

## OPEN ACCESS



The Journal of Threatened Taxa is dedicated to building evidence for conservation globally by publishing peer-reviewed articles online every month at a reasonably rapid rate at [www.threatenedtaxa.org](http://www.threatenedtaxa.org). All articles published in JoTT are registered under [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/) unless otherwise mentioned. JoTT allows unrestricted use of articles in any medium, reproduction, and distribution by providing adequate credit to the authors and the source of publication.



## Journal of Threatened Taxa

Building evidence for conservation globally

[www.threatenedtaxa.org](http://www.threatenedtaxa.org)

ISSN 0974-7907 (Online) | ISSN 0974-7893 (Print)

### NOTE

**ADDITIONS TO THE FLORA OF COIMBATORE HILLS, TAMIL NADU, INDIA**

K. Kiruthika, M. Sulaiman & R. Gopalan

26 February 2017 | Vol. 9 | No. 2 | Pp. 9881-9884  
10.11609/jott.2991.9.2.9881-9884



For Focus, Scope, Aims, Policies and Guidelines visit [http://threatenedtaxa.org/About\\_JoTT.asp](http://threatenedtaxa.org/About_JoTT.asp)

For Article Submission Guidelines visit [http://threatenedtaxa.org/Submission\\_Guidelines.asp](http://threatenedtaxa.org/Submission_Guidelines.asp)

For Policies against Scientific Misconduct visit [http://threatenedtaxa.org/JoTT\\_Policy\\_against\\_Scientific\\_Misconduct.asp](http://threatenedtaxa.org/JoTT_Policy_against_Scientific_Misconduct.asp)

For reprints contact [info@threatenedtaxa.org](mailto:info@threatenedtaxa.org)

Partner



Publisher/Host





## ADDITIONS TO THE FLORA OF COIMBATORE HILLS, TAMIL NADU, INDIA

K. Kiruthika<sup>1</sup>, M. Sulaiman<sup>2</sup> & R. Gopalan<sup>3</sup>

<sup>1,3</sup> Department of Botany, Karpagam University, Coimbatore, Tamil Nadu 641021, India

<sup>2</sup> Forest Genetics Circle, Tamil Nadu Forest Department, Coimbatore, Tamil Nadu 641003, India

<sup>1</sup> kiruthika.zizyphus@gmail.com, <sup>2</sup> sulai.anbu@gmail.com &

<sup>3</sup> gopalanurichi@gmail.com

During a recent botanical exploration in Sirumugai forests (Coimbatore Forest Division) the authors came across three interesting taxa. The vetted study on the specimens with the scale of national and regional floras, literature and related specimens at Madras Herbarium (MH), Botanical Survey of India, Southern Regional Centre, Coimbatore helped those identified as *Cosmostigma racemosum* (Roxb.) Wight (Asclepiadaceae), *Blachia umbellata* (Willd.) Baill. (Euphorbiaceae) and *Vanilla walkeriae* Wight (Orchidaceae). These species have been never collected from the Coimbatore Forest Division; hence reported here as additions to the flora of Coimbatore. The herbarium was prepared by conventional method and the voucher specimens are deposited at Karpagam University Herbarium (KUH), Coimbatore. A brief description and photographs are provided for easy identification (Images 1–3).

Sirumugai forests lie in the Coimbatore Hills of the Western Ghats north of Palghat gap. It occupies about 11,683.74ha with the vegetations of dry deciduous

forests, moist deciduous forests, semi-evergreen forests and grasslands. The forest areas are well drained in both the monsoons by the rivers Thatapalam and Bhavani.



ISSN 0974-7907 (Online)  
ISSN 0974-7893 (Print)

OPEN ACCESS

### Taxonomic treatment

#### *Cosmostigma racemosum*

(Roxb.) Wight

Contr. Bot. India 42. 1834; Wight, Icon. Pl. Ind. Orient. 591. 1842; Hook.f. Fl. Brit. India 4: 46. 1883; Gamble, Fl. Madras 2(5): 845. 1923; S.R.Sriniv. in A.N.Henry et al. Fl. Tamil Nadu, Ind. Ser. I: Anal. 2: 84. 1987. *Asclepias racemosa* Roxb. Fl. Ind. 2: 32. 1832. *Cosmostigma acuminatum* Wight, Icon. Pl. Ind. Orient. 1270. 1848.

