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Ph: +91 9385339863 | [www.threatenedtaxa.org](http://www.threatenedtaxa.org)

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continued on the back inside cover

Cover: *Geodorum laxiflorum* Griff.—inflorescence (Orchidaceae) © Ashish Ravindra Bhojwar.



## *Melastoma imbricatum* Wall. ex Triana (Melastomataceae): a new addition to the flora of Manipur, India

Rajkumari Jashmi Devi<sup>1</sup> , Deepashree Khuraijam<sup>2</sup> , Peimichon Langkan<sup>3</sup> & Biseshwori Thongam<sup>4</sup>

<sup>1-4</sup> Plant Systematic and Conservation Laboratory, Institute of Bioresources and Sustainable Development, Takyelpat, Imphal West, Manipur 795001, India.

<sup>1</sup> rajkumjas@gmail.com, <sup>2</sup> deepashreekhuraijam@gmail.com, <sup>3</sup> apeilangkan637@gmail.com,

<sup>4</sup> b\_thongam07@yahoo.com (corresponding author)

Manipur is one of the northeastern states of India lying between 94.31–94.78 E longitudes and 23.83–25.68 N latitude. The state is bounded by upper Chindwin areas of Myanmar in east, Cachar hills of Assam in west, Naga Hills of Nagaland in the north and Chin hills of Myanmar in the south. The state is also a part of the Indo-Burma Biodiversity Hotspot.

The genus *Melastoma* of family Melastomataceae is distributed in southeastern Asia, India, southern China, Japan, northern Australia, Oceania, and Bangladesh. It was reported to comprise about 100 species (Chen 1984), however recent taxonomic revision recognized 22 species (Meyer 2001). While in flora of British India (Vol 2), the genus is represented by six species, viz., *M. malabathricum*, *M. polyanthum*, *M. normale*, *M. imbricatum*, *M. sanguineum*, and *M. houtteanum* (Hooker, 1889), in flora of Manipur (Vol 1), it is represented by two species, viz., *M. malabathricum* and *M. normale* (BSI 2000). And three species were recorded in flora of Assam (Vol 2), viz., *M. malabathricum*, *M. normale*, and *M. imbricatum* (Kanjilal et al. 1938). Among the three species reported from northeastern region (NER) of India, *M. normale* is now designated

as *Melastoma malabathricum* ssp. *normale* (D. Don) K. Meyer.

A field survey was carried out at Ukhrul district, Manipur during the month of April 2021. A plant was collected from Lambui (25.015N, 94.294E), Ukhrul district, Manipur which looked similar to *M. malabathricum*. In flora of Manipur (2000), *M. malabathricum* was reported from Sirohee, Imphal, and Uchathol in Manipur. However, the leaves were found to be broader with longer petiole. The plant specimen was brought to Plant Systematic and Conservation Laboratory, Institute of Bioresources and Sustainable Development (IBSD), Imphal, India for proper identification. With the help of floras (Hooker 1889; Kanjilal et al. 1938; Wu et al. 2007), and Literatures (Meyer 2001), the plant specimen was identified as *Melastoma imbricatum* Wallich ex Triana of family Melastomataceae using distinct characters such as hypanthium covered with short appressed golden scales; petiole 1.8–6.5 cm, lamina strigose on both sides, leaf blade broadly ovate to broadly elliptic, 5.5–13.5 cm wide; ovary as long as hypanthium. The herbarium specimen was deposited at Plant systematic and Conservation Laboratory, Institute of Bioresources

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and Sustainable Development, Imphal, India under the voucher number PSCL/C1SP7-35. Since no previous report was found on distribution of *M. imbricatum* in Manipur, India, the present study reports it as a new addition to the flora of Manipur, India. A brief description and colour illustration of the species is provided (Image 1).

