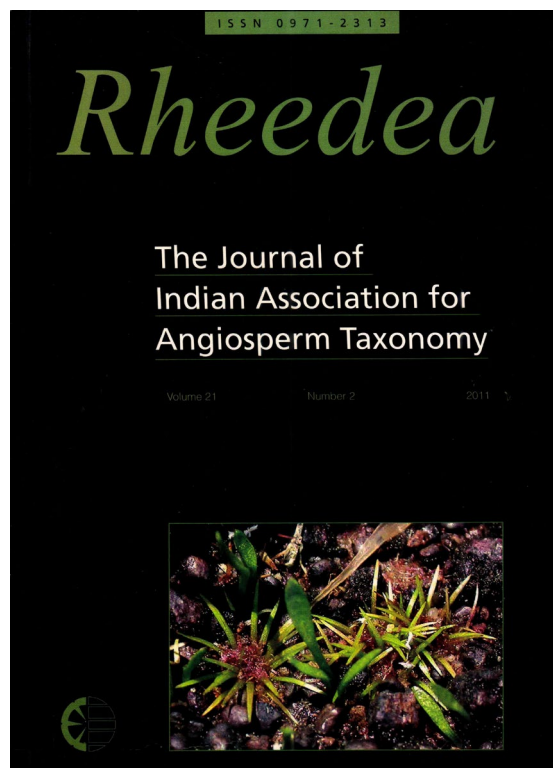




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# A new species of *Tylophora* (Apocynaceae – Asclepiadoideae – Asclepiadeae) from the Nicobar Islands, India

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## Abstract

A new species, *Tylophora nicobarica*, is described from the Nicobar Islands of the Andaman & Nicobar Archipelago. It is closely allied to *T. subramanii* A.N. Henry but differs in having glabrous leaves, longer petioles, ovate calyx lobes and pubescent and greenish yellow corolla.

**Keywords:** Andaman & Nicobar Islands, Apocynaceae, New Species, *Tylophora*

## Introduction

*Tylophora* R. Br. (Apocynaceae) contains c. 60 species, and distributed mainly in tropical and subtropical Asia (Tseng & Chao, 2011), Africa and Australia (Richardson, 2008). In India, it is represented by 21 species and 2 varieties (Jagtap & Singh, 1999). Pandey & Diwakar (2008) reported 3 species, namely, *T. globifera* Hook.f., *T. indica* (Burm.f.) Merr. and *T. tetrapetala* (Dennst.) Suresh from Andaman & Nicobar Islands.

During a botanical exploration in the Little Nicobar Island, the senior author collected an interesting specimen of *Tylophora*. On a critical examination of herbarium specimens at CAL and perusal of relevant literature (Hooker, 1885; Parkinson, 1923; Ridley, 1923; Backer & Bakhuizen, 1965; Rao, 1986; Jagtap & Singh, 1999; Sinha, 1999; Pandey & Diwakar, 2008), it was found to be an undescribed species. It was not, however, the first record, since it was first collected by P. Chakraborty in 1974 from Katchal Island. Our researches show that it is closely allied to *Tylophora subramanii* A.N. Henry.

***Tylophora nicobarica* Murugan et M.Y. Kamble, sp. nov. Fig. 1, 2**

*Tylophora subramanii* A.N. Henry art affinis, sed foliis glabris, paribus nervorum 6–9; petiolis longioribus (usque ad 4.5 cm longis); lobis calycis ovatis; corolla viridi-lutea, in superficiebus ambabus pubescenti; corona rotundata; polliniis late ovatis, polliniis corpusculis longioribus; stigmatem margine rotundato et apice tholiformi et semibus et comis magnioribus differt.

**Typus:** INDIA, Andaman & Nicobar Islands, Nicobar district, Little Nicobar Island, Pewaye, 26 October 2010, C. Murugan 27755 (Holotypus, CAL; Isotypii, PBL).

