A new species of *Pancratium* Dill. ex L. (Amaryllidaceae) from Eastern Ghats of India

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The family Amaryllidaceae has large beautiful flowers and is widely distributed in tropical to subtropical regions. The genus *Pancratium* belongs to Amaryllidaceae and the word Pancratium was derived from Greek, which means “all strength” alluding to the medicinal properties of the bulbs of these plants. It was first described by Linnaeus (1753) and it is represented by 21 species from the World (WFO 2021). While India has 11 species—*P. bhramarambae* Sadas., *P. biflorum* Roxb., *P. donaldii* Blatt., *P. longiflorum* Roxb. ex Ker Gawl., *P. nairii* Sasikala & Reema Kumari., *P. parvum* Dalzell., *P. st-mariae* Blatt. & Hallb., *P. telanganense* Sadas., *P. triflorum* Roxb., *P. verecundum* Aiton, and *P. zeylanicum* L. (Sadasivaiah & Karuppasamy 2018). Only two species, *P. longiflorum* and *P. triflorum*, are reported from Eastern Ghats of Andhra Pradesh (Pullaiah 2018).

The genus *Pancratium* having unique characteristics like perennial herbaceous bulbous, linear lanceolate leaves, umbellate Inflorescence, large flowers with funnel shaped perianth, six stamens attached on the throat of the perianth with filiform filaments united below by a coronal membrane into a toothed or lobed cup, oblong or linear dorsifixed anthers, tricarpellary, syncarpous and trilocular, inferior ovary with 2-seriatein numerous ovules and filiform style.

During our botanical explorations in the Eastern Ghats of Andhra Pradesh, first author was collected an interesting species of *Pancratium* from hills of Vizianagaram District (Figure 1). It is resembles *P. st-mariae*. After critical taxonomic assessment it was identified as a new species and herbarium specimen was deposited in Herbarium, Department of Botany, Andhra University (Image 2). Some of the bulbs were introduced into the College Campus Garden. A detailed description, comparison table (Table 1), and photographs were provided in this article (Image 1).
membranous spathe, apex acuminate; flowers without fragrance, with very short perianth tube (1.3 cm long), perianth lobes long, filament, greenish white anthers pollen oval shape and long style.

**Description:** A small perennial bulbous herbs grows up to 30–32 cm height; bulbs globose, 3.2 x 4.1 cm, tunica membranous, dark brown, white when remove the tunica, neck 5–5.5 x 0.4 cm, dark brown; leaves 5–6, radical, narrowly elliptic, semi succulent, 24–25 x 2–2.4 cm, dorsiventral, adaxis dark green, abaxis light green, glabrous, acute; scape 2-flowered, 9 x 0.3 cm, compressed and veined, succulent, green; flowers white, not fragrant, 5.1 x 6.5 cm, bloom at morning; spathe 5 cm long, acute, membranous covered the pedicel and ovary, opening at one side, 2-veined, veins green; pedicel 0.5 cm long, green; perianth tube 1–1.2 cm long, light green, slightly grooved; perianth lobes glabrous, recurved 4–4.5 x 0.25 cm, linear, entire, mucronate white; stamens 6, filaments white, slightly curved at base, shorter than the perianth lobes, 2.2 cm, anthers 0.2 cm long, pale green or tea green, longitudinal dehiscence, versatile, opposite to the filament, pollen oval shape; staminal corona white, 1.1 x 2.2 cm, 12-toothed, tooth 0.2 cm, tip attenuate, glabrous, the two teeth where thefilaments arise are close, whereas between the filaments teeth are distant; ovary 3-celled, green, 0.8–1 x 0.4–0.5 cm, glabrous, numerous ovules on axile placentation, style longer than the filaments, slender, 6.5 cm, stigma simple. Fruits and seeds not found.

**Flowering:** November–December.

**Etymology:** The specific epithet of species was given in honour of Prof. Malleboena Venkaiah (Retired), Department of Botany, Andhra University for his great contribution to biodiversity conservation.

**Table 1. Comparison table of *P. venkaiahii* sp. nov. with *P. st-mariae*.**

| Description | *P. venkaiahii* sp. nov. | *P. st-mariae* |
|-------------|--------------------------|----------------|
| 1. Bulb     | Globose, 3.2 x 4.1 cm, tunica dark brown membranous | Globose, 3.5–6 cm, tunica pale brown, many veined |
| 2. Neck     | 5–5.5 cm | 10 cm |
| 3. Leaves   | 5–6, narrowly elliptic, acute, 24–25 x 2–2.4 cm | 2–5, lanceolate, obtuse, 10–15 x 1–1.5 cm |
| 4. Scape    | 8–9 cm, long, 2-flowered | 10–15 cm long, 2–5 flowered |
| 5. Spathe   | 5 cm | 2 cm |
| 6. Pedicel  | 0.5 cm | 0.5 cm |
| 7. Perianth tube | 1.2 cm, light green | 3 cm, green |
| 8. Perianth lobes | Oblong or linear oblong, 4–4.5 | Lanceolate, 2–2.5 x 0.2–0.3 |
| 9. Staminal cup | 1.1 cm, teeth 0.2 cm | 7–10 mm, teeth 2 mm |
| 10. Anthers | Pale green or pea green | Yellow |
| 11. Style   | 6.5 cm | 3.5–4.5 cm |
contribution in taxonomy and ethno botany.

