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RESEARCH ARTICLE

Theriophonum minutum (Willd.) Baillon (Areaceae): A new record for Karnataka state, India

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Abstract The species of *Theriophonum minutum* (Willd.) Baillon, was recorded for the first time in Raichur district of Karnataka, India. Previously, this *Theriophonum* species was reported from various parts of country such as Andhra Pradesh, Maharashtra, Odisha, Tamil Nadu and Telangana. This species can be easily recognized by its habit and position of sterile flowers and staminate flowers in the spadix. A short description with colour photographs of the plant in its natural habitat is provided.

Keywords: Araceae, Arum, Raichur, *Theriophonum*

Introduction

The family Areaceae Juss. comprises 105 genera and about 2550 species, mostly distributed in the tropics and subtropics (Mabberley 2017). The genus *Theriophonum* Blume (1837) belong to the subfamily Aroideae of Araceae. It is represented by 100 species in the world. In India, the genus is represented by five species which are confined to the south and central parts, while there is only one species in Sri Lanka and four species in India (Sivadasan and Nicolson 1982, Sivadasan *et al*. 2014).

During botanical survey conducted in the Raichur district, Karnataka. The species of *Theriophonum* Blume was collected in Yeragera, Raichur District of Karnataka. After a critical examination and review, it was identified as *Theriophonum minutum* (Willd.) Baillon (Sivadasan and Nicolson 1982). So far, this aroid has not been reported from any other parts of Karnataka. The identification was confirmed by comparing this collection with the type specimen available at the Herbarium of the Royal Botanic Gardens, Kew, London. The voucher specimen was deposited in the Herbarium, Department of Botany, Karnatak Science College, Dharwad. Hence, the present collection is an addition to the flora of Karnataka State.

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Taxonomic Treatment

Theriophonum minutum (Willd.) Baillon, Hist. Pl. 13:457 (1895); Engler, Pflanzenr. (IV.23F) 73: 105 (1920); Alston in Trimen, Handb. Fl. Ceylon 6: 294 (1931); Fischer in Gamble, Fl. Madras 3: 1579 (1931). Fig. 1.

Type: Klein s.n. (lectotype B-Willd, Herb. no. 17729)

Corms subglobose, 1-2.5 cm long, 4-6.5 cm diam. Leaves with petioles 6.5-24.5 cm long; lamina extremely variable, usually trilobed to

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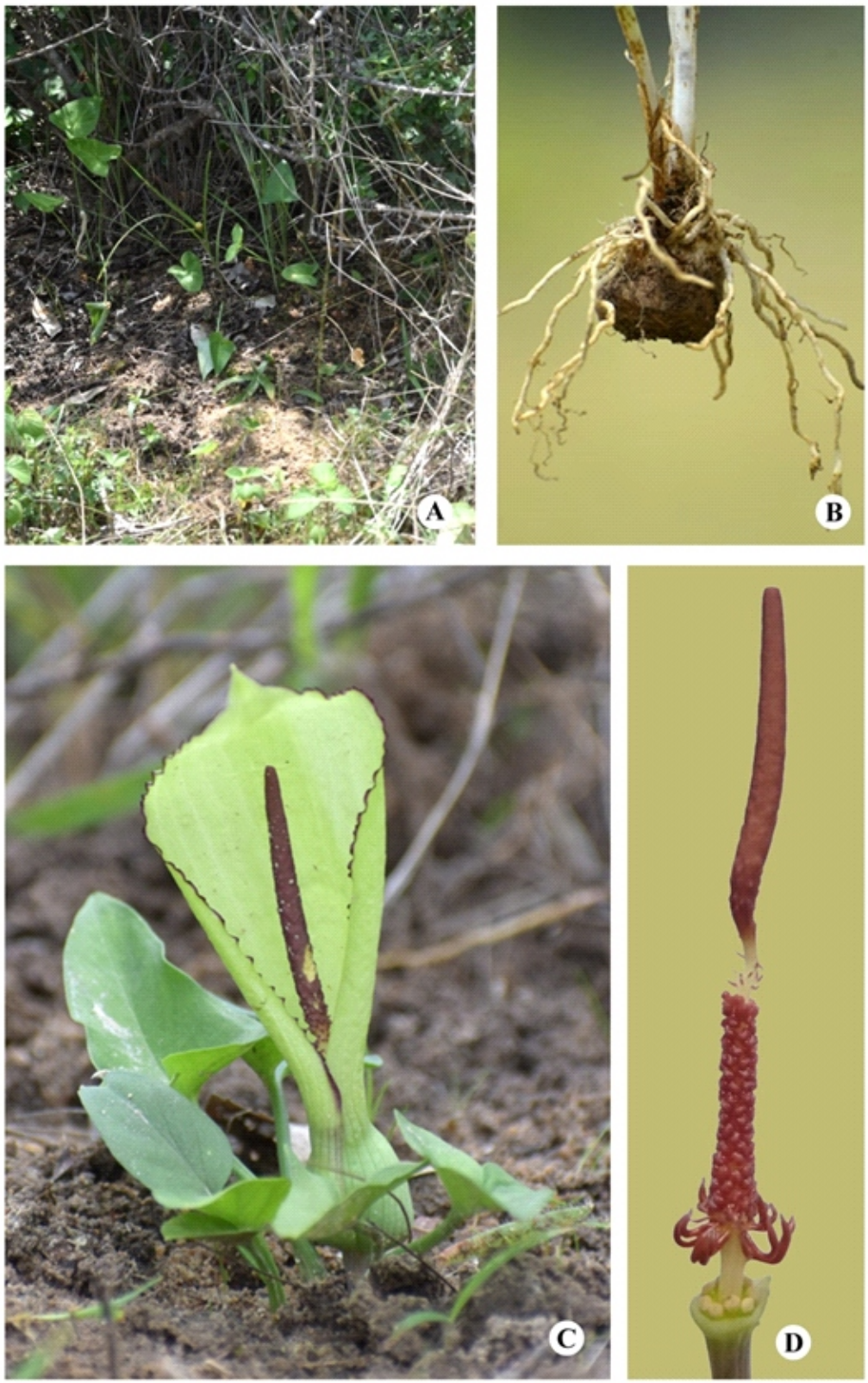

