs beneath, thinly hairy above; pedicels 4–8 mm long, pubescent. *Calyx* campanulate, ± 1 cm long, appressed golden-hairy; tube ± 5 mm long; lobes ovate, caudate-acuminate, ± 5 mm long. *Corolla* infundibuliform, bilabiate, 1.6–1.8 cm long, ± 1.2 cm wide at mouth, pubescent outside; lobes 5, rounded, ± 4 mm long. *Stamens* 2, included; filaments ± 5 mm long, attached at ± 5 mm above base of corolla, curved towards each other, glabrous; anthers coherent to each other at tips; cells oblong, longitudinally dehiscing. *Disc* unilateral, erect, squamiform, minutely 3-dentate at top, ± 2 mm long, glabrous. *Ovary* linear-ellipsoid, 8–9 mm long, ± 2 mm thick, shortly stalked, thinly hairy towards upper part; style ± 4 mm long, curved, pubescent; stigma bilobed, ± 2 mm across; ovules numerous, stalked; placenta 2, parietal, branched, recurved. *Berry* indehiscent, linear-ellipsoid, curved, 2.5–3.0 cm long, ± 4 mm thick, with persistent calyx and style; seeds numerous, embedded in pulp, ellipsoid, 0.7–0.8 mm long, obliquely minutely striate, reddish-brown.

INDIA, GREAT NICOBAR ISLAND. Ca. 17 km. from Campbell Bay to Alexander River, alt. ± 75 m above s.l., shaded stream-sides in evergreen hill forests, 21 viii 1975, Balakrishnan 3025 A (holo. CAL); *ibid.* 3025B (iso. CAL); *ibid.* 3025 C–D (iso. PBL); *ibid.* 3025E (iso. E).

This new species is named in honour of Mr B. L. Burtt who has made substantial contributions to the taxonomy of Gesneriaceae.

[Note: there is apparently another species of *Cyrtandra* on Great Nicobar. It is represented by a specimen "Great Nicobar Hill, April 1904, S. Ahmad Ali 3 (CAL, E)." This plant is said to have reddish flowers. It belongs to the group of *C. decurrens* De Vriese, having a much longer corolla tube than *C. burttii* and the outside densely covered with long brown silky hairs. B. L. Burtt.]

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CYRTANDROMOEIA ON GREAT NICOBAR ISLAND

During the same botanical exploration of Great Nicobar Island, large populations of a shrubby plant with white flowers were discovered along partially shaded places in hill forests. The first impression given by the plant was that of a member of the Gesneriaceae. However, on detailed study of floral parts preserved in liquid, it was found that the ovary was bilocular with axile placentation, suggesting rather the family Scrophulariaceae. After scanning through the literature on Gesneriaceae and Scrophulariaceae, the very interesting and relevant article by B. L. Burtt on *Cyrtandromoeia* (in Bull. Bot. Surv. India 7:73-88, 1965) was referred to and the plant was found to be a member of that genus, originally included in Gesneriaceae and correctly transferred to Scrophulariaceae by Burtt. A study of the various species revealed that this plant clearly fits the description of *Cyrtandra acuminata* Kurz; Burtt did not supply a name for this in *Cyrtandromoeia*, due to uncertainty about its locality. It differs from the closely related species *Cyrtandromoeia decurrens* (Bl.) Zoll. in the shorter and unwinged petioles, white calyx, longer cymes and larger capsules, and from *C. subsessilis* (Miq.) Burtt in larger leaves, corolla and capsules and many-flowered longer cymes. The species has not been collected since the type collection was made by Kurz more than 100 years ago. The locality published by Kurz was Andaman Islands, Mt Harriet above Port Blair, but the sheet at Kew is labelled 'Nicobar Islands' and that at Calcutta 'Katchall', one of the Nicobar group. In view of its rediscovery on great Nicobar it seems likely that the Katchall locality is correct. The species now needs a new name, the binomial *Cyrtandromoeia acuminata* being already preoccupied in the genus: it is a synonym of *C. subsessilis*. The new name *C. nicobarica* is proposed and a detailed description with illustrations, prepared from liquid preserved material, is given.

Cyrtandromoeia nicobarica Balakr., nom. nov. Fig. 2.

Syn.: *Cyrtandra acuminata* Kurz in Journ. Bot. 13:329 (1875)—excl. syn. Wall.; non *Cyrtandromoeia acuminata* C.B.Cl.