Twiners with milky sap, slender. Stems terete, densely pubescent at nodes, green when young, brown when old; internodes to 22 cm long. Leaves simple, opposite-decussate, elliptic-ovate, 10–12 × 6–11 cm, truncate or cordate at base, entire at margins, abruptly acuminate at apex, membranous, glabrous, dark green above, pale below; lateral nerves 6–9 pairs, conspicuous, reticulated, raised below, looped intramarginally; petioles to 4.5 cm long, slightly pubescent, glabrescent with age. Inflorescences a simple or branched umbellate racemes, axillary, 10–20-flowered, opening in succession; peduncles stout, 1–3 cm long, densely pubescent when young, glabrescent on age; pedicels stout, 5–10 mm long, hairy, leaving a scar on the peduncle when falls off; bracts 2–4, 1–2 mm long, ciliate at margins, hairy outside. Sepals 5, ovate, c. 4 × 3 mm, glandular at base, glabrous inside, hairy outside. Corolla rotate, c. 1.5 cm across, greenish yellow outside; lobes broadly ovate, 5–6 × 4–5 mm, ciliate at margins, slightly notched at apex, pubescent. Corona lobes in one series of 5 lobes, broadly ovate, 2–3 mm long, rounded at base, abruptly acute and retuse at apex, fleshy, shorter than column, connate at base, adnate to column, greenish yellow. Stamens c. 2 mm long, erect with small inflexed membranous appendages; pollinia

