

## Rediscovery of *Pancratium donaldii* Blatt. (Amaryllidaceae) in Endemic Species from Mahadev Hilly Ranges of South Maharashtra, India

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### Abstract

*Pancratium donaldii* (Amaryllidaceae), a rare and narrowly endemic plant, has been rediscovered after a gap of 92 years in the Mahadev hill ranges of Khatav Tehsil, located in the eastern part of Satara district, Maharashtra. Until now, the species was known only from its type localities in Panchgani and Satara. The new record, about 45 km from Satara and 97 km from the Panchgani Table Land, represents a significant extension of its known distribution. The Mahadev hill ranges form part of the north-western Deccan Plateau and are characterized by semi-arid conditions with lateritic soils. Here, *P. donaldii* was observed thriving in rocky crevices and shallow soil patches along open hill slopes exposed to intense sunlight. The surrounding vegetation is dominated by xerophytic herbs and shrubs, reflecting the region's harsh, dry climate and limited rainfall. The rediscovered population was studied in detail, with a complete morphological description supported by high-resolution photographs and illustrations for easy identification. The species is distinguished by its striking large, fragrant white flowers, slender linear leaves, and bulbous base. Ecological observations suggest that *P. donaldii* has a very narrow habitat preference, surviving only in exposed, rocky terrain with minimal vegetation cover. This rediscovery highlights the urgent need for conservation action. Given its highly restricted range and habitat specificity, the species is vulnerable to habitat disturbance. Targeted field surveys across the Deccan Plateau are recommended, both to locate additional populations and to assess the conservation status of other rare or overlooked species in the region.

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### Introduction

The genus *Pancratium* Dill.ex L. was established by Linnaeus (1753) and is now represented by 24 species, 7 of them in Mediterranean region, 4 in Africa and 11 in tropical Asia (De Castro *et al.* 2012, The Plant list 2012). In India presently 12 species are occurred. *Pancratium donaldii* was described by Blatter E and first published in Journal and Proceedings of the Asiatic Society of Bengal 26: 360.1931. Blatter collected it in 1928 from Pachagani mentioning the precise locality of this plant. Thereafter, during a long period, it could not be re-collected from type locality even after extensive and intensive searching by many botanists and suggested further explorations for confirming its status. In flora of Maharashtra mentioned its status as rare. Since then, there had been no collection of this species from state. Therefore, the present record comes after 92 years from other locality. At present authors visited type locality but, in this region, due to

anthropological activities it was not found. In 2020 and 2021 SMM also investigated from the Mahadev hills of Satara district of Khatav Tehsil without success. During visit in the Mahadev hilly ranges, authors found curious flowering members of the family Amaryllidaceae in June 2020. The GPS readings of new locality N-17°.57' to E-74°.29' and Altitude 3285 MSL in ft. After a thorough study, the specimen is identified as *Pancratium donaldii*. The present paper provided with nomenclatural citation, taxonomic description, phenology, distribution pattern with maps and photographic plates (Images-1-3).

*Pancratium donaldii* Blatter sp.nov (Amaryllidacea, accedensad *Pancratium parvum* Dalz.necnon *P. Mariae* Blatter and Hallberg. Different a primo lata conica scapo fortissimo, ab altero stylo non inclusa erperigonni tubo multo longiore necnon distinct trigono.) *Pancratium donaldii* Blatt. In J. Asiat.Soc.Beng.26:360.1930.

A perennial glabrous herb. Bulb globose, ca. 4cm. diam., tunicate, brown; neck cylindric, upto 3cm. long. Leaves at time of flowering 2, leathery, lanceolate, acute or obtuse. Reaching 2/3 up to the scape. Scape very stout, compressed, almost smooth, or striate or ribbed, up to 10cm. long green. Flowers fragrant, 2-5 in umbel. Spatha 1 very broadly ovate, bifid at apex, membranous, whitish transparent. Pedicels up to 1cm. long. Perianth- tube up to 9cm. long, greenish below, white above, distinctly trigonous, slightly dilated above; lobes white, reaching 3cm. by 1cm., broadly lanceolate, suddenly contracted in to awl-shaped apiculus 3-4mm. long, at the base of apiculus above a small horn pointed inwards. Staminal cup 1cm long, broadly conico-trigonous, with 6 longitudinal folds truncate at apex with bifid teeth between the filaments. Filaments longer or shorter than teeth of cup. Anthers about 4mm long, yellow. Ovary cylindrical-trigonous 1cm long x3mm across; tricarpellary; style filiform, about 11cm. protruding for about 1cm. beyond the anthers. Stigma subtrilobed. 3-celled, white. Capsules 3-angled, subglobose, 0.9- 1.0 x 2.0 cm, with persistent style. Ovules many, each locule having 5-7 seeds. Seeds angular black, 4x4mm, trigonal, beaked.

**Locality:** Bombay Presidency: Pachagani, second tableland in grass on latrite soil exposed situation, only in an area of about 50sq.yards (Donald Elkins No.758,type,759.760,761cotypes)- found flowering 10<sup>th</sup> June. 1928, Mahadev hills of Khatav (Jaigaon)

**Flowering & Fruiting: June-July. & Feb.**

**Habitat and Ecology:** It grows on slopes in semi-shade as well as exposed conditions in dry deciduous forests at an altitude range of 3285 MSL in ft. Plants are sparsely grown around a small patch. It appeared among the grasses in epimeral nature for short period

**Threat:** Construction of wind mills, Forest fires, Deforestation, over grazing.

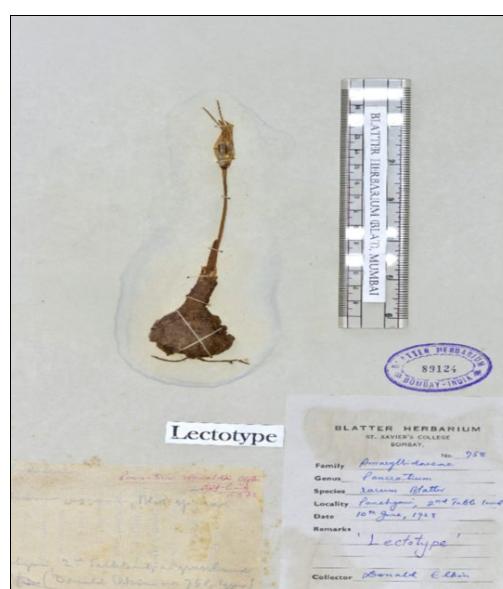
**Distribution:** India (Maharashtra) Endemic, presently it is not found in type locality but present only from Mahadev hills (Jaigaon) of khatav Tahasil of Maharashtra.

**Conservation Status:** *Pancratium donaldii* is assessed as Data Deficient (DD), as only 35 individuals were located in this report. Further explorations in the adjacent hill tracts are necessary to ascertain its status (IUCN, 2014).

**Specimens examined:** India, Mumbai, BLAT. Donald Elkins No. 758, lectotype



**Fig 1:** A. Habitat B. Whole plant with tuber C. Pair of follower's D. Single flower E. Flower dorsal view F. Corolla G. Stamen H. Gynoecium I. Pair of capsules J. Seed



**Fig 2: Lectotype Herbarium**

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**Conflicts of Interest:** The authors declare no conflict of interest.

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