Cyrtandromoeia decurrens C.B.Cl. in DC., Mon. Phan. 5, 1:184 (1883) p.p. (quoad syn. *kurzianum*, descr. p.p. et tab. 21).

Erect shrub, 2.0-2.5 m high; main stem woody, obtusely subquadrangular, 2-4 cm thick, grey-white; branches many, opposite, obtusely quadrangular, glabrous, drying to black colour; nodes with a line connecting petioles resembling stipular line. Leaves elliptic-lanceolate to oblanceolate, cuneate at base, acute to shortly acuminate at apex, serrate at margins, 15-27 cm × 6-12 cm, membranous, drying to black colour; lateral nerves 11-15 pairs; petiole not winged, 1.0-2.5 cm long. Inflorescence of scorpioid cymes, 4-12 cm long, many-flowered, on main woody stem and axils of fallen leaves on branches, pendulous; main peduncle up to 1 cm long, glabrous; bracts opposite, linear-oblanceolate, subulate-mucronate at apex, ± 8 mm long, ± 2 mm wide, minutely puberulous. Flowers ± 4.3 cm long, ± 2.8 cm wide at mouth; pedicels ± 1.2 cm long with a few scattered minute hairs disappearing in fruit. Calyx campanulate, 5 ridged, 1.8-2.0 cm long, oblique at mouth with 5 mucronate teeth at apex, dirty white, drying to black, distinctly nerved, minutely puberulous inside and with very few minute hairs on keels outside and on rim, persistent. Corolla white, campanulate,

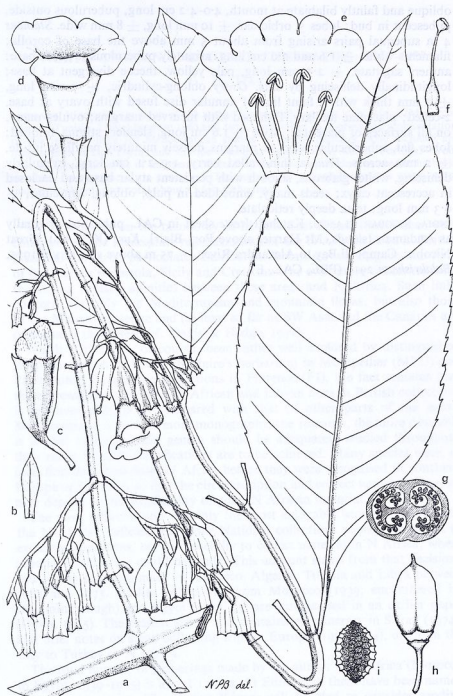


FIG. 2. *Cyrtandromoea nicobarica* Balakr.: a, branch $\times \frac{1}{2}$; b, bract $\times 2$; c, bud $\times 1$; d, open flower $\times 1$; e, corolla opened out showing stamens $\times 1$; f, gynoecium $\times 1$; g, t.s. of ovary $\times 10$; h, fruit $\times 1$; i, seed $\times 25$.

oblique and faintly bilabiate at mouth, 4.0-4.2 cm long, puberulous outside, pubescent in bud; lobes 5, orbicular, ± 10 mm long, ± 8 mm wide. *Stamens* 4 in subequal pairs arising from about 5 mm above the base of corolla; filaments white, ± 1.6 and 2.0 cm long, minutely puberulous towards base; anthers sagittate, ± 2.5 mm long, pale yellow, thecae divergent at base; longitudinally dehiscent by slits. *Ovary* oblong-cylindric, ± 7 mm long, ± 3 mm thick with a faint line of annular disc fused with ovary at base, 2-celled; placentae axillary, T-shaped with incurved margins; ovules many, on all surfaces of placentae; style ± 1.6 cm long, slender; stigma bilobed; lobes flat, suborbicular, wavy at margins, densely minutely papillose inside, ± 2 mm across. *Fruit* a thin-walled berry, 1.9-2.1 cm long, irregularly dehiscent, white, glabrous, smooth with persistent styler base and enclosed in accrescent calyx; seeds many, embedded in pulp, oblong, lenticular, ± 0.3 mm long; testa deeply reticulate.

INDIA, NICOBAR ISLANDS. Katchall [teste sheet in CAL, published originally as Andaman Islands, Mt Harriet above Port Blair], Kurz (K, CAL). Great Nicobar, Campbell Bay to Alexandra River, ± 75 m above s.l., 17 viii 1975, Balakrishnan 2919 (PBL, CAL, E).