

## Extended distribution of *Astraea lobata* (Linnaeus) Klotzsch [Euphorbiaceae] in India from Tripura

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### Abstract

The occurrence of *Astraea lobata* (Linnaeus) Klotzsch of Euphorbiaceae in Ramthakur College campus at Agartala is an extended distributional record of the species from India and an addition to Euphorbiaceae flora of Tripura.

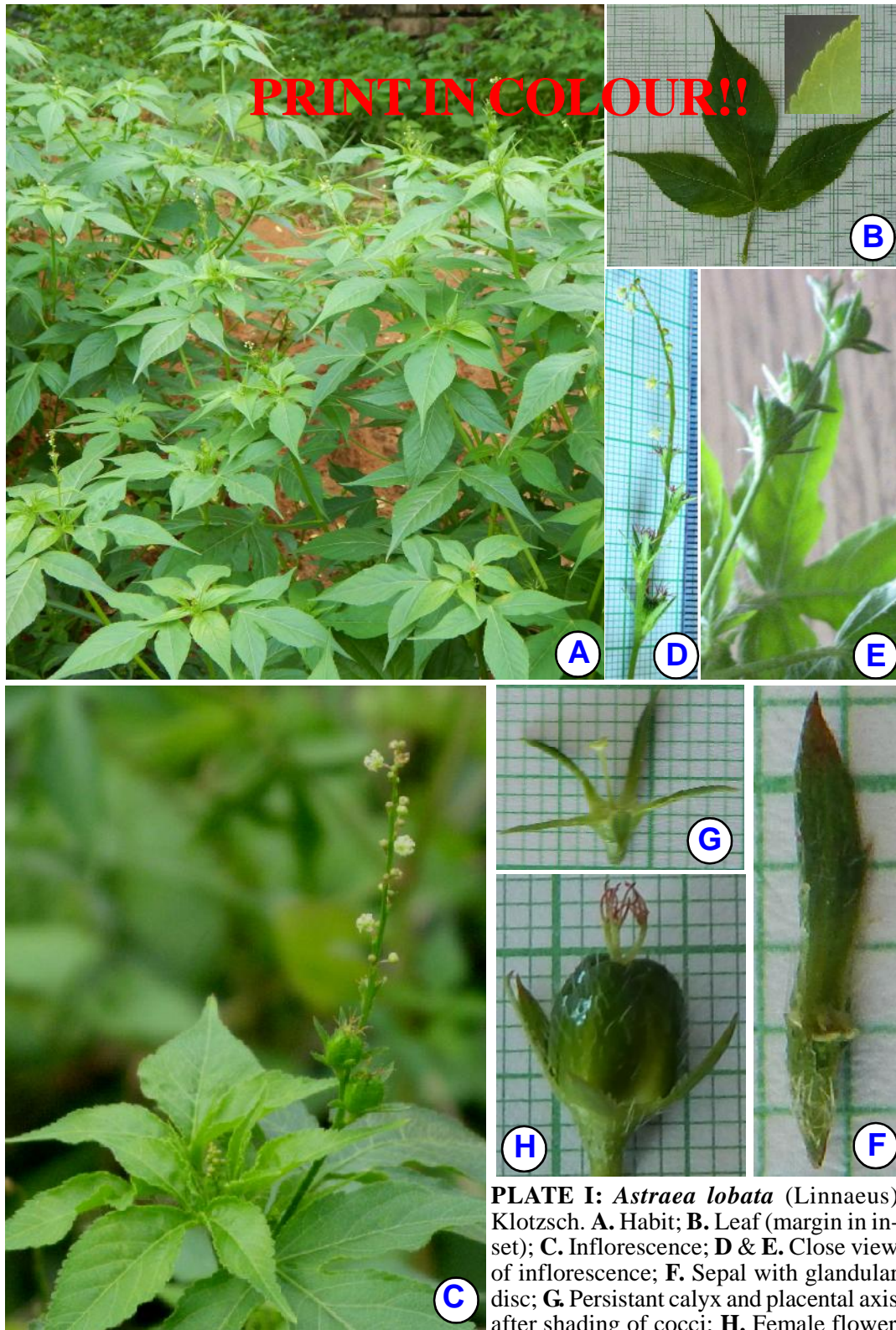
**Key words:** *Astraea lobata*, Euphorbiaceae, New record, Tripura, India