Climbers. Stems terete, hollow, puberulous. Leaves opposite, broadly ovate, 6.5–11.5 × 3.5–8.5 cm, 5-ribbed, rotund at base, acuminate at apex, with up to 1.7cm long acumen, adaxially glabrous, abaxially sparsely pubescent on nerves, membranous, lateral nerves 5–6 pairs, nerves anastomosing along margin; petioles 1–3 cm long, canaliculate, puberulous. Inflorescence a corymb, ca 3.5cm long, peduncle puberulous; sepals 5, ovate, ca 2×2 mm; petals 5, ovate, ca 3×5 mm, yellowish-green, brown dotted on adaxial surface; corona processes erect, membranous, adnate to staminal column; stamens 5, pollinia erect, clavate, caudicles long, slender, red; stigma broad, flat, 5-angled.

Flowering: June.

Habitat: *Cosmostigma racemosum* (Roxb.) Wight is distributed in moist deciduous forests associated with *Atalantia monophylla* DC., *Justicia simplex* D. Don,



DOI: <http://doi.org/10.11609/jott.2991.9.2.9881-9884>

Editor: N.P. Balakrishnan, Coimbatore, India.

Date of publication: 26 February 2017 (online & print)

Manuscript details: Ms # 2991 | Received 16 August 2016 | Final received 25 January 2017 | Finally accepted 03 February 2017

Citation: Kiruthika, K., M. Sulaiman & R. Gopalan (2017). Additions to the flora of Coimbatore hills, Tamil Nadu, India. *Journal of Threatened Taxa* 9(2): 9881–9884; <http://doi.org/10.11609/jott.2991.9.2.9881-9884>

Copyright: © Kiruthika et al. 2017. Creative Commons Attribution 4.0 International License. JoTT allows unrestricted use of this article in any medium, reproduction and distribution by providing adequate credit to the authors and the source of publication.

Funding: None.

Competing interests: The authors declare no competing interests.

Acknowledgements: The authors express gratefulness to Dr. N. Krishnakumar IFS, PCCF Chennai, I. Anwardeen IFS, Conservator of Forests, Coimbatore Circle and Mr. B. Srinivasan, The Range Officer, Sirumugai Range, Coimbatore Forest Division for the forest permission and facilities extended for fieldwork. We are thankful to Dr. G.V.S. Murthy, Additional Director, Botanical Survey of India, Southern Regional Circle, Coimbatore for the herbarium consultation and library references. And we would like to extend our gratitude to the Authorities of Karpagam University, Coimbatore for the encouragement.



Image 1. *Cosmostigma racemosum* (Roxb.) Wight

*Millettia splendens* Wight & Arn., *Vitex altissima* L.f., etc.

Specimen examined: KUH 823 (Image 4), 28.vi.2015, Uliyoor R.F., Sirumugai Forest Range, Coimbatore District, Tamil Nadu, India, 11.409145°N & 76.995192°E, 413m, coll. K. Kiruthika & M. Sulaiman.

Distribution: Peninsular and eastern India.

***Blachia umbellata* (Willd.) Baill.**

Etud. Gen. Euphorb. 387. t. 19. ff. 18-20. 1858; Hook.f. Fl. Brit. India 5: 402. 1887; Gamble, Fl. Madras 2(7): 1338. 1925. Chandrab. in A.N.Henry et al. Fl. Tamil Nadu, Ind. Ser. I: Anal. 2: 222. 1987. *Croton umbellatus* Willd. Sp. Pl. 4: 545. 1805. *B. reflexa* Benth. in J. Linn. Soc. Bot. 17: 226. 1880; Hook.f. Fl. Brit. India 5: 402. 1887; Gamble, Fl. Madras 2(7): 1338. 1925. Chandrab. in A.N.Henry et al. Fl. Tamil Nadu, Ind. Ser. I: Anal. 2: 222. 1987.

Trees, up to 10m tall. Stems glabrous, branchlets slender. Leaves opposite, elliptic, 15–16 × 4–5.5 cm, cuneate at base, serrate, acuminate at apex, acumen up to 1.5cm long, smooth; lateral nerves up to 18 pairs; petioles 0.5–1 cm long, canaliculate. Inflorescence an umbel. Fruits subglobose, 0.8–1.3 × 0.6–1.5 cm, trilobed, peduncles 0.5–1.5 cm long, perianth persistent, reflexed; seeds ellipsoid, 1.2–1.3 × 2.3–2.5 cm, smooth, brown.

Fruiting: June.



Image 2. *Blachia umbellata* (Willd.) Baill.

Habitat: *Blachia umbellata* (Willd.) Baill. is distributed in moist deciduous forests associated with *Capparis sepriaria* L., *Celtis philippensis* Blanco, *Chukrasia tabularis* A. Juss., *Hydnocarpus pentandrus* (Buch.-Ham.) Oken, etc.

