CONTRIBUTIONS TO THE FLORA OF CEYLON (SRI LANKA)

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Abstract: An investigation into the Flora of the Polonnaruwa District (southern part*) has revealed the existence of additional taxa in the Flora of Ceylon (Sri Lanka). These include a new species of Rhinacanthus Nees, two new species records for the country, and a distributional record for the dry low country (inclusive of Polonnaruwa District) in Canthium puberulum Thwaites ex Hook. f., a rare endemic species of the Rubiaceae, hitherto known only from the Central Province. Ecology notes provide additional data to specific descriptions of specimens encountered in the field. Respective illustrations of the species described are provided.

1. Introduction

In the course of a floristic survey of the flora of the Polonnaruwa District (southern part*) the occurrence of some angiosperm species, unusual for Ceylon, was observed for the first time. Subsequent investigations proved these to include a new species of Rhinacanthus (Acanthaceae), two new species records for Ceylon, and a distributional record of an endemic species (Rubiaceae) for the dry low country (inclusive of the district) hitherto not recognized.

2. Materials and Methods

The data for the determination of these taxa were based on field collections and observations in the study area, laboratory studies of fresh representative specimens, and of herbarium material in the EUSL***, the National Herbaria of Kew (England), Peradeniya and Singapore, and the Rapinat Herbarium, Tiruchirapalli (India).

3. Taxa

3.1 New Species of Rhinacanthus Nees

The genus Rhinacanthus Nees of the Acanthaceae, a pantropic family, has been represented so far in South and South-East Asia by only one species, *R. nasutus* (L.) Kurz., occurring in the lowlands of Ceylon, including the

* It lies between 80°40' and 81°20' east longitude and 7°41' and 8°0' north latitude, and covers an expanse of 1,567 km² of land.

*** Unofficial abbreviation for the Herbarium, Eastern University, Sri Lanka.
Polonnaruwa District. The new species described below forms yet another representative of the genus for this asiatic region.

*R. polonnaruwensis** Cramer, sp. nov.

Haec species *R. nasuto* (L.) Kurz affinis sed, ab ea caule in parte superiore pendente, foliis linearibus marginibus distincte undulatis atque radicibus vermicularibus differt.

Herba perennis; radices vermiculares; caulis usque 110 cm altus, parte tamen superiore pendens. Folia linearia, 4.2–10 x 0.3–0.6 cm basi attenuata, apice acuta, marginibus distincte undulatis. Thyrses terminales, laxae, usque ad 15 cm longae; peduncula dense glandulos–pilosula, pilis interspersae hirsutis; bracteae lanceolatae, 2–3 mm longae. Flores fasciculati; calyx profunde 5–partitus; lobi lineari–lanceolati, 2.5–3.0 x 0.5–1.2 mm, acuminati, extra glandulos–pilosuli; corollae tubus usque 2.7 cm longus, supra leviter dilatatus, labium superior ovali–oblongum, 6.0 x 3.0 mm, apice 2–fidum; labium inferior usque 1.2 cm latum. Capsula clavata, 1.5–1.7 x 0.3 cm, longe stipitata; stirps tenuis; retinacula lineari–lanceolata, sursum incurvata; semina 4, helicoidio–reniformia, muricata.

Perennial herb; roots vermicular; stem to 110 cm high, sagging in upper part. Leaves linear, to 4.2–10 x 0.3–0.6 cm, attenuate at base, acute at apex, distinctly undulate at margins. Thyrses terminal, lax, to 15 cm long; peduncles densely glandular–pilosose, interspersed with eglandular hairs; bracts linear–lanceolate, 2–3 mm long. Flowers clustered; calyx deeply 5–partite; lobes linear–lanceolate, 2.5–3 x 0.5–1.2 mm, acuminate, glandular–pilose without; corolla tube to 2.7 cm long, faintly dilated above; upper lip oval–oblong, 6 x 3 mm, 2–fid at apex; lower lip to 1.2 cm across. Capsule clavate, 0.5–1.7 x 0.3–0.4 cm, with a long stalk, retinacula linear–lanceolate, curved upwards; seeds 4, helicoid–reniform, 1 mm broad, muricate.

Flowering: August — September; flowers white.
Ecology: The plant occurs in patches under shade in sandy–loam soil in close vicinity to a stream or river.

Illustration. Figure 1.

** The new species is to commemorate the sacred city of Polonnaruwa.
Figure 1: *Rhinacanthus polonnaruwensis* Cramer.

a. flowering branch; b. bract; c. bracteole; d. calyx split open (inner view); e. dissected corolla; f. anther; g. gynoecium; h. t.s. ovary; i. capsule (surface view); j. dehisced capsule; k. seed; l. roots.
Note. On many visits to the locality of the plant the inflorescences were observed only in fruit. Flowers occur only during a limited period of the year as stated above.

The weakness of the upper part of the stem brings about its sagging nature. This character, that of the linear leaves with undulate margins and the fruiting inflorescences during most of the year are very distinctive in the field.

The novelty of this species has been confirmed by the author’s research in the herbaria mentioned under Materials and Methods.

