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NOTES ON DISTRIBUTION OF *XANTHOSOMA SAGITTIFOLIUM* (L.) SCHOTT (ARACEAE) IN PENINSULAR INDIA

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The Arrow leaf Elephant's Ear *Xanthosoma sagittifolium* (L.) Schott (Araceae) is reported for the first time from Eastern Ghats of Andhra Pradesh, India. A detailed description, relevant notes and photographs are provided to facilitate identification.

Key words: Andhra Pradesh, Araceae, Eastern Ghats, new record, *Xanthosoma,* uses

The family Araceae Juss. consists of about 125 genera and about 3750 species including the Lemnaceae (Boyce *et al*. 2011), distributed in tropical and subtropical regions of the world, majority of the genera occur in the new world tropics. In India, the family is represented by 25 genera and 187 taxa including 167 species, 2 subspecies and 18 varieties; of these 77 taxa are endemic to India (Sasikala *et al*. 2019) and in Andhra Pradesh, the family represented by 12 genera and 20 species (Pullaiah 2018). The genus *Xanthosoma* Schott belongs to the family Araceae. Globally, the genus is represented by 195 species (POWO 2020), mainly distributed in tropical and southern tropical America, Cost Rica and West Indies and introduced and naturalised in many tropical regions of the world (Mayo 1997).

While exploring the aroids of Andhra Pradesh, the first author collected an interesting *Xanthosoma* species in flowering from Eastern Ghats (Viziangaram and Visakhapatnam districts), which was later identified as *Xanthosoma sagittifolium* (L.) Schott. The plant *Xanthosoma sagittifolium* (L.) Schott is known so far from Karnataka, Kerala and Tamil Nadu in peninsular India (Rao *et al*. 2019). Perusal of relevant literature and consultation of major herbaria (AUH, BSID, and MH) reveals that the genus *Xanthosoma* Schott was not reported from Eastern Ghats of Andhra Pradesh (Pullaiah 2018). Hence, it is reported here as a new addition to the flora of Andhra Pradesh. A detailed description, relevant notes and photographs are provided to facilitate identification.

TAXONOMIC DETAILS

Xanthosoma sagittifolium (L.) Schott, Melet. Bot. 19. 1832.*Arum sagittifolium* L.,*Sp. Pl. 966. 1753*.

Gigantic terrestrial herbs 150 -200 cm tall, stem corm, sub cylindrical, 18-25 cm long, 10-15 cm diam, internodes short; leaves with petioles erect-spreading, 80-160 cm ; petiole 95 cm long, sub terete, glaucous, lower part 50-55 cm, long, flat and upper part of the petiole is terete and 40-42 cm long; leaf lamina 60-90 cm long and 50-58cm wide, dark green matteadaxially, pale green and glossy on inner surface, ovate-saggitate, sub- hastate in young leaves, apiculate tip, deeply lobed at the base, posterior lobes obtusely pointed or rounded at the tip, sinus V- shaped; mid rib broadly sunken and medium green above, narrowly round-raised, paler and matte below; primary lateral veins 7-9 pairs, deeply sunken and slightly paler above, prominently round raised and paler below; posterior ribs are not naked, tertiary veins weakly etched above, prominulous and slightly darker below:

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Figure 1:Xanthosoma sagittifolium (L.) Schott; **A.** Habitat; **B**. Habit; **C.** Portion of petiole Showing latex; **D.** Inflorescence; **E.** Inflorescence-Open

Inflorescence 4-5 spadices in each floral sympodium, appearing with leaves; peduncle 20-25cm long, 2-3.5 cm diam, often glaucous; spathe 20-30 cm long, tube 7-10 cm long, 4-5 cm diam. Dark green, ovoid to ellipsoid, persistent; blade creamy white, oblong lanceolate, erect, reflexed at anthesis, marcescent after anthesis and then deciduous; spadix 15-25 cm long densely flowered, staminate portion 11 cm long, from the base to middle of spadix, slightly tapered to the apex, male flowers 7-9 androus, stamens connate into hexagonal synandrium, anthers lateral, pollen extruded in strands; sterile portion 5-6 cm long; pistillate portion 3-4 cm long, carpels ovoid, 8-10 ovules in each carpel, suborthotropous ovules with long funicles, parietal placentation, stigma yellow, sticky; fruits not seen.

Flowering and Fruiting: December – March.

Habitat: Occasional along moist habitats and open areas of low lands.

Distribution: Native range is Costa Rica to Southern Tropical America, introduced and naturalised many tropical regions of the world (Mayo et al., 1997); cultivated in India.

Specimen examined: India, Eastern Ghats, Andhra Pradesh, Vizianagaram district, Dharmapuri,Date: 17-01-2010. *R. Prameela* RP 7410; Visakhapatnam, Limbaguda, 15-01-2019. *R. Prameela* 23356 (AUH).

Uses: It is cultivated for its starchy corms. Corms and leaves are cooked for human consumption. The corms are mostly used to feed animals or are dried, peeled and ground to produce flour, rich in Carbohydrates, Calcium, Iron, and Phosphorus. Corms are also produced starch (Manner 2011).Four hydroperoxysterols isolated from shoots showed antibacterial activities against *E.coli, Bacillus subtilis* and *Micrococcus luteus* (Kato *et al*. 1996). In Africa, it is also medicinally applied against burns.

Notes: The species *Xanthosoma sagittifolium* (L.) Schott is allied to *Colocasia esculenta* (L.) Schott but it is distinguished by its latex, leaves, and rhizomes. In the former species latex is present(vs latex absent),leaves are not peltate (leaves are pelate), basal two lobes of leaves acute (vs basal two lobes of leaves rounded) and rhizomes usually completely running below ground (vs rhizomes usually emerging and running for most of their length above or below ground) (Serviss *et al. 2*000). Sasikala *et al.* (2019) in their recent work on Fascicles of Flora of India (Aracae), the genus *Xanthosoma* has not been reported but the genus is commonly cultivated in some parts of India for its edible rhizomes.

The *Xanthosoma sagittifolium* (L.) Schott usually cultivated for its edible tubers, but an escape and naturalised in open areas in low lands. The species has been naturalised in Karnataka (Udupi, Dakshina Kannada, Bengaluru districts), Kerala (Kozhikode, Palakkad, Thrissur and Kollam districts), Tamil Nadu (Salem district-Shevaroy hills) in peninsular India (Sankara Rao *et al.* 2019) and our recent explorations confirmed the extension of its distribution in Eastern Ghats of Andhra Pradesh (Visakhapatnam and Vizianagaram districts).

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