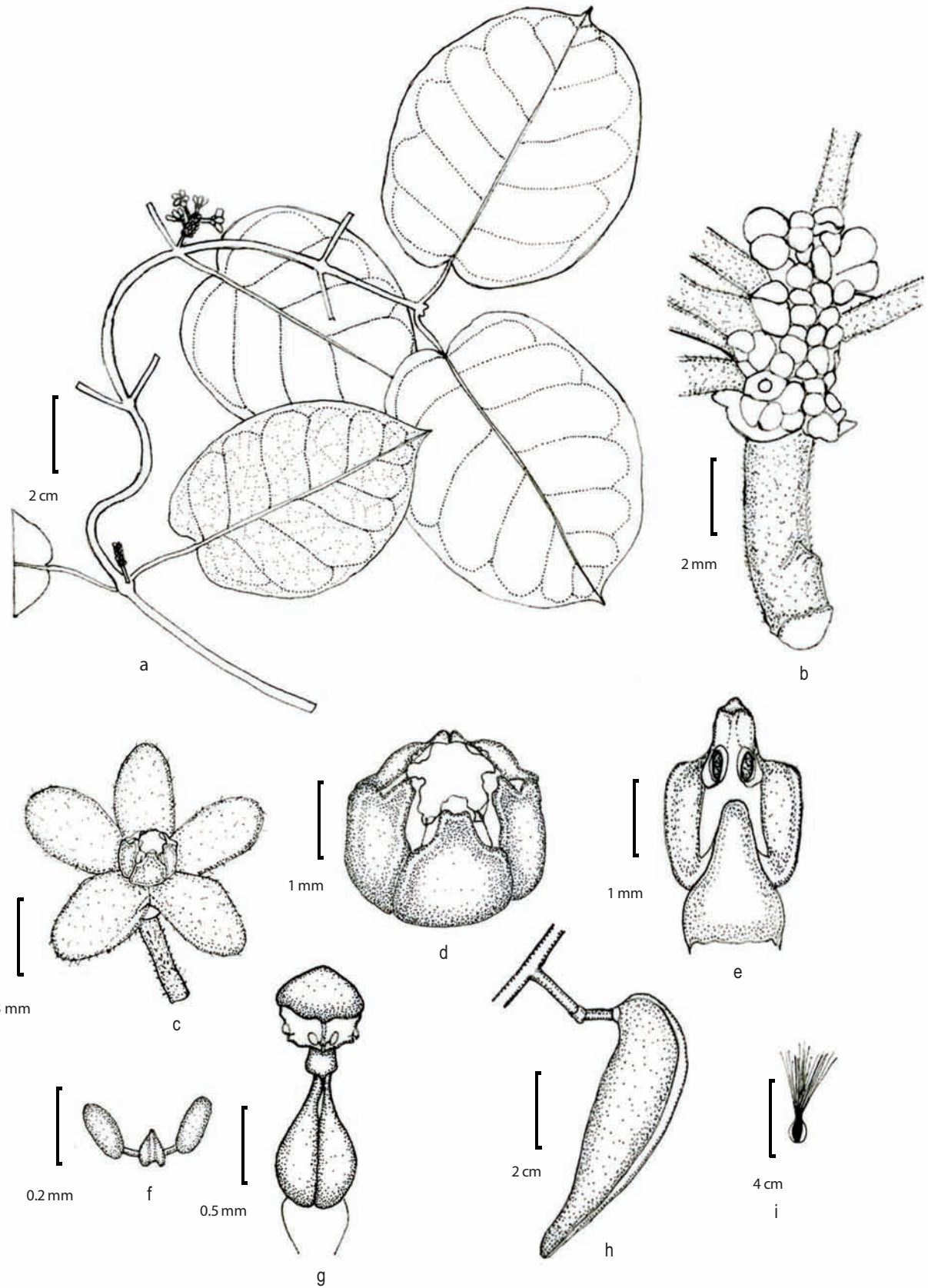


Fig. 1. *Tylophora nicobarica* Murugan et M.Y. Kamble, sp. nov.: a. A flowering branch; b. Inflorescence; c. Flower; d. Corona; e. Stamen; f. Pollinia; g. Carpels with stigma; h. Fruit; i. Seed.