### INTRODUCTION

*Astraea* Klotzsch (1841: 194) of Euphorbiaceae was earlier considered as a synonym of *Croton* Linnaeus (1753) by many authors (Chakrabarty & Balakrishnan 1992; Webster 1993; Govaerts *et al.* 2000; Balakrishnan & Chakrabarty 2007; Schmelzer 2007) but based on molecular phylogenetic study of *Croton* and related groups by Berry *et al.* (2005) justified recognizing *Astraea* as a valid genus (Caruzo *et al.* 2014). The genus *Astraea* is a native of South America and West Indies. There are eight accepted species under this genus (The Plantlist, Version 1.1 2013). *Astraea lobata* (Linnaeus) Klotzsch is the only species occurring throughout the Neotropical region and also introduced in Africa and Yemen. It is native to South America and West Indies. This species is also reported from Bangladesh (Khan & Khan 2002). A perusal of literatures revealed that, so far, in India this species is reported only from Sholapur district of Maharashtra (Gaikwad *et al.* 2012). Recently this species is found in Tripura, a Northeast Indian state.

During field survey in the campus of Ramthakur College (23°48'19.63"N and 91°16'26.00"E; Elevation 26.21 m at Agartala, Tripura, few *Croton bonplandianus* Baillon like plants were found in their flowering and fruiting conditions. After critical examination and perusal of relevant literatures the plant was identified as *Astraea lobata* (Linnaeus) Klotzsch. So, the present collection of this plant from Ramthakur College campus forms a new record and an addition to Euphorbiaceae flora of Tripura and voucher specimens are submitted to Tripura University Herbarium. Earlier, the genus itself was not recorded from this part of the country (Deb 1981). A morphological description, along with photographs, distribution and ecological notes are provided in present communication to facilitate easy identification of the species.

*Astraea lobata* (Linnaeus) Klotzsch, Arch. Naturgesch. (Berlin) 7: 194. 1841; Rheede 22(2): 131 – 132. 2012. *Croton lobatus* Linnaeus, Sp. Pl. 2: 1005. 1753 “*lobatum*”; Vell., Fl. Flumin. 10: t. 70. 1831. [PLATE - I]



**PLATE I:** *Astraea lobata* (Linnaeus) Klotzsch. **A.** Habit; **B.** Leaf (margin in inset); **C.** Inflorescence; **D & E.** Close view of inflorescence; **F.** Sepal with glandular disc; **G.** Persistent calyx and placental axis after shading of cocci; **H.** Female flower

Annual, monoecious, branched, upto 80 cm high; stem terete with stellate trichomes. Leaves simple, alternate; stipules free lateral, subulate, hairy; petiole with glandular hairs at base; lamina palmately 3 – 5 lobed, membranous, finely serrate, serrations tipped by glandular hairs, lobes long, acuminate. Racemes mostly terminal with pistillate flowers in the lower part and staminate upward on rachis in cymose clusters. Staminate flowers pedicilate, dichlamydous, sepals equal, greenish; petals equalling sepals, white, reflexed; stamens 11 – 13, basally connate; anthers 2-celled. Pistillate flowers sessile, with five lanceolate green persistent sepals, lower half glandular hairy, glandular disc present at the base of each sepal; ovary superior, densely hairy, 3-celled, ovules pendulous; style 3, each deeply 5-fid, reddish. Fruits ovoid, regmas 3, one-seeded; seeds ellipsoid,  $\pm 5$  mm long, warty, with black and white caruncle.

*Flowering & fruiting*: June to November

*Exsiccatae*: Tripura, Ramthakur College, *Das & Datta, TUH-483*, Dated 18.05.

*Global Distribution*: South America (mainly in eastern and West Central Brazil) and Asia (India)

*Indian Distribution*: Maharashtra and Tripura.

*Note*: The possible way of its introduction in Tripura is doubtful and is probably as weed seeds mixed with different types of food-grains imported there from outside.

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