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## ON THE OCCURRENCE AND DISTRIBUTION OF THE NARROWLY ENDEMIC ANDAMAN LANTERN FLOWER *CEROPEGIA ANDAMANICA* (APOCYNACEAE: CEROPEGIEAE)

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NOTE

## On the occurrence and distribution of the narrowly endemic Andaman Lantern Flower Ceropegia andamanica (Apocynaceae: Ceropegieae)

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The genus Ceropegia (Apocynaceae, L. Asclepiadoideae) is the largest of the tribe Ceropegieae, represented by 190-200 taxa (Meve 2002; Mabberley 2017). The genus is distributed mainly in tropical and subtropical regions of the old world from the Canary Islands in the west through Africa, Madagascar, Arabia, India, southeastern Asia, New Guinea, and northern Australia in the east (Kidyoo & Paliyavuth 2017). Karthikeyan et al. (2009) recorded 56 species, two subspecies and three varieties for India, and according to more recent estimates the genus is represented by 56 species, two varieties and one forma (Kambale 2015; Kambale & Gnanasekaran 2016). A total of 40 species and three varieties are endemic to India (Singh et al. 2015; Kambale & Gnanasekaran 2016) of which C. andamanica Sreek., Veenak. & Prashanth is the only species known to occur in Andaman & Nicobar Islands.

Ceropegia are considered very attractive owing to the intricate ornamental nature of their "fly trap" flowers and their ecological adaptations. Flowers of distinctive color, pattern, and shape are unique to this genus. The Andaman & Nicobar Islands, with a total geographical area of 8,249km<sup>2</sup>, stretch from Myanmar

in the north to Sumatra in the south. This is one of the major phytogeographical regions of India, well known for tropical lowland rainforests (Nayar 1997). The floral components of these islands show many similarities with Malaysia, Myanmar, Thailand, and Sri Lanka. Most of the species found on these islands are also found outside India (Balakrishnan & Rao 1983).

 $(\mathbf{i})$ 

While studying and identifying old specimens collected from Andaman & Nicobar Islands deposited at CAL, the authors found a specimen of Ceropegia sp. collected from South Andaman Island in 1890. On further examination of the specimen and scrutiny of literature, it was found to be Ceropegia andamanica Sreek., Veenak. & Prashanth.

It is interesting to note that Dr. King's collection from Goplakabang, South Andamans in 1890, came almost 108 years before the species was described in 1998 from the collections made from Mount Harriet in South Andaman Islands. The 1890 collection was from a different locality, from where this species was not reported until now. The species was also collected in the recent past from different localities by N.G. Nair in 1975, from Herbertabad in South Andaman almost 23 years

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Editor: Anonymity requested.

Mount Harriet (1995) and identified it to be a new species and published it as *Ceropegia andamanica* in 1998. The purpose of this article is to update the distribution data of the species and provide a detailed description, image of the oldest herbarium specimen collected 108 years before the type collection, and to map its distribution to aid the conservation of this rare and narrow endemic species (Figure 1). A color photograph is also provided for easy identification. The species is also critically evaluated as per the recent IUCN category.

#### Ceropegia andamanica Sreek., Veenak. & Prashanth

Blumea 43(1): 215. 1998; Karthik et al., Fl. Pl. India 1: 160. 2009. (Figure 1 & Image 1).

Type: India, Andaman & Nicobar Islands, South Andaman: Mt. Harriet National Park, 14.xii.1995. Sreekumar & Veenakumari 15493 (holotype CAL0000018036!; isotypes PBL, L).

Perennial herb with watery latex. Leaves simple, opposite-decussate, lanceolate,  $5-15 \times 1-5 \text{ cm}$ , chartaceous, base shallowly cordate, margins entire, apex acute to acuminate, dark green above, glaucous beneath, glabrous, lateral veins 2–8 pairs, more or less prominent on both surfaces, tertiary veins prominent on both surfaces. Petiole 0.5–2 cm long, slender, glabrous. Inflorescence axillary, pedunculate, in 3–8-flowered cymes; peduncle slender, 1–2.5 cm long, glabrous. Flowers purple, 4–12 cm long; bracts 3–4 mm long,

glabrous; pedicel slender, 0.5–2 cm long, glabrous. Calyx 5-lobed; sepals 5, subulate, 0.5–1 cm long, glabrous. Corolla 5–12 cm long; corolla tube 1.5–2 cm long, dilated at base, sub-cylindrical, funnel shaped at throat; corolla lobes 3–7 cm long, connate at the tip, twisted, whip like, purplish, hairy. Corona biseriate; outer corona c. 3x2 mm, with 5 ovate-retuse bifid lobes, ciliate along margin and inside; inner corona with 5 erect, club shaped lobes, c. 2x1 mm, glabrous. Fruits not seen.