**Keys to species**

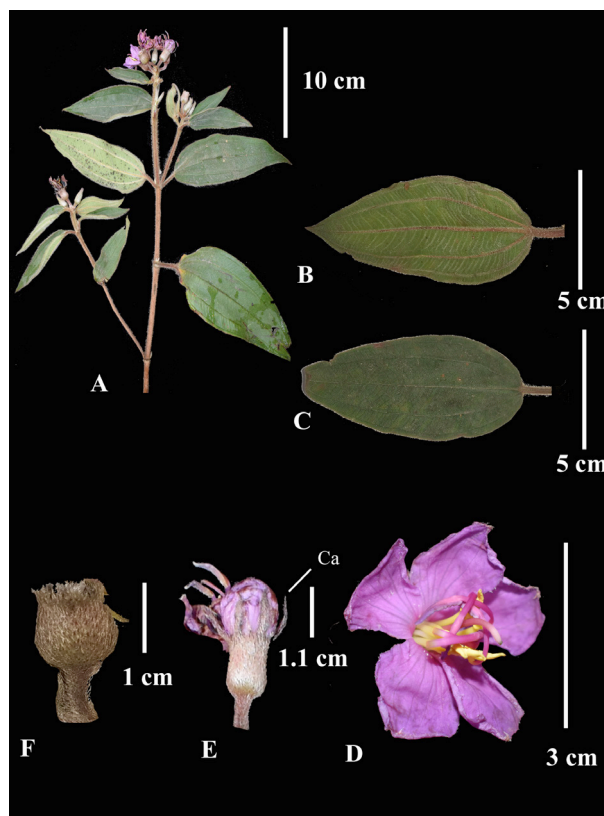
- 1a. Branches covered with scales; hypanthium covered with appressed or slightly spreading golden to red scales; bracts not enclosing the flowers; petiole 0.5–1.9 cm; leaf surface not bullate; leaf blade ovate, elliptic, or elliptic-lanceolate, 1.7–3.5(–6) cm wide; ovary shorter than hypanthium ..... 2
- 2a. Branches scaly; lamina strigose to slightly pilose below ..... ***M. malabathricum***
- 2b. Branches pilose; lamina pilose below .....  
..... ssp. ***normale***
- 1b. Branches covered with appressed scales; hypanthium covered with short appressed golden scales; petiole 1.8–6.5 cm; bracts not enclosing the flowers; leaf surface not bullate, lamina strigose on both sides, leaf blade broadly ovate to broadly elliptic, 5.5–13.5 cm wide; ovary as long as hypanthium ..... ***M. imbricatum***

**Taxonomy description**

***Melastoma imbricatum*** Wall. ex Triana, Trans. Linn. Soc. London 28: 60 (1871).

Hooker J.D. Fl. of British India 2: 524.1889; Kanjilal et al. Fl. of Assam 2:299. 1938.

Shrubs, 1 m high. Stems quadrangular, with appressed scales. Leaves broadly ovate to broadly elliptic, 9–11.2 cm × 4.7–5 cm, acute at apex, entire along margin, rounded at base, strigose on both sides, secondary veins two on each side of midvein, tertiary veins numerous and parallel. Petioles 1.5–1.9 cm long. Inflorescences terminal, 8–10 flowered, with two leaf-like bracts at base, overtopped by young branches. Bracts obovate, 1 × 0.4 cm, covered with small appressed scales outside, glabrous inside. Flowers 5-merous. Pedicels 1 cm, strigose; Hypanthium campanulate, 1 × 0.6 cm, covered with short appressed golden scales, 1.2 mm; Calyx triangular, lanceolate 1.12 × 0.2 cm, covered with small appressed scales outside, glabrous inside. Petals violet, obovate, 1.5–2 × 7–10 mm; stamens dimorphic; longer stamens, connective at base 8 mm, ventrally curved, two appendages, 1.5 mm; filaments 6 mm long; anthers 7 mm long, violet; shorter stamens with connective not extended; filaments 5 mm long, two appendages 1



**Image 1.** *Melastoma imbricatum* Wall. ex Triana: A—Plant | B—Abaxial leaf beneath with very small scabrous hairs | C—Adaxial leaf with 2 secondary veins on each side of midvein, tertiary veins numerous and parallel | D— Flower | E—Bud with calyx (Ca.) | F— Hypanthium. © Rajkumari Jashmi Devi & Mayengbam Aldrin.

mm long; anthers 6 mm long, yellow. Ovary as long as hypanthium, half inferior, densely bristly at apex. Fruit and seed not seen but noted fruit as a fleshy capsule, rupturing irregularly transversally at maturity exposing soft pulpy orange seeds (Meyer 2001).