3.2 New records
Note. Unless otherwise indicated, the collection numbers refer to those of Cramer & Jayaratnam.

3.2.1 Rubiaceae

3.2.2. Borreria G. F. W. Meyer, nom. cons.
Note. On examination of the East African species of this complex Verdcourt recognized, in the detachment of the septum from one or both capsular valves (or neither), respectively in Spermacoce L. and in Borreria the only differential character between the two genera. Considering this as of hardly any taxonomic weight he accordingly merged the latter in the former (based on priority).

Notwithstanding Verdcourt’s position I prefer to follow the practice of retaining the nomina generica conservanda of the International Code of Botanical Nomenclature in regard to the case of Borreria. I would still accept, therefore, Hepper’s earlier adoption of this name (for the African complex) and Santapau’s further retention of the name (for the Indian complex) according to the practice of the Code.


Contributions to the Flora of Ceylon (Sri Lanka)

Perennial herb; stem to ca. 30 cm high, much branched, woody at base, quadrangular, scaberulous on angles above. Lower leaves opposite, upper ones whorled, all sessile, linear—oblong to linear-lanceolate, 2.2–4.5 x 0.5–0.8 cm.; stipules adnate in pairs into a shallow cup, pectinate, Cymes terminal, clustered in semi-lunar heads; bracts linear, to 3 mm long. Corolla tube to 1.25 mm long; lobes triangular—ovate, to 1.5 mm long; stamens exserted; stigmatic branches globose. Capsule ovoid—oblong, sub—compressed; septum split longitudinally, undetached from valves; seeds oblong, 2–3 x 1 mm, plano—convex, ventrally grooved, reticulately nerved.

Flowering. January – March; flowers white, inconspicuous.

Ecology. A weed with a strong tap root in sandy ground, often along grassy roadsides; fairly common.

Illustration. Figure 2

Distribution. Habarana, 6067 (EUSL***, PDA).

Also in Tropical America and Indonesia.

Note. The broad tops of heads subtended by the whorl of leaves are very distinctive.

3.2.4 Acanthaceae

3.2.3.1 Pseuderanthemum Radlkf.


Annual, to ca. 120 cm high, sparsely branched. Leaves linear to linear-elliptic, 5–13.5 x 0.2–1.2 cm, cuneate at base, undulate at margins; petioles to 5 mm long. Spikes terminal, to 14 cm long; bracts lanceolate, 2–3 x 0.5 mm. Corolla tube 1.5–1.6 cm long, faintly broadened at throat; limb to 2.2 cm across; anther thecae puberulous at apex; staminodes linear—lanceolate, curved upwards. Capsule clavate, to 1.8 x 0.4 cm; retincacula linear—lanceolate, curved upwards; seeds suborbicular, 4 x 3 mm, alveolate.
Figure 2: *Borreria distans* (H. B. K.) A. DC.

a. flowering branch; b. flower; c. dissected corolla; d. stamen; e. l.s. ovary; f. t.s. ovary; g. dehisced capsule; h. seed.
Flowering. June—August; flowers white, dotted pale purple on upper lip, soon deciduous.

Ecology. Under shade of trees close to a stream or a river in sandy—loam soil of secondary, semi—evergreen forest; occasional.

Illustration. Figure 3.


Also in Malaysia.

Note. This species is allied to P. latifolium (Vahl) Hansen (syn. P. malabaricum C. B. Clarke) from which it clearly differs in the linear shape of leaves and the entire straightness of the corolla tube.

3.3 New distribution record

3.1 Rubiaceae


Shrub to ca. 3 m, diffusely branched; spines supra—axillary, slender. Leaves elliptic—ovate to obovate, 1.4—3 x 1.1—2 cm. Flowers axillary, solitary or binary. Drupes ovoid or oboviod.

Flowering. November — December; flowers white, turning pale green with age.

Ecology. Under shade of trees in loamy soil of degraded, semi—evergreen forest close to streams; rare. Endemic.

Illustration. Figure 4.

Distribution. Habarana (Galwanguwa), 6005 (EUSL***, PDA).

Note. Trimen cites ‘Central Province’ (C. P. 3995) as the only distribution locality of this species in Ceylon. Except for the C.P. specimen there is no other representative specimen of it in the National Herbarium, Peradeniya. Our subsequent location of this species at Habarana must be considered, therefore, a new distributional record for the species locally and climatologically, occurring as it does in the ‘dry zone’ of the low country.

4. Discussion

The flora of Ceylon (Sri Lanka) is still not completely documented, certain areas in the country being not yet fully investigated floristically. The present contributions to this flora, from a monitoring of the plants of the Polonnaruwa District, one such unexplored area, fill some lacunae still left in the complete documentation of this flora.
Figure 3: *Pseuderanthemum angustifolium* Ridley

a. flowering branch; b. bract; c. bracteole; d. calyx split open; e. dissected corolla; f. stamen & staminode; g. gynoecium; h. t.s. ovary; i. dehisced capsule; j. seed.
Figure 4: *Canthium puberulum* Thw. ex Hook. f.

a. flowering branch; b. flower; c. corolla split open; d. stamen; e. style and stigma. f. t.s. ovary; g. fruit.
The new species described adds to the widespread distribution of the *Acanthaceae* in the Polonnaruwa District where representatives of 21 of its genera, out of the 31 presently reported for Ceylon (Trimen³), occur.

The new species records form an additional confirmation of the affinity of our flora with that of the Malaysian region.

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