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MUNTINGIA CALABURA (MUNTINGIACEAE) : A NEW GENERIC RECORD TO THE FLORA OF UTTAR PRADESH, INDIA

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ABSTRACT

This paper presents a comprehensive description of *Muntingia calabura* including suitable illustration and photographs along with field note, phenology and ecological details. These elements aim to assist foresters and field botanists in identifying and implementing conservation measures for the species.

Key words : Angiosperm, India, Jamaica cherry, Taxonomy, New record.

Introduction

The Muntingiaceae family, belonging to the rosid order Malvales (APG, 2016), comprises three genera: *Dicraspidia*, *Muntingia*, and *Neotessmannia*. Each of these genera includes a single species—*Dicraspidiaddonell-smithii* Standl., *Muntingia calabura* L. and *Neotessmannia uniflora* Burret, respectively (<https://powo.science.kew.org/taxon/urn:lsid:ipni.org:names:999706-1>). Previous authors had placed the monotypic genus *Muntingia* L. in the Elaeocarpaceae Juss. ex DC. or Tiliaceae Juss. ex DC. families (Bayer *et al.*, 1998).

Since the genus exhibits characters that would be abnormal in either family, neither placement has been widely recognized by experts (Bayer *et al.*, 1998). Linnaeus (1753) named the plant *Muntingia* after Abraham Munting. The native range of *Muntingia calabura* is Mexico to S. Tropical America (<http://plantsoftheworldonline.org/taxon/urn:lsid:ipni.org:names:39485-1>).

It is widely cultivated in the warm regions of the New World, as well as in India, Southeast Asia, Malaya, Indonesia, and the Philippines, primarily for edible fruits and useful bark fibers. *Muntingia calabura* is distinguished by its persistent stipules and white petals,

while *Neotessmannia* is distinguished by its caducous stipules and yellow petals. *Dicraspidia* differs from the other two in that it has dimorphic peltate-serrate and filiform stipules, whereas *Muntingia* and *Neotessmannia* have monomorphic filiform stipules.

India harbours only *Muntingia calabura* in the family Muntingiaceae. During the study of forest vegetation in north-eastern Uttar Pradesh, we came across a tree species that we were unfamiliar with; after a review of literature and herbarium records, it was identified as *Muntingia calabura* L., which had previously been unreported in any of the publications from Uttar Pradesh. (Masters, 1874; Duthie, 1903; Raizada, 1976; Srivastava, 1976; Mishra and Verma, 1992; Kanjilal, 1996; Khanna *et al.*, 1999; Chaudhary *et al.*, 2016; Singh *et al.*, 2016; Khanna, 2017; Khanna, 2018; Khanna and Shukla, 2019).

Taxonomic Description

Muntingia calabura L., Sp. Pl. 509. 1753~ Manilal and Sivar., Fl. Calicut 54. 1982~ Babu, Fl. Malappuram Dist. 90. 1990~ S. K. Murti in B. D. Sharma and Sanjappa, Fl. India 3: 570. 1993~ M. Reema *et al.* in P. Daniel, Fl. Kerala 1: 505. 2005~ Sunil and Sivadasan, Fl. Alappuzha Dist. 146. 2009~ Ratheesh Narayanan, Fl. Stud. Wayanad Dist. 175. 2009.



Fig. 1 : A. Flowering twig showing pendant apex and arrangement of leaves, B. Flower, C. Fruits (Unripe).

Synonyms: *Muntingia calabura* var. *trinitensis* Griseb.; *Muntingia glabra* Spreng.; *Muntingia rosea* H. Karst.

Common name : Jamaica Cherry, Singapore Cherry, Panama Cherry, Strawberry tree, Calabura, Jam tree, Cotton Candy berry.

A small tree with a height of 20 to 25 feet. Stem glandular hairy. Branching horizontal, pendant towards tip. Leaves alternate, distichous, simple, petiolate~ stipules 1 linear, ca. 5 mm long~ petiole ca. 5 mm long~ lamina ovate-lanceolate, ca. 5–12 × 1–4 cm; apex acuminate, margin serrate, base obliquely unequal, glandular hairy adaxially, woollyhairy abaxially~ paler beneath, lateral nerves usually 5 pairs. Supra-axillary inflorescences are normally one-flowered. Flowers white. Pedicels 2–2.5 cm long. Sepals 5, ca. 1.5 cm long, lanceolate, shortly connate at base, densely hairy. Petals 5, ovate, obovate or suborbicular, shortly clawed, crumpled in bud. Stamens many, yellow, ca. 1 cm long~ filaments filiform, anthers yellow. Superior ovary, ca. 5 mm long, ellipsoid, 5-chambered, numerous ovules; styles short; stigmas capitate, 5-grooved. The fruit is a berry that is dull red and subglobular, with several obovoid or ellipsoid seeds (Fig. 1).

Habitat : Disturbed lowland tropical forests, abandoned pastures, farm fields, forest edges, open lots, and along roadside and waterway margins.

Flowering and fruiting : Throughout the year.

Distribution : India: Gujarat; Maharashtra; Karnataka; Tamil Nadu, now Uttar Pradesh.

Uses : This plant is grown for its small, edible fruits and is often used as an ornamental. The bark fibers are locally used to make ropes and baskets (Bayer, 2003). According to Mahmood *et al.* (2014), this plant possessed a variety of pharmacological activities, including cytotoxic, antinociceptive, antiulcer and anti-inflammatory properties.

Specimens examined : Uttar Pradesh : Gorakhpur, Gorakhpur-Maharajganj Highway, near Gulhariya Thana, 26.10.2018, *B. Chaurasia* 84918; Gorakhpur, Gorakhpur-Maharajganj Highway, near Gulhariya Thana, 04.11.2019, *B. chaurasia* 84927.

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