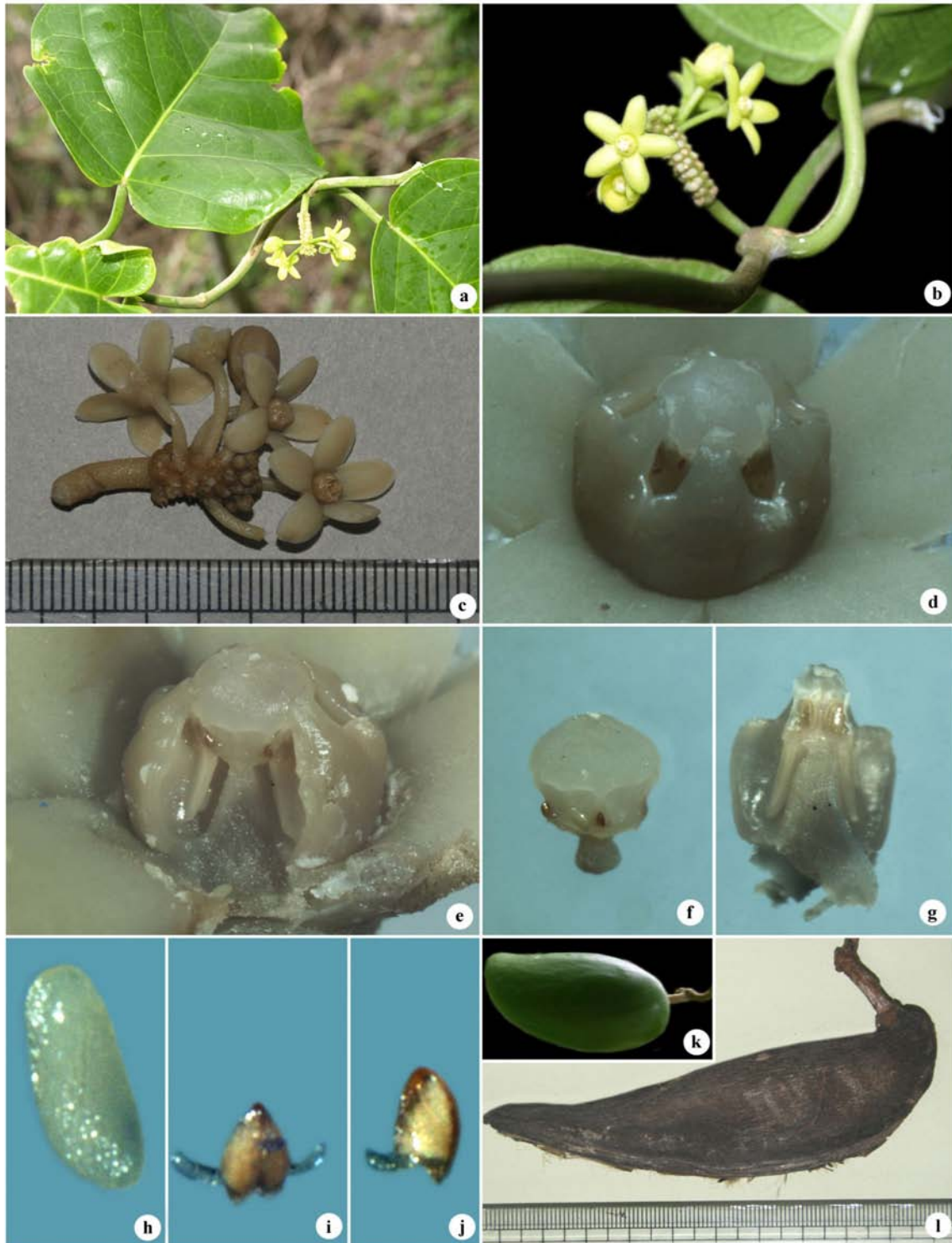


Fig. 2. *Tylophora nicobarica* Murugan et M.Y. Kamble, sp. nov.: a. A flowering branch; b, c. Inflorescence; d. Corona; e. Gynostegium; f. Stigma; g. Stamen; h. Pollen mass; i, j. Corpuscles with caudicle; k, l. Fruit.

broadly ovoid, 0.3 – 0.4 × 0.1 – 0.2 mm, yellow. Ovary c. 2 mm long; ovules many, ovoid, minute; style dome-shaped at apex. Follicles solitary by abortion, elliptic-oblongoid, 8 – 11 cm long, blunt at ends, glabrous; seeds ovate, 1 – 1.7 × 0.5 – 1 cm; coma to 5 cm long.

*Flowering & Fruiting:* June – November.

*Habitat:* Littoral forests, sea level to 50 m. It grows in association with *Aglaonema nicobaricum* Hook.f. (Araceae), *Allophylus cobbe* (L.) Raeusch. (Sapindaceae), *Aristolochia tagala* Cham. (Aristolochiaceae), *Carex cryptostachys* Brongn. (Cyperaceae), *Connarus nicobaricus* King (Connaraceae), *Curculigo capitulata* Kuntze (Hypoxidaceae), *Dioscorea vexans* Prain & Burkill (Dioscoriaceae), *Glochidion calocarpum* Kurz (Euphorbiaceae), *Hypolytrum nemorum* P. Beauv. (Cyperaceae), *Ixora brunnescens* Kurz (Rubiaceae), *Mussaenda macrophylla* Wall. (Rubiaceae), *Oplismenus compositus* (L.) P. Beauv. (Poaceae), *Otanthera nicobarensis* Teijsm (Melastomataceae), *Pseuderanthemum album* (Roxb.) Merr. (Acanthaceae), *Selaginella delicatula* (Desv.) Alston (Selaginellaceae) and *Tabernaemontana crispa* Roxb. (Apocynaceae).

*Distribution:* It is known only from Nicobar Islands.

*Specimens examined:* INDIA, **Andaman & Nicobar Islands**, Nicobar district, Katchal Island, Mildera, 10.8.1974, P. Chakraborty 2025; Great Nicobar Island, 33 km on North-South Road, 30.11.1978, N.G. Nair 7152; Pygmalion Point (now Indira Point), 24.6.1981, D.K. Hore 8838; Little Nicobar

Island, Tenking-Olenchi, 4.11.2009, C. Murugan 27755 (PBL).

*Etymology:* The species is named after Nicobar Islands, type locality of this species.