Figure 1:. *Theriophonum minutum* (Willd.) Baillon , A. Habitat, B. Corms, C. Inflorescence, D. Flowers in Spadix.

hastate: broad-leaved specimens with central lobe 2-5 x up to 5 cm and lateral lobes 1.5-3 x up to 1.5 cm; Peduncles 6-12 cm. Spathe 5-10 cm long, the basal portion convolute, 1-3 cm long and blade greenish-purplish, not flattened but somewhat convolute, the margins sometimes purplish wavy. Spadix shorter than spathe, 4-8 cm long, with a basal pistillate portion, a naked interstice, ca 0-5 cm long, a short, sterile portion, a staminate portion 0.8-1.5 cm long, a second sterile portion and a naked, creamy-purplish appendix 2-3.5 cm long which may be warty in maturity. Pistillate flowers more or less in a single whorl, each unilocular with 2-4 basal and apical ovules; stigma sessile, discoid. Lower sterile flowers subulate, ca 4 mm long. Staminate flowers scattered, sessile, each with two anther-lobes, the connective truncate to strongly beaked (beak to 2 mm long), variable. Upper sterile flowers much smaller than lower, ca 1-5 mm long. Berries 7-12 on deflexed peduncles, subconical. Seeds usually 2, shiny; broadly ovoid to obovoid with a white basal tissue.

Flowering and Fruiting: July -October

Habitat: it is scattered in shady places, also on plains and on the floor of scrub jungles, often sheltered by thorny plants.

Distribution: Andhra Pradesh (Kurnool district, Krishna district), Telangana (Adilabad district, Nizamabad district), Maharashtra (Mumbai-City district, Mumbai Suburban district, Sindhudurg district, Yavatmal district), Odisha (Angul district, Kalhandi district, Cuttack district, Ganjam district, Khurda district), Tamil Nadu (Throughout Tamil Nadu) (SankaraRao *et al*. 2019).

Specimens Examined

INDIA: Karnataka. Raichur Dt. Yeragera (University Campus), Altitude 361 m.s.l., Latitude 16.099620 and Longitude 77.410829, 19 July 2021, *Savita Ranganagouda & K. Kotresha*, 638 & 23 July 2021, *Savita Ranganagouda & K. Kotresha*, 668.

Biotic association

Acalypha lanceolata Willd., *Canthium coromandelicum* (Burm.f.) Alston, *Caralluma adscendens* (Roxb.) Haw., *Carissa congesta* Wight, *Cyanotis tuberosa* (Roxb.) Schult. & Schult.f., *Drimia indica* (Roxb.) Jessop, *Drosera burmanni* Vahl, *Drosera indica* L., *Euphorbia hirta* L., *Evolvulus alsinoides* (L.) L., *Iphigenia indica* (L.) A.Gray ex Kunth, *Lepidagathis cristata* Willd., *Ocimum sanctum* L., *Ruellia prostrata* Poir., *Senna auriculata* (L.) Roxb., and *Stylosanthes hamata* (L.) Taub.

Discussion

The genus *Theriophonum* (Blume) is represented by five species, among that four are endemic to Peninsular India, they are *Theriophonum dalzellii* Schott, *T. fischeri* Sivadasan, *T. infaustum* N. E. Brown and *T. sivaganganum* (Ramam. & Seb.) Bogner. The present collected species of *T. minutum* (Willd.) Baillon is recognized with the arrangement of sterile and staminate flowers in the inflorescence.

While reviewing the literature it was noted that *T. minutum* (Willd.) Baill. were cooked as vegetables by Konda reddis tribe of East Godavari district, Andhra Pradesh (Ramarao *et al*. 2001) and Koyas tribes of Lankapalli Forest Reserve in Khammam district, Telangana (Ramabharathi *et al*., 2019). The tubers of this plant was dried and eaten after steaming, also used in confectionary by Gond, Halba and Kawar tribes of Salekasa taluka, Gondiya district, Maharashtra (Patale *et al*. 2015). Similarly, this wild edible plant contains relatively higher nutritive values compare to conventional foods resources (Yadav & Dixit, 2008). With this information, field studies shows that, there is no any report on the ethno-medicinal usage by the local peoples of Yeragera village, of Raichur District. Further it was observed that, the population of *T. minutum* (Willd.) Baillon is estimated to hundreds of individuals, as they have located in one population appears on the plains and under the shady places which sheltered and protected by thorny plants. Therefore, it is recommended that, intensive field surveys on such ephemeral species of aroids of Karnataka to assess the population status of little known aroids.

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