Specimen examined: KUH 852 (Image 5), 26.vi.2016, Kunjappanai R.F., Sirumugai Forest Range, Coimbatore District, Tamil Nadu, India, 11.36428°N & 76.94463°E, 769m, coll. K. Kiruthika & M. Sulaiman.

Distribution: India (Karnataka, Kerala & Tamil Nadu) and Sri Lanka.

***Vanilla walkeriae* Wight**

Icon. Pl. Ind. Orient. 932.1845; Hook.f. Fl. Brit. India 6: 90. 1890; C.E.C.Fisch. in Gamble, Fl. Madras 3(8): 1451. 1928; Vajr. in Bull. Bot. Surv. India 26(3-4): 211-214. 1984; J. Joseph, Orch. Nilgiris 16. 1987; J. Joseph & R. Ansari in A.N.Henry et al. Fl. Tamil Nadu, Ind. Ser. I: Anal. 3: 26. 1989.

Terrestrial, straggler; stems 0.5–2.0 cm across, green when young, brown at maturity and turns yellow on light exposure, stout, 3–4 longitudinally grooved; internodes 7.1–15.5 cm long; rooted at nodes. Leaf small, ovate-lanceolate, acuminate at apex, caducous. Inflorescence a terminal raceme, ca 27-flowered, rachis up to 12cm long; floral bract lanceolate, 0.5–1.2 × 0.3–0.5 cm, sessile, fleshy, apex acute, reflexed, 3-veined; flowers white ca 12.8×6.0 cm, pedicel with ovary ca 6.5×2.5 cm, green, terete; dorsal sepal oblanceolate, ca 5.7×1.8 cm, 10-veined; lateral sepals oblanceolate, 5.3–5.6 × 1.3–1.6 cm, 14–16-veined; petals obovate, ca 5.5×2.0 cm, sub-median nerve thick, green on abaxial side, 14–20-veined, margin undulate; lip ca 4.2×2.3 cm, trilobed, lateral lobes triangular, connate, acuminate at apex, trumpet-shaped, rhomboid when spread out; lamellate

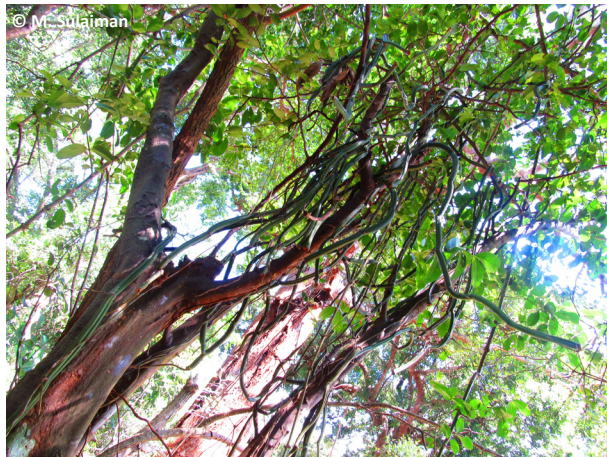


Image 3. *Vanilla walkeriae* Wight



towards base, fimbriate, arranged parallel in between the thick central median; column ca 1.7×0.3 cm, narrow, hooded, pollinia 4, small, ovoid, free.

Flowering: April.

Habitat: *Vanilla walkeriae* Wight is distributed on the riverbanks of moist deciduous forests along with *Dicliptera cuneata* Nees, *Ecobolium viride* (Forssk.) Alston, *Litsea deccanensis* Gamble, *Terminalia arjuna* (Roxb. ex DC.) Wight & Arn. etc.

Specimen examined: KUH 815 (Image 6), 21.iv.2015, Uliyoor R.F., Sirumugai Forest Range, Coimbatore District, Tamil Nadu, India, 11.404085°N & 76.996401°E, 324m, coll. K. Kiruthika & M. Sulaiman.

Distribution: India (Karnataka, Kerala & Tamil Nadu) and Sri Lanka.

### Discussion

In India, *Cosmostigma racemosum* (Roxb.) Wight has been reported from the states of Karnataka, Kerala and Andhra Pradesh. A few collections were made from the Eastern Ghats of Tamil Nadu, i.e., one from Kollimalai, s.coll. 12991, 27 June 1916 which were determined by J.S. Gamble and deposited at Madras Herbarium, Botanical Survey of India, Coimbatore and other collections from Pacchamalai, Trichy District by K.M. Matthew on 11 July 1976; K.M. Matthew & C. Manoharan on 28 November 1978, were deposited at RHT, St. Joseph's College, Trichy. The present collection from Sirumugai, Coimbatore Forest Division reveals the extended distribution and it confirms the existence of the species in Tamil Nadu.