**Flowering:** April–July

**Fruiting:** Not seen but noted as February to March or December (Flora of China 2007)

**Vernacular name:** Yachubi (Manipuri)

**Distribution:** Southeastern Asia, India, southern China, Japan, northern Australia, Oceania (Meyer 2001) and Bangladesh (Uddin 2019)

**Habitat:** Occurs in disturbed forests and along river banks up to 2,000 m.

**Specimen examined:** PSCL/C1SP7-35, India, Manipur, Ukhrul, Lambui, 25.015N, 94.294E, 1,420 m, 14.iv.2021 (Image 2).

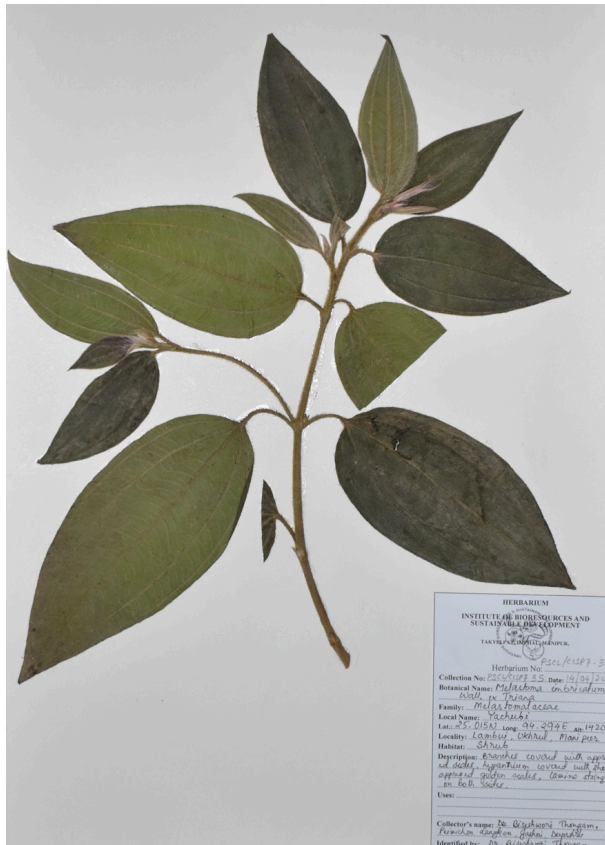


Image 2. Herbarium sheet of *Melastoma imbricatum* Wall. ex Triana.

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#### Article

**Distribution, diet, and trophic level of *Arvicanthis abyssinicus* and *Tachyoryctes splendens* around the area of recently extinct Ethiopian Wolf *Canis simiensis* on Mount Guna, northwestern Ethiopia**

– Hirpasa Teressa, Wondimu Ersino & Tadele Alemayo, Pp. 20539–20549

#### Communications

**Seasonal composition of avian communities in different habitats of Harike Wetland, a Ramsar site in Punjab, India**

– Jagdeep Singh & Onkar Singh Brraich, Pp. 20550–20565

**Temporal changes in species richness of waterfowl (Anseriformes) community in D’Ering Memorial Wildlife Sanctuary, Arunachal Pradesh, India**

– Tapak Tamir & Daniel Mize, Pp. 20566–20575

**Reptilian assemblages in the wetlands of Amboli hill complex, northern Western Ghats, Maharashtra, India during the monsoon season**

– Sachinkumar R. Patil & Kiran Choudaj, Pp. 20576–20583

**Butterfly diversity and composition at Chemerong Amenity Forest, Terengganu, Malaysia**

– Muhammad Hafiz Sulaiman, Abdul Munir Mohd Zaki, Geok Chin Yap, Nur Atiqah Aniruddin & Ju Lian Chong, Pp. 20584–20596

**Ecological niche modeling for reintroduction and conservation of *Aristolochia cathcartii* Hook.f. & Thomson (Aristolochiaceae), a threatened endemic plant in Assam, India**

– Bhaskar Sarma & Bhaben Tanti, Pp. 20597–20605

**New host plant records of Fig Wax Scale *Ceroplastes rusci* (Linnaeus, 1758) (Hemiptera: Coccoomorpha: Coccidae) from India**

– Arvind Kumar & Renu Pandey, Pp. 20606–20614

**Seasonal variations influencing the abundance and diversity of plankton in the Swarnamukhi River Estuary, Nellore, India**

– Krupa Ratnam, V.P. Limna Mol, S. Venkatnarayanan, Dilip Kumar Jha, G. Dharani & M. Prashanthi Devi, Pp. 20615–20624