Flowering: November–December.

Distribution: India: Andaman Islands; South Andaman (known only from three localities).

Habitat: Along the edges of inland evergreen forests in association with *Mallotus resinosus* (Blanco) Merr. and *Phaulopsis imbricata* Sweet.

Additional specimens examined: India: Andaman Islands, South Andaman, Goplakabang, 1890, Dr. King's collector s.n. (CAL0000031581!) (Image 2); Herbertabad, 29.xi.1975, N.G. Nair 3169 (PBL!); Mount Harriet, 7.xii.1989, Sam P. Mathew 20416 (PBL!).

### **Conservation status**

The species is endemic and reported so far only from three locations in Andaman Islands, India. The extent of occurrence (EOO) of the species is estimated as c. 33km<sup>2</sup> (severely fragmented and with a projected decline in area of occupancy, number of locations, and number of mature individuals) and the area of occupancy (AOO) of the species is estimated as c. 12km<sup>2</sup>. The AOO is measured against the grid size of 4km<sup>2</sup> for each of the three locations. The number of mature individual of this



Image 1. Ceropegia andamanica Sreek., Veenak. & Prashanth - a flowering twig.



Figure 1. Distribution of Ceropegia and amanica Sreek., Veenak. & Prashanth in Andaman Islands.

Journal of Threatened Taxa | www.threatenedtaxa.org | 26 January 2021 | 13(1): 17597–17600

Cccurrence and distribution of *Ceropegia andamanica* 

Maheshwari & Karthigeyan



Image 2. The oldest collection of *Ceropegia andamanica* collected by King's collector in 1890.

species is <50.

The threat perception on the species is assessed here as Critically Endangered [CR B1 b(ii,iii,iv,v); D] globally.

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#### www.threatenedtaxa.org

#### Communications

# Diversity and distribution of snakes in Trashigang Territorial Forest Division, eastern Bhutan

Bal Krishna Koirala, Karma Jamtsho, Phuntsho Wangdi, Dawa Tshering,
Rinchen Wangdi, Lam Norbu, Sonam Phuntsho, Sonam Lhendup & Tshering Nidup,
Pp. 17455–17469

Freshwater fishes of Cauvery Wildlife Sanctuary, Western Ghats of Karnataka, India – Naren Sreenivasan, Neethi Mahesh & Rajeev Raghavan, Pp. 17470–17476

Fish communities and associated habitat variables in the upper Subansiri River of Arunachal Pradesh, eastern Himalaya, India

Sutanu Satpathy, Kuppusamy Sivakumar & Jeyaraj Antony Johnson, Pp. 17477–17486

Diversity and distribution of odonates in Rani Reserve Forest, Assam, India – Dipti Thakuria & Jatin Kalita, Pp. 17487–17503

An assessment of the population status of the threatened medicinal plant Illicium griffithii Hook.f. & Thomson in West Kameng District of Arunachal Pradesh, India

- Tashi Dorjee Bapu & Gibji Nimasow, Pp. 17504-17512

#### **Short Communications**

#### The discovery of a melanistic Leopard Panthera pardus delacouri (Linnaeus, 1758) (Mammalia: Carnivora: Felidae) at Bukit Kudung in Jeli, Kelantan, Peninsular Malaysia: conservation and ecotourism

– Kamarul Hambali, Nor Fakhira Muhamad Fazli, Aainaa Amir, Norashikin Fauzi, Nor Hizami Hassin, Muhamad Azahar Abas, Muhammad Firdaus Abdul Karim & Ai Yin Sow, Pp. 17513–17516

On the epidemiology of helminth parasites in Hangul Deer *Cervus hanglu hanglu* (Mammalia: Artiodactyla: Cervidae) of Dachigam National Park, India – Naziya Khurshid, Hidayatulla Tak, Ruqeya Nazir, Kulsum Ahmad Bhat & Muniza Manzoor, Pp. 17517–17520

#### Histopathological findings of infections caused by canine distemper virus, *Trypanosoma cruzi*, and other parasites in two free-ranging White-nosed Coatis *Nasua narica* (Carnivora: Procyonidae) from Costa Rica

