

**COLUBRINA JAVANICA MIQ. (RHAMNACEAE) – A NEW ANGIOSPERM
RECORD FOR BANGLADESH**

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Keywords: Colubrina javanica; New record; Bangladesh.

Colubrina Rich. ex Brongn. floristically is the least specialized members of the Rhamnaceae (Johnston, 1971) and consist of 23 species distributed in tropical areas of Africa, South Asia, Australia, Pacific Islands and South America (Yilin and Schirarend, 2007). Hooker (1875) recorded 3 species of this genus, viz. *C. asiatica* (L.) Brongn., *C. pubescens* Kurz, and *C. travancorica*, from Indian subcontinent. Roxburgh (1832) reported this genus as *Ceanothus* L., and described one species *Ceanothus asiatica* L. from Singapore. Prain (1903) reported the occurrence of *C. asiatica* in the Indian coast without specifying any particular area and suggested for searching this species in the Sundarbans. Hooker (1875) and Johnston (1971) reported *Colubrina javanica* Miq., as a synonym of *C. asiatica* but recently Yilin and Schirarend (2007) separated that species from *C. asiatica* on the basis of differences in indumenta and length of fruiting pedicels. The genus *Colubrina* has never been mentioned in any publication on the flora covering the present territory of Bangladesh (Heinig, 1925; Raizada, 1941; Khan and Banu, 1972; Chaffey *et al.*, 1985; Alam, 1988; Karim, 1994; Mia and Khan, 1995; Siddiqi, 2001; Hossain, 2003; Rahman, 2004; Rashid *et al.*, 2008; Hassan, 2009; Hossain, 2013).

Recently, the first author, while inventorying the flora of Sundarbans under his Ph.D. project, collected few specimens of *Colubrina* from Katka area and after a critical taxonomic study the specimens have been identified as *C. javanica* Miq. Hence, the genus *Colubrina* and the species *C. javanica* are reported here as the new angiosperm records for Bangladesh. The specimens are deposited at Jahangirnagar University Herbarium (JUH) and Bangladesh National Herbarium (DACB).

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

Colubrina javanica Miq., Fl. Ned. Ind. 1(1): 648 (1856). *Colubrina asiatica* var. *subpubescens* (Pit.) M.C. Johnst., Brittonia 23: 48 (1971); *C. pubescens* Kurz, J. Asiat. Soc. Bengal 2: 301 (1872); *C. pubescens* var. *subpubescens* Pit., Fl. Indo-Chine 1(8): 931 (1912) (Fig. 1).

An evergreen branched shrub. Stem 2.5-6.0 m tall, 10-12 cm in diameter, branches long, slender, slightly flexuose, youngest ones pubescent. Stipules minute, 0.7-0.8 mm long, lanceolate. Leaves alternate; petioles 7-15 mm long, sparsely pubescent; lamina 3.2-6.0 × 1.8-3.6 cm, ovate to broadly ovate, occasionally elliptic to oblong, thinly papery, abaxially glabrous, glabrescent or pubescent on veins, adaxially glabrous, secondary veins 2-4 pairs, base rounded and entire, margin serrulate to slightly undulate, apex acuminate or acute to truncate. Inflorescence axillary thyrses, 5-10 flowered, peduncles 1-2 mm long. Flowers bisexual, 5-merous. Pedicels 2.0-3.2 mm long.