Habitat and species association: Rarely found in the open canopy dry deciduous vegetation with an association of ground flora: *Andrographis paniculata* (Burm.f.) Nees, *Aristida adscensionis* L., *Cleome aspera* J.Koenig ex DC., *Cynodon dactylon* (L.) Pers., *Imperata cylindrica* (L.) Rausch., *Ledebouria revoluta* (L.f.) Jessop, *Sacciolepis interrupta* (Willd.) Stapf; Shrubs: *Canthium coromandelicum* (Burm.f.) Alston, *Opuntia stricta* (Haw.) Haw., *Pavetta zeylanica* (Hook.f.) Gamble, *Senna auriculata* (L.) Roxb.; Climbers: *Cajanus scarabaeoides* (L.) Thouars, *Canavalia gladiata* (Jacq.) DC., *Cissus quadrangularis* L., *Paracalyx scariosus* (Roxb.) Ali, *Smilax zeylanica* L., *Tinospora cordifolia* (Willd.) Miers; Trees: *Ailanthus excelsa* Roxb., *Anogeissus acuminata* (Roxb. ex DC.) Wall. ex Guillen. & Perr., *Bombax ceiba* L., *Butea monosperma* (Lam.) Taub., *Gmelina asiatica* L., *Strychnos nux-vomica* L., and *Tamarindus indica* L.

Conservation status: Rare in the study area, quantification of the natural populations of this species is not known but this species is facing threats from grazing and anthropogenic activities. First author introduced this species into the College Campus Garden and observed that all individuals were acclimatized and flowered but there was no fruit set. It was observed that the leaves of this plant was fed by caterpillars in the campus and this species is host for some lily moths.

Ethnomedicine: Generally, bulbs are used as medicine for veterinary diseases and is called ‘adavivulli’. Ethno medicinal information for human beings is still not known.

India has more than 50% native *Pancratium* species including current report, and detailed studies need to
be conducted in the aspects of taxonomy, distribution, economic importance, and conservation status.

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Image 2. Herbarium specimen of *Pancratium venkaiahii* sp. nov. holotype (AUV 23367). © J. Prakasa Rao.
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**Article**

**Distribution and habitat-use of Dhole *Cuon alpinus* (Mammalia: Carnivora: Canidae) in Parsa National Park, Nepal**

– Santa Bahadur Thing, Jhamak Bahadur Karki, Babu Ram Lamichhane, Shashi Shrestha, Uba Raj Regmi & Rishi Ranabhat, Pp. 20703–20712

**Communications**

**Habitat preference and population density of threatened Visayan hornbills *Penelopoides panini* and *Rhabdotorrhinus waldeni* in the Philippines**

– Andrew Ross T. Reintar, Lisa J. Paguntalan, Philip Godfrey C. Jakosalem, Al Christian D. Quidel, Dennis A. Warguez & Emelyn Peñaranda, Pp. 20713–20720

**Nest colonies of Baya Weaver *Plucho philipinus* (Linneaeus, 1766) on overhead power transmission cables in the agricultural landscape of Cuddalore and Villupuram districts (Tamil Nadu) and Puducherry, India**

– M. Pandian, Pp. 20721–20732

**Status and distribution of Mugger Crocodile *Crocodylus palustris* in the southern stretch of river Cauvery in Melagiris, India**

– Rahul Gour, Nikhil Whitaker & Ajay Kartik, Pp. 20733–20739

**Dragonflies and damselflies (Insecta: Odonata) of Jabalpur, Madhya Pradesh, India**

– Ashish Tiple, Vivek Sharma & Sonali V. Padwad, Pp. 20740–20746

**Sp Ald mental and temporal variation in the diversity of malaco fauna from Aripal stream of Kashmir Himalaya, India**

– Zahoor Ahmad Mir & Yahya Bakhtiyar, Pp. 20747–20757

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– Yadvinder Singh, Gurdarshan Singh, D.P. Singh & J.I.S. Khattar, Pp. 20758–20772

**Short Communications**

**Breeding biology of Sri Lanka White-eye *Zosterops ceylonensis* (Aves: Passeriformes: Zosteropidae) in tropical montane cloud forests, Sri Lanka**

– W.D.S.C. Dharmarathne, P.H.S.P. Chandrasiri & W.A.D. Mahaulpatha, Pp. 20773–20779

**Two new species of army ants of the *Aenictus ceylonicus* group (Hymenoptera: Formicidae) from Kerala, India**

– Anupa K. Antony & G. Prasad, Pp. 20780–20785

**Addition of three new angiospermic taxa to the flora of Bangladesh**

– M. Ashrafuzzaman, M. Khairul Alam & A.K.M. Golam Sarwar, Pp. 20786–20791

**A new distribution record of *Memecylon clarkeanum* Cogn. (Melastomataceae) to Karnataka from Sharavathi river basin, central Western Ghats, India**

– Malve Sathisha Savinaya, Jogattappa Narayana, Venkatarangaiah Krishna & Kalamanji Govindaiah Girish, Pp. 20792–20797

**Notes**

**First record of Doherty’s Dull Oakblue *Arhopala khamti* Doherty, 1891 from upper Assam, India**

– Arun Pratap Singh, Pp. 20798–20800

**A new species of *Pancratium* Dill. ex L. (Amaryllidaceae) from Eastern Ghats of India**

– R. Prameela, J. Prakasa Rao, S.B. Padal & M. Sankara Rao, Pp. 20801–20804

**Tribulus ochroleucus** (Maire) Ozenda & Quezel (Zygophyllaceae) - a new addition to the flora of India

– K. Ravikumar, Umeshkumar Tiwari, Balachandran Natesan & N. Arun Kumar, Pp. 20805–20807

**Abnormalities in the female spikelets of *Coix lacryma-jobi* L. (Poaceae) India**

– Nilesh Appaso Madhav & Kumar Vinoth Chhotupuri Gosavi, Pp. 20808–20810