Jorge Rojas-Jiménez, Juan A. Morales-Acuña, Milena Argüello-Sáenz,
Silvia E. Acevedo-González, Michael J. Yabsley & Andrea Urbina-Villalobos, Pp. 17521–
17528

# On a new species of *Macrobrachium* Spence Bate (Decapoda: Palaemonidae) from Ayeyarwady River, Myanmnar

– H.H.S. Myo, K.V. Jayachandran & K.L. Khin, Pp. 17529–17536

# Review of the tiger beetle genus *Calomera* Motschulsky, 1862 (Coleoptera: Cicindelidae) of the Philippines

 Milton Norman Medina, Alexander Anichtchenko & Jürgen Wiesner, Pp. 17537– 17542

#### Rediscovery of Martin's Duskhawker Anaciaeschna martini (Selys, 1897) (Odonata: Aeshnidae) from Western Ghats, peninsular India, with notes on its current distribution and oviposition behavior

– Kalesh Sadasivan, Manoj Sethumadavan, S. Jeevith & Baiju Kochunarayanan, Pp. 17543–17547

A note on the current distribution of reedtail damselfly *Protosticta rufostigma* Kimmins, 1958 (Odonata: Zygoptera: Platystictidae) from Western Ghats, and its addition to the odonate checklist of Kerala

Kalesh Sadasivan & Muhamed Jafer Palot, Pp. 17548–17553

## Member



Assessment of threat status of the holly fern *Cyrtomium micropterum* (Kunze) Ching (Polypodiopsida: Dryopteridaceae) in India using IUCN Regional guidelines - C. Bagathsingh & A. Benniamin, Pp. 17554–17560

#### Notes

First report of the Asiatic Brush-tailed Porcupine Atherurus macrourus (Linnaeus, 1758) (Mammalia: Rodentia: Hystricidae) from West Bengal, India – Suraj Kumar Dash, Abhisek Chettri, Dipanjan Naha & Sambandam Sathyakumar, Pp. 17561–17563

Record of the world's biggest pangolin? New observations of bodyweight and total body length of the Indian Pangolin *Manis crassicaudata* Gray, 1827 (Mammalia: Pholidota: Manidae) from Mannar District, Sri Lanka

- Priyan Perera, Hirusha Randimal Algewatta & Buddhika Vidanage, Pp. 17564-17568

First record of *Touit melanonotus* (Wied, 1820) (Aves: Psittaciformes: Psittacidae) in Cantareira State Park, Brazil: new colonization or simply unnoticed? – Marcos Antônio Melo & David de Almeida Braga, Pp. 17569–17573

Is *Bombus pomorum* (Panzer, 1805) (Hymenoptera: Apidae) a new bumblebee for Siberia or an indigenous species?

– Alexandr Byvaltsev, Svyatoslav Knyazev & Anatoly Afinogenov, Pp. 17574–17579

Some new records of scarab beetles of the genus *Onthophagus* Latreille, 1802 (Coleoptera: Scarabaeidae) from northern Western Ghats, Maharashtra, with a checklist

 Aparna Sureshchandra Kalawate, Banani Mukhopadhyay, Sonal Vithal Pawar & Vighnesh Durgaram Shinde, Pp. 17580–17586

# Ecological importance of two large heritage trees in Moyar River valley, southern India

 Vedagiri Thirumurugan, Nehru Prabakaran, Vishnu Sreedharan Nair & Chinnasamy Ramesh, Pp. 17587–17591

Bulbophyllum spathulatum (Orchidaceae), a new record for Bhutan – Pema Zangpo, Phub Gyeltshen & Pankaj Kumar, Pp. 17592–17596

On the occurrence and distribution of the narrowly endemic Andaman Lantern Flower Ceropegia andamanica (Apocynaceae: Ceropegieae) – M. Uma Maheshwari & K. Karthigeyan, Pp. 17597–17600

The oat-like grass *Trisetopsis aspera* (Munro ex Thwaites) Röser & A.Wölk (Poaceae): a new record for the flora of central Western Ghats of Karnataka, India – H.U. Abhijit, Y.L. Krishnamurthy & K. Gopalakrishna Bhat, Pp. 17601–17603

Star Grass Lily Iphigenia stellata Blatter (Colchicaceae) – a new addition to the flora of Gujarat, India

- Mitesh B. Patel, Pp. 17604-17606

#### A new record of pyrenocarpous lichen to the Indian biota

– N. Rajaprabu, P. Ponmurugan & Gaurav K. Mishra, Pp. 17607–17610



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