



***Achyranthes longifolia* (Makino) Makino (Amaranthaceae): A new record for Odisha**

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Abstract

Achyranthes longifolia (Makino) Makino (Amaranthaceae) is reported as new angiospermic addition to the flora of Odisha state, India.

Kew words: *Achyranthes longifolia*, Eastern Ghats, Mahendragiri Hills, new record, Odisha.

1. Introduction

Amaranthaceae is one among the largest families, having 71 genera and about 850 species in the world. In India about 20 genera belongs to 60 species were distributed (Mishra and Singh, 2001). In tropical and subtropical regions of the world 15 species were distributed from genus *Achyranthes* (Shu, 2003). In India the genus *Achyranthes* represented by 6 species namely *A. aspera*, *A. bidentata*, *A. coynei*, *A. porphyristachya*, *A. shahii* and *A. longifolia* (<http://efloraindia.nic.in>; Satish *et al.*, 2015; Rao *et al.*, 2016), two species *A. aspera*, *A. bidentata* were reported from Odisha (Saxena and Brahman, 1995). When the distribution in globally *A. longifolia* distributed in Southern China, Japan, Laos, Thailand, and Vietnam (Shu, 2003) and recently this species were reported first time for Southern Asian region from Araku valley Eastern Ghats of Andhra Pradesh by Rao *et al.*, 2016.

2. Materials and Methods

2.1 Collection of specimens

Specimens of *Achyranthes* were collected from Semi-evergreen forests of Mahendragiri hills of Odisha during the post monsoon and winter season of 2016. Few branches were collected to make standard herbarium specimens. Formalin method (Jain and Rao, 1977) was used to prepare herbarium specimens. Field and voucher numbers were allocated real time observations on habitat,

taxonomic notes and adjoining threats were recorded in field book. The specimens were identified as *Achyranthes longifolia* with the help of flora and literature (Saxena and Brahman, 1996; Pullaiah, 2002; Shu, 2003; Rao *et al.*, 2016) and deposited in Andhra University Herbarium (AUH).

2.2 Population and associated communities

In total 60 individuals were observed which are very close to The Kunti Temple. *Achyranthes longifolia* is associated with *Mangifera indica*, *Neolitsea foliolosa*, *Leea asiatica*, *Litsea sp.*, *Syzygium sp.*, *Barleria strigosa*, *Rubus ellipticus*, *Rubus nivius*, *Gnetum ula*, *Adiantum sp.*, *Oxalis sp.*, *Strobilanthes sp.* and other species of graminoids.

2.3 Details of coordinates and elevation

Present species is located between 18°57'51.57"N, 84°22'8.19"E with an elevation of 1,501 m (Fig. 1).

3. Results

3.1 Description *Achyranthes longifolia* (Makino) Makino

Perennial herb, erect, up to 50 cm height. Leaves opposite decussate, leaf blade lanceolate or broadly lanceolate, 10-20x2-5 cm, somewhat hairy, entire margin, apex caudate, older leaves changed in to purple colour. Flowers in spikes, terminal or axillary, densely arranged on rachis, rachis thick, densely pubescent, white. Tepals 5, shiny, 6 mm

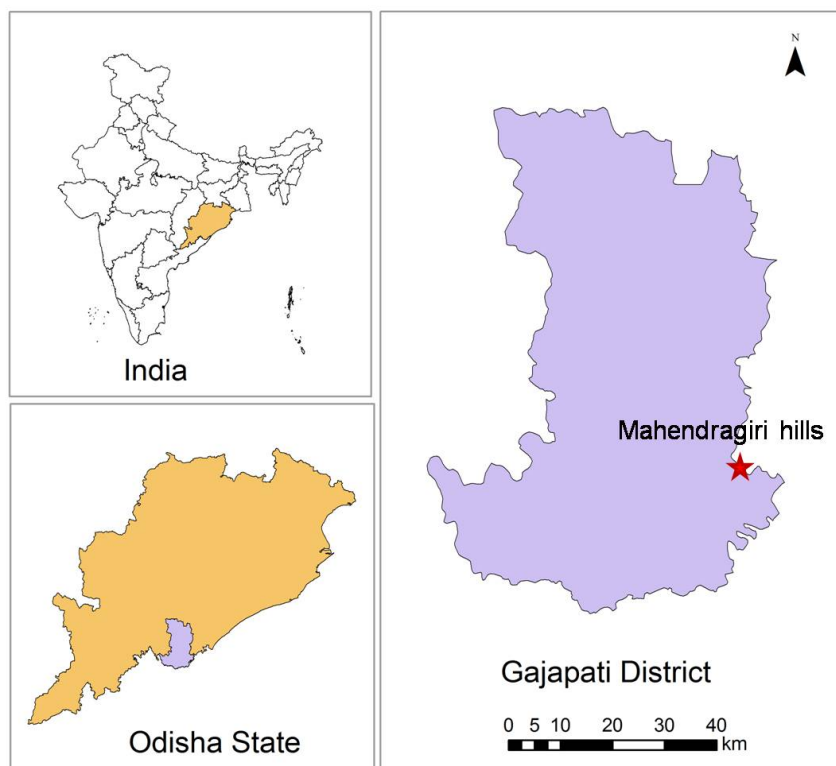


Fig 1. Map of the Study area



Fig 2. a) habit of *A. longifolia*; b) Part of inflorescence; c) Immature fruits; d) Mature fruits; d) Herbarium specimen

long, lanceolate, with a mid-vein, apex acute, greenish white, persistent; Stamens five, filaments fused at base, pseudostaminodes indistinctly dentate at the apex, alternatively placed with fertile stamens, filaments whitish green, filaments 1 mm long, anthers 0.1 mm. Ovary truncates one celled. Utricles yellowish brown, up to 7 mm long, shiny, oblong, smooth, enclosed with persistent hardened sepals and spines like bracteoles. Seed single, light brown colour, 2 mm long, shape oblong (Fig 2).

Flowering & Fruiting- September - February.

Medicinal importance- It is an important medicinal plant used for treat throat infection and it can improve blood circulation because of it has ecdysterone, ecdysterone, inokosterone, triterpenoid saponin and potassium in the roots (Thomas, 2008).

Specimen examined- Odisha, Ganjam District, Mahedragiri Hills, April 6th, 2016, *J. Prakasa Rao* 20493 (AUH).

4. Conclusion

Present study explored the need of conducting extensive botanical explorations in Eastern Ghats. The habitat of *A. longifolia* is facing severe threats from anthropogenic activities like forest fires during summer. There is an urgent need to protect Mahedragiri Hills and emphasize importance of the valuable flora and fauna for Conservation.

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