#### Short Communications

**First record of *Prosopeonoides* Millidge & Russell-Smith, 1992 (Araneae: Linyphiidae) from India, with the description of a new species**

– Anusmitha Domichan & K. Sunil Jose, Pp. 20625–20630

**Rediscovery of *Platerus pilcheri* Distant (Hemiptera: Reduviidae), a forgotten assassin bug from India, with comments on its range extension**

– H. Sankararaman, Anubhav Agarwal, Valérie A. Lemaître & Hemant V. Ghate, Pp. 20631–20636

**First Indian DNA barcode record for the moth species *Pygospila tyres* (Cramer, 1780) (Lepidoptera: Crambidae: Spilomelinae) distributed in Asia and Australia**

– Aparna S. Kalawate, A. Shabnam & K.P. Dinesh, Pp. 20637–20642

**First record and description of female *Onomarchus leuconotus* (Serville, 1838) (Insect: Orthoptera: Tettigoniidae) from peninsular India**

– Sunil M. Gaikwad, Yogesh J. Koli & Gopal A. Raut, Pp. 20643–20647

**New records of odonates (Insecta: Odonata), *Archibasis oscillans* Selys, 1877 and *Merogomphus tamaracherriensis* Fraser, 1931 from Maharashtra, India**

– Akshay Dalvi & Yogesh Koli, Pp. 20648–20653

**A checklist of dragonflies & damselflies (Insecta: Odonata) of Kerala, India**

– Sujith V. Gopalan, Muhamed Sherif & A. Vivek Chandran, Pp. 20654–20665

***Aldama macbridei* (Heliantheae: Compositae): notes on its distribution and vulnerable habitats in central Peru**

– Daniel B. Montesinos-Tubée & Federico García-Yanes, Pp. 20666–20671

**Lichens and animal camouflage: some observations from central Asian ecoregions**

– Mahmood Soofi, Sandeep Sharma, Barbod Safaei-Mahroo, Mohammad Sohrabi, Moosa Ghorbani Organli & Matthias Waltert, Pp. 20672–20676

#### Notes

**First photographic evidence of Asiatic Black Bear *Ursus thibetanus* in Kaziranga Tiger Reserve, India**

– Priyanka Borah, Jyotish Ranjan Deka, Mujahid Ahamad, Rabindra Sharma, Ruchi Badola & Syed Ainul Hussain, Pp. 20677–20679

**First record of Small Minivet *Pericrocotus cinnamomeus* (Aves: Passeriformes: Campephagidae) from Kashmir, India**

– Zakir Hussain Najjar, Bilal A. Bhat & Riyaz Ahmad, Pp. 20680–20682

***Cotesia anthelae* (Wilkinson, 1928) (Hymenoptera: Braconidae) a natural parasitoid of *Cirrochroa thais* (Fabricius, 1787) (Lepidoptera: Nymphalidae), first report from the Oriental region**

– Ankita Gupta & P. Manoj, Pp. 20683–20685

***Melastoma imbricatum* Wall. ex Triana (Melastomataceae): a new addition to the flora of Manipur, India**

– Rajkumari Jashmi Devi, Deepashree Khuraijam, Peimichon Langkan & Biseshwori Thongam, Pp. 20686–20688

***Geodorum laxiflorum* Griff. (Orchidaceae), a new distribution record for Maharashtra state of India**

– Ashish Ravindra Bhojar, Swapnil Nandgawe, Syed Abrar Ahmed & Saduram Madavi, Pp. 20689–20691

**Photographic record of *Armillaria mellea* a bioluminescent fungi from Lonavala in Western Ghats, India**

– Swanand R. Patil & Shubham V. Yadav, Pp. 20692–20694

#### Response & Reply

**Correction to Catalogue of herpetological specimens from Meghalaya, India at the Sálím Ali Centre for Ornithology and Natural History (SACON)**

– Pandi Karthik, Pp. 20695–20697

**Reply to the “Correction to Catalogue of herpetological specimens from Meghalaya, India at the Sálím Ali Centre for Ornithology and Natural History (SACON)” by P. Karthik**

– S.R. Chandramouli, R.S. Naveen, S. Sureshmarimuthu, S. Babu, P.V. Karunakaran & Honnavalli N. Kumara, Pp. 20698–20700

#### Book Review

**Conservation Kaleidoscope: People, Protected Areas and Wildlife in Contemporary India**

– L.A.K. Singh, Pp. 20701–20702

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