*Vanilla walkeriae* Wight was reported from Quilon, Travancore by Wight in 1845. During the floristic study of Madras Presidency, C.E.C. Fischer (1928) reported

*V. walkeriae* Wight from Jirganhalli hills of northern Coimbatore presently in Karnataka State. Since this species has not been collected or represented in MH until 1975, a collection made by E. Vajravelu (Vajravelu & Chandrasekaran 1984) from the scrub jungle of Parali, Begumbahalla forests, Nilgiri District in 1975 was the last one. Abraham & Vatsala (1981) opined that *V. wightiana* Lindl. was collected but could not collect *V. walkeriae* Wight from Peninsular India during their studies on orchids. On examining the specimens at MH, only three specimens by E. Vajravelu, (fruiting - 2 sheets and flowering - 1 sheet) were observed. In Sirumugai forests, *V. walkeriae* was found in fragmented populations with more than 20 mature individuals. However, further studies are needed to assess its present status in the country.

The present collections of these little known interesting taxa, viz., *Cosmostigma racemosum* (Roxb.) Wight, *Blachia umbellata* (Willd.) Baill. and *Vanilla walkeriae* Wight are the evidences of rich floral diversity in Coimbatore forests with new additions to its flora.

### References

- Abraham, A. & P. Vatsala (1981). *An Introduction to Orchids*. Tropical Botanic Garden and Research Institute, Trivandrum.
- Henry, A.N., G.R. Kumari & V. Chithra (1987). *Flora of Tamil Nadu, India. Series I. Analysis Volume II*. Botanical Survey of India, Coimbatore.
- Henry, A.N., V. Chithra & N.P. Balakrishnan (1989). *Flora of Tamil Nadu, India. Series I: Analysis Volume III*. Botanical Survey of India, Coimbatore.
- Gamble, J.S. & C.E.C. Fischer (1916–1936). *Flora of the Presidency of Madras. Vols. I–III*. Botanical Survey of India, Calcutta; <http://doi.org/10.5962/bhl.title.21628>
- Hooker, J.D. (1872–1897). *The Flora of British India. Vol. I–VII*. London; <http://doi.org/10.5962/bhl.title.678>
- Vajravelu, E. & R. Chandrasekaran (1984). Notes on some rare and

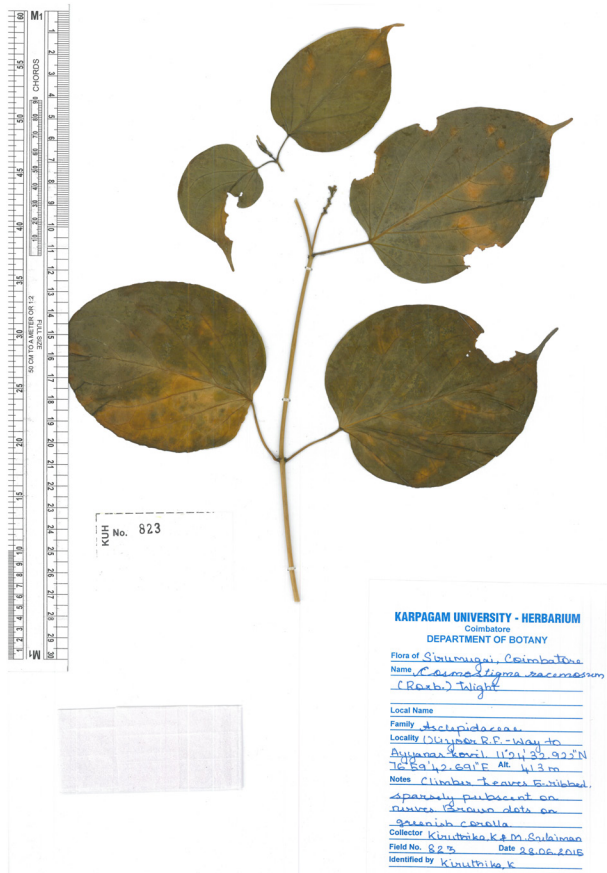


Image 4. Herbarium image of *Cosmostigma racemosum* (Roxb.) Wight



Image 5. Herbarium image of *Blachia umbellata* (Willd.) Bail.



