

CUPHEA CARTHAGENENSIS (JACQ.) J.F. MACBR. (LYTHRACEAE) - A NEW ANGIOSPERM RECORD FOR BANGLADESH

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The New World genus *Cuphea* is the largest of the 32 genera of Lythraceae (Graham *et al.*, 2005) with about 260 species of herbaceous perennials and small shrubs (Graham *et al.*, 2006). This genus is distributed from East USA to the South of Argentina (Graham, 1988). The species *Cuphea carthagenensis*, native to tropical America (Smith, 1985), is widely spreaded in Brazil and other American countries including Hawaii and South Pacific islands (Graham *et al.*, 2006). Singh *et al.* (2002) reported that this species is naturalized and distributed in North East India. The species *Cuphea carthagenensis* has never been mentioned in any publication on the flora covering the present territory of Bangladesh (*viz.* Clarke, 1879; Prain, 1903; Rahman, 2009). Recently, the authors, while exploring the flora of different forest areas of Sylhet, collected few specimens of *Cuphea* from Jafflong and campus of Shahajalal University of Science and Technology. After a critical taxonomic study, the specimens have been identified as *Cuphea carthagenensis* (Jacq.) J.F. Macbr. Hence, it is reported here as a new angiosperm record for Bangladesh. The specimens are presently deposited at Jahangirnagar University Herbarium (JUH) and Bangladesh National Herbarium (DACB).

The detailed description of the species based on herbarium material and photographs are given below.

Cuphea carthagenensis (Jacq.) J. F. Macbr., Field Mus. Nat. Hist., Bot. Ser. 8: 124.1930. (**Fig. 1**)

Lythrum carthagenense Jacq., Enum. Syst. Pl. quas in insulis Caribaeis 22.1760.

Cuphea balsamona Cham. & Schltld., Linnaea 2: 363. 1827.

Cuphea pinto (Vandelli) Kuntze, Pflanzenr. IV. 216(Heft): 123. 1903.

English name: Colombian Waxweed, Columbian Cuphea, Tarweed.

Perennial herbs with sticky or glandular hairs on stems, leaves, and flowers. Stems 40-70 cm long, slightly woody at the base, often many branched, puberulous to hispidulous or bristly. Leaves opposite; petioles 0-4 mm long, sparsely pubescent; lamina elliptic-ovate, 15-40 × 6-14 mm, base cuneate, apex acute, margins entire and ciliate, upper surface glabrescent to puberulous or scabrous, lower surface sparsely puberulous. Inflorescences of terminal and axillary cymes, or sometimes solitary flower, puberulous to hispidulous. Flowers bisexual, zygomorphic; pedicels 1.0-1.8 mm long. Calyx tube 4-6 mm long, lobes deltoid, 0.4-0.6 × 0.3-0.5 mm, ribbed, with a short spur at outside of the base, sepals 6, sparsely hispidulous. Corolla consists of 6 petals inserted at rim of calyx tube, subequal, 2.5-4.0 × 0.9-2.0 mm, oblong to elliptical, pink or violet. Stamens 11 in 2 unequal whorls, included and inserted near the constriction of the calyx tube. Ovary 1-celled; style included, 0.5-0.9 mm long; stigma punctiform. Fruits capsule ovoid or rounded, 2-5 mm diameter. Seeds 4-8, flat or discoid, brown. *Flowering and fruiting period:* Throughout the year.

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Ecology: In grassland, hill slope, and road side; on moist and dry soil.

Distribution: Native to South America and naturalized in North America and Australia, introduced in Singapore, India and Japan.

Specimens examined: **Sylhet:** Lacctura, 16.06.2013, M.A. Rahim 505 (JUH); Shahajalal University of Science and Technology campus, 10.10.2014, G.M. Hossain 1001 (JUH) and 1002 (DACB); Jaflong, 11.10.2014, M.S. Rahman 3015 (JUH).



Fig. 1. *Cuphea carthagenensis* (Jacq.) J. F. Macbr. a. Habit, part of a branch; b. Part of stem; c. Flower; d. Calyx tube.

Uses: Aerial parts of *C. carthagenensis* are used in treatment of high levels of cholesterol and triglycerides (Biavatti *et al.*, 2004) that indicates its potential role in losing weight (Dickel *et al.*, 2007). Water extract of this species exhibited activity against some bacteria (Duarte *et al.*, 2002). The infusion and decoction of aerial parts is used orally for the prevention and control of bovine mastitis (Avancini *et al.*, 2008). The whole plant of the species is used in treatment of fever, arterial hypertension, cardiovascular diseases and constipation. It is also used as diaphoretic and diuretic. The aerial parts of plant showed activity against Harpes simplex virus type (Andrighetti-Fröhner *et al.*, 2005). Leaves decoction is taken orally and used for treatment of vaginal infections, weakness and anemia (Coe, 2008). The astringent plant decoction is taken as a general remedy and some drink it as a treatment for gonorrhea. It is used as a remedy for malaria and often taken to alleviate symptoms of syphilis (Toursarkissian, 1980). Ursolic acid, ergosterol and a natural triterpenoid were obtained from this species (Gonzalez *et al.*, 1994).

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