*Ecological status:* Less than 50 individuals confined to an area of 15 sq. km. were observed during field surveys conducted by the first author from 2008 to 2011. Though it qualifies to be categorized under Critically Endangered (CR), further studies and explorations in adjacent areas are required to ascertain its status.

*Notes:* *Tylophora nicobarica* Murugan & M.Y. Kamble, sp. nov. is closely allied to *T. subramanii* A.N. Henry but differs in the Characters as shown in Table 1.

#### Key to species of *Tylophora* in Andaman & Nicobar Islands

1. Flowers small, in much branched panicles or corymbose cymes ..... **T. tetrapetala**
1. Flowers large, in simple or rarely branched umbellate cymes and racemes ..... 2
2. Flowers in simple or branched umbellate racemes..... **T. nicobarica**
2. Flowers in simple umbellate cymes ..... 3
3. Plants quite glabrous; sepals ovate-lanceolate; coronal scales globose, very large ..... **T. globifera**
3. Plants pubescent; sepals linear or linear-lanceolate; coronal scales ovoid, small ..... **T. indica**

**Table 1.** Differences between *Tylophora subramanii* A.N. Henry and *T. nicobarica* Murugan & M.Y. Kamble, sp. nov.

Characters	<i>T. subramanii</i>	<i>T. nicobarica</i>
Leaves	Sparsely to densely pubescent; lateral nerves 5 – 7 pairs	Glabrous; lateral nerves 6 – 9 pairs
Petioles	Up to 3.5 cm long	Up to 4.5 cm long
Inflorescence	Densely hirsute	Sparsely pubescent
Calyx lobes	Lanceolate	Ovate
Corolla	Glabrous, reddish brown	Pubescent, greenish yellow
Corona	Pentagonal	Dome-shaped
Pollen masses	Globose, as long as corpuscle	Broadly ovoid, longer than corpuscle
Stigma	Pentagonal at margins, flat at apex	Rounded at margins, dome-shaped at apex
Fruits	Lanceoloid, tapering at apex	Elliptic-oblongoid, obtuse at ends
Seeds	Elliptic, to 1.2 cm long; coma 3 – 3.5 cm long	Ovate, to 1.7 cm long; coma c. 5 cm long

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### Literature Cited

- Backer, C.A. & R.C. Bakhuizen 1965.** *Flora of Java*. Vol. 2. Noordhoff, Netherlands.
- Hooker, J.D. 1885.** *The Flora of British India*. Vol. 4. L. Reeve & Co. Ltd., London.
- Ridley, H.N. 1923.** *The Forest Flora of the Malay Peninsula*. L. Reeve & Co. Ltd., London.
- Jagtap, A. & N.P. Singh 1999.** Asclepiadaceae & Periplocaceae. *Fasc. Fl. India. Fasc. 24*. Botanical Survey of India, Calcutta. pp. 1 – 332.
- Pandey, R.P. & P.G. Diwakar 2008.** An Integrated Check-list of Andaman and Nicobar Islands, India. *J. Econ. Taxon. Bot.* **32**: 403 – 500.
- Parkinson, C.E. 1923.** *A Forest Flora of the Andaman Islands*. Government Central Press, Simla.
- Rao, M.K.V. 1986.** A preliminary report on the angiosperms of Andaman – Nicobar Islands. *J. Econ. Taxon. Bot.* **8**: 107 – 184.
- Richardson, B. 2008.** *Flora Base, the West Australian Flora*. Department of Environment & Conservation, Australia.
- Ridley, H.N. 1923.** *The Flora of the Malay Peninsula*. Vol. II. L. Reeve & Co. Ltd., London.
- Sinha, B.K. 1999.** *Flora of Great Nicobar Island*. [Hajra, P.K. & P.S.N. Rao (Eds.)]. Botanical Survey of India, Calcutta.
- Tseng, Y.H. & C.T. Chao 2011.** *Tylophora lui* (Apocynaceae), a new species from Taiwan. *Ann. Bot. Fennici* **48**: 515 – 518.

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