Image 6. Herbarium image of *Vanilla walkeriae* Wight

interesting plants from Nilgiris, south India. *Bulletin of the Botanical Survey of India* 26(3-4): 211-214; <http://doi.org/10.20324/nelumbo%2Fv26%2F1984%2F74940>

Wight, R. (1845). *Icones Plantarum Indiae Orientalis : or figures of Indian plants - Volume III*. Madras. <http://dx.doi.org/10.5962/bhl.title.92>





**OPEN ACCESS**

The Journal of Threatened Taxa is dedicated to building evidence for conservation globally by publishing peer-reviewed articles online every month at a reasonably rapid rate at [www.threatenedtaxa.org](http://www.threatenedtaxa.org). All articles published in JoTT are registered under [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/) unless otherwise mentioned. JoTT allows unrestricted use of articles in any medium, reproduction, and distribution by providing adequate credit to the authors and the source of publication.

ISSN 0974-7907 (Online); ISSN 0974-7893 (Print)

February 2017 | Vol. 9 | No. 2 | Pages: 9777–9884

Date of Publication: 26 February 2017 (Online & Print)

DOI: 10.11609/jott.2017.9.2.9777-9884

[www.threatenedtaxa.org](http://www.threatenedtaxa.org)

**Article****Flora richness as an indicator of desert habitat quality in Kuwait**

-- Yahya Al-Shehabi & Kevin Murphy, Pp. 9777–9785

**Communications****Distribution of *Cryptopotamon anacoluthon* (Kemp, 1918) (Crustacea: Brachyura: Potamidae), a freshwater crab endemic to Hong Kong**

-- David John Stanton, Michael Robertson Leven & Tommy Chung Hong Hui, Pp. 9786–9794

**Moths of the family Limacodidae Duponchel, 1845 (Lepidoptera: Zygaenoidea) from Bhutan with six new generic and 12 new species records**

-- Jatishwor Singh Irungbam, Meenakshi Singh Chib & Alexey V. Solovyev, Pp. 9795–9813

**Odonates of Coimbatore District, Tamil Nadu, India**

-- M. Suhirtha Muhil & P. Pramod, Pp. 9814–9828

**Twenty-three new records of mantodea (Insecta) from some states of India**

-- Tushar Kanti Mukherjee, Geetha Iyer & Parbati Chatterjee, Pp. 9829–9839

**Short Communications****On the feeding habit of the Guiana Dolphin *Sotalia guianensis* (van Benedèn, 1864) (Mammalia: Cetartiodactyla: Delphinidae) in southeastern Brazil (~220S): has there been any change in more than two decades?**

-- Ana Paula Madeira Di Benedetto, Clara da Cruz Vidart Badia & Salvatore Siciliano, Pp. 9840–9843

**Additions to the scorpion fauna (Arachnida: Scorpiones) of Kerala, India, with an illustrated key to the genera**

-- K. Aswathi & P.M. Sureshan, Pp. 9844–9850

**Diversity of two families Libellulidae and Coenagrionidae (Odonata) in Regional Institute of Education Campus, Bhubaneswar, Odisha, India**

-- Priyamvada Pandey & Animesh Kumar Mohapatra, Pp. 9851–9857

**A report on occurrence of aphidophagous predators of *Aphis odinae* (van der Goot) (Hemiptera: Aphididae) in cashew ecosystem from Goa, India**

-- Ramasamy Maruthadurai & Narendra Pratap Singh, Pp. 9858–9861

**Notes****A new critical habitat for conservation of the White-bellied Heron *Ardea insignis* Hume, 1878 (Aves: Ardeidae) from Bhutan**

-- Karma Wangdi, Tashi Dhendup & Tsethup Tshering, Pp. 9862–9863

**First report of the parasitoid wasp *Piestopleura Förster* (Hymenoptera: Platygastroidea: Platygasteridae) from India**

-- Kamalanathan Veenakumari, Peter Neerup Buhl, Anandhan Rameshkumar & Prashanth Mohanraj, Pp. 9864–9865

**A century later the Manipur Argus *Callerebia suroia* Tytler, 1914 (Lepidoptera: Nymphalidae: Satyrinae) recorded in its type locality in Manipur, India**

-- Jatishwor Singh Irungbam, Harmenn Huidrom & Baleshwar Singh Soibam, Pp. 9866–9869

**First record of the predatory stinkbug *Eocanthecona concinna* (Walker, 1867) (Pentatomidae: Asopinae) from India**

-- Sadashiv Hanumant Waghmare & Sunil Madhukar Gaikwad, Pp. 9870–9873

**New records of Aplousobranch ascidians to Indian waters from Andaman Islands**

-- Jhimli Mondal, C. Raghunathan & K. Venkataraman, Pp. 9874–9880

**Additions to the flora of Coimbatore hills, Tamil Nadu, India**

-- K. Kiruthika, M. Sulaiman & R. Gopalan, Pp. 9881–9884