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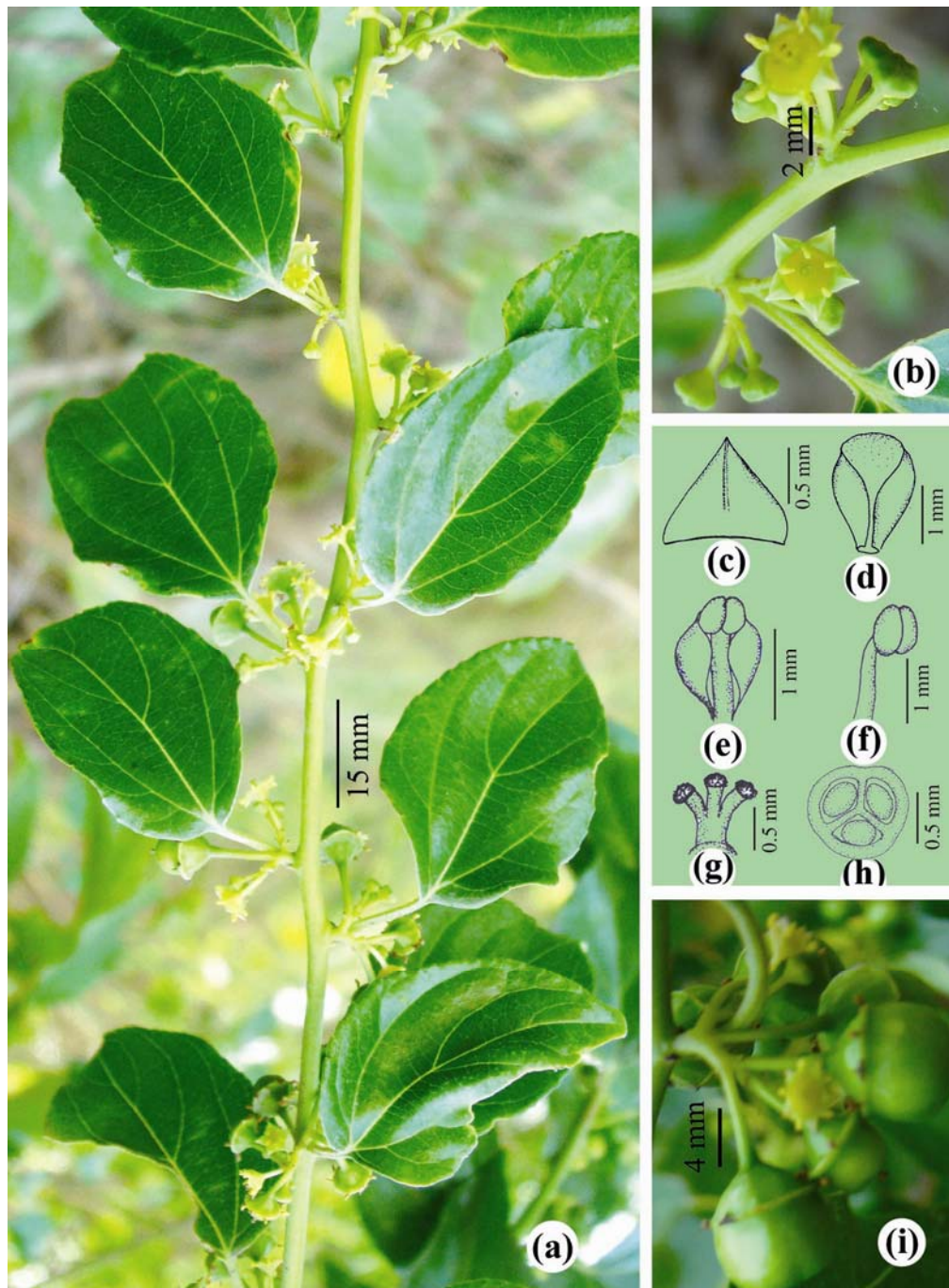


Fig.1. *Colubrina javanica* Miq. (a) Habit: a part of flowering branch; (b) Inflorescence; (c) A calyx lobe; (d) A petal; (e) A cucullated petal partly covering a stamen; (f) A stamen; (g) A style with stigma; (h) T.S. of ovary; (i) Fruits.

Calyx tube hemispherical, sepals 5, green, 1.0-1.1 mm long, 1.1-1.2 mm wide at the base, triangular, adaxially distinctly keeled. Petals 5, yellow to light green, 0.7-0.9 × 0.8-1.0 mm at maturity, as long as stamen at bud stage, obovate, cucullate, clawed. Stamens 5, 1.2-1.5 mm long, each surrounded by a petal; filament 0.9-1.2 mm long; anthers partly exerted in mature flower, 2-lobed, dorsifixed, 0.2 × 0.3 mm. Ovary sub-inferior, with broad rugose yellow rounded disc, immersed to calyx tube, 3-loculed, each locule with 1-ovule, placentation basal; style up to 1 mm long, attached with yellow rounded disc, distinctly 3-fid up to the middle; stigmas convex, scabrous. Fruits globose, 3-furrowed, 7-8 mm in diameter, basally surrounded by the remains of calyx tube, loculicidally dehiscent at maturity, locule 1-seeded. Seeds triangular, 4-5 × 5-6 mm, greyish brown; fruiting pedicels 6-10 mm long.

Flowering and fruiting period: April - December.

Ecology: Bushy area besides the coast.

Specimen examined: **Bagerhat:** Sundarbans east forest division, Katka, near Forest Station, 21.12.2012, M.S. Rahman 1081 (JUH); 22.4.2014, G.M. Hossain 651 (JUH); 22.4.2014, M.S. Rahman 1512 (DACB).

Distribution: China, Indonesia, Malaysia, Myanmar and Thailand.

Uses: The crushed leaves of *Colubrina* possess lathering properties. In Samoan and Fijian Islands, the leaves are used as a detergent and shampoo. It is used to cure burns caused by centipede or millipedes. In the Bahamas, *Colubrina* is used as a digestive aid, anti scorbutic, tonic, laxative, and as a febrifuge. In the Philippines, extract of the leaves is used as a remedy for skin diseases. In Sri Lanka, a cottage industry has been developed based on *Colubrina* stem (McCormick, 2007).

Acknowledgement

The first author gratefully acknowledges the Ministry of Science and Technology, Government of the People's Republic of Bangladesh for awarding the National Science and Technology (N.S.T.) fellowship.

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(Manuscript received on 17 June 2014; revised on 4 November 2014)