

## ***Ficus conglobata* King: A rare and lesser known species from Arunachal Pradesh, N. E. India.**

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### **Abstract**

*Ficus conglobata* King (Moraceae) a rare and lesser known species of India is reported and described. After its discovery, it is poorly represented in taxonomic literature and herbarium collection. The species is recollected from two different localities in Lohit and West Kameng districts of Arunachal Pradesh which is an extended distribution. Morphological description, illustration and other relevant details are provided to facilitate identification of the species.

**Key words:** *Ficus conglobata*, Rare, Distribution, Arunachal Pradesh.

### **INTRODUCTION**

*Ficus* Linnaeus is the largest genus of Moraceae predominantly distributed in the tropical and subtropical regions and very few are also reported from temperate regions of the world. This genus is the most diverse in their habit ranging from herbs, shrubs, climbers trees to hemi epiphytes stranglers and lianas. *Ficus* is considered most conspicuous but problematic genus due to its minute flowers present inside the closed fleshy receptacle known as scyconium. The genus comprises about 750 species throughout the world (Corner 1965; Berg 1989; Berg & Corner 2005; Ronsted *et al* 2008) and about 115 species in India, (Chaudhary *et al* 2012). Out of these 51 species are listed from Arunachal Pradesh (Giri *et al* 2008).

During the Taxonomic studies on the family Moraceae in Arunachal Pradesh a large number of *Ficus* specimens have been collected. One of the collections has been identified as *Ficus conglobata* collected from two different localities in Lohit and West Kameng district of Arunachal Pradesh. A perusal of relevant literature and scrutiny of herbarium specimens at various herbaria revealed that *Ficus conglobata* is a rare species of *Ficus* described by King (1887) from India based on collection from eastern Himalaya (Bhutan & Sikkim) and Chittagong (now in Bangladesh). After King (1887 & 1888) the species is reported and described by Prain (1903), Brandis (1906) and Corner (1965) indicating the additional distribution from Bihar, Manipur and Assam. However, the evidences of specimen collected from these localities are not available. Recently the species have been listed by Chaudhary *et al* (2012) as one of the 115 Indian *Ficus* based on literature information. Although the species have been listed by the aforesaid workers, the species is represented very poorly in Indian Herbaria and only two collections could be located in Indian Herbaria.

Besides the King's collection available at MH, another is found as unidentified specimen at ASSAM collected by A.S. Rao in 1969 from Lohit district of Arunachal Pradesh. It has been found that during the last five decades no taxonomic record of the species have been made and no authentic collection have been found after the type collections.

Hence the present collection and report of the species is very valuable and significant as it is one of the few collections of the species after its discovery by King in 1887 with extended distribution in eastern Himalayan region from Sikkim to Arunachal Pradesh. Moreover the present study provides full morphological details with complete representation of herbarium specimens. Detailed descriptions, illustration along with other relevant information are provided herewith for easy identification of the taxon in the field.

#### **Taxonomic treatment:**

*Ficus conglobata* King in Ann. Roy. Bot. Gard. Calcutta 1: 99, t. 123. 1887 & in Hooker *f.*, Fl. Brit. India 5: 522. 1888; Prain, Bengal Pl. 2: 982. 1903; Brandis, Indian Trees: 606. 1906; Corner, Gard. Bull. Singapore 21(1): 89. 1965; S.S.R. Bennet in J. Econ. Tax. Bot. 7: 319. 1981; Chaudhary, J.V. Sudhakar & al. in Taiwania 57 (2): 205. 2012. [**PLATES I & II**]

Trees up to 15 m tall. Bark light grey, smooth with vertical lines. Latex yellowish. Branches many forming a crown, aerial roots absent; branchlets pubescent when young. Leafy twigs 5 – 10 mm thick, brownish strigose, hirtellous, appressed-puberulous; internodes hollow. Leaves opposite or sub-opposite, long petioled; lamina elliptic, sometimes oblong or subovate, 25 – 34 x 13 – 20 cm, minutely serrate or dentate, acuminate with c.1.5 cm long acumen, base cuneate to sub-cordate, slightly unequal, rough, hispid, abaxially with coarse gray hairs, adaxially rough and with short thick hairs in the vein, basal lateral veins 6, outer 4 basal veins are short and thin, secondary veins 5 – 6 on each side of the mid vein; petioles 5 – 7 cm, pubescent; stipule ovate-lanceolate, caducous, pubescent, 1.5 – 2.5 cm, strigose or hirtellous. Figs numerous in fascicles from woody tubercles mostly at the base of the trunk, dark brownish, ramiflorous to cauliflorous, pyriform or subglobular, united at the base, in the axils of scarious bract, densely crowded with the stout stem. Receptacles 4 – 6 cm long, peduncle 3 – 5 cm, apically 5 lobed, ribbed 4 – 5 with distinct black spots, brownish strigose; basal bracts 3, basally connate, ovate – acute, 2-3 mm. persistent. *Male flowers*: sessile, near the ostiole, 1.5 – 2 mm long; tepals 5, free, linear-lanceolate or spatulate, 1 – 1.5 mm long; stamen 1, anther bilobed, ca 2 mm long, broadly ovate, emerginate at base and apex; filament very short or absent; *gall flowers*: sessile, 1 mm long, tepals fused, surrounds the base of ovary, style short, lateral, glabrous, 0.3 – 0.4 mm, stigma slightly dilated or funnel shaped; *female flowers*: sessile, shortly pedicellate, 1.2 mm long, tepals basally connate like gall flowers, style lateral, short, 0.4 – 0.5 mm long. Achene obovoid, broad, 2 – 2.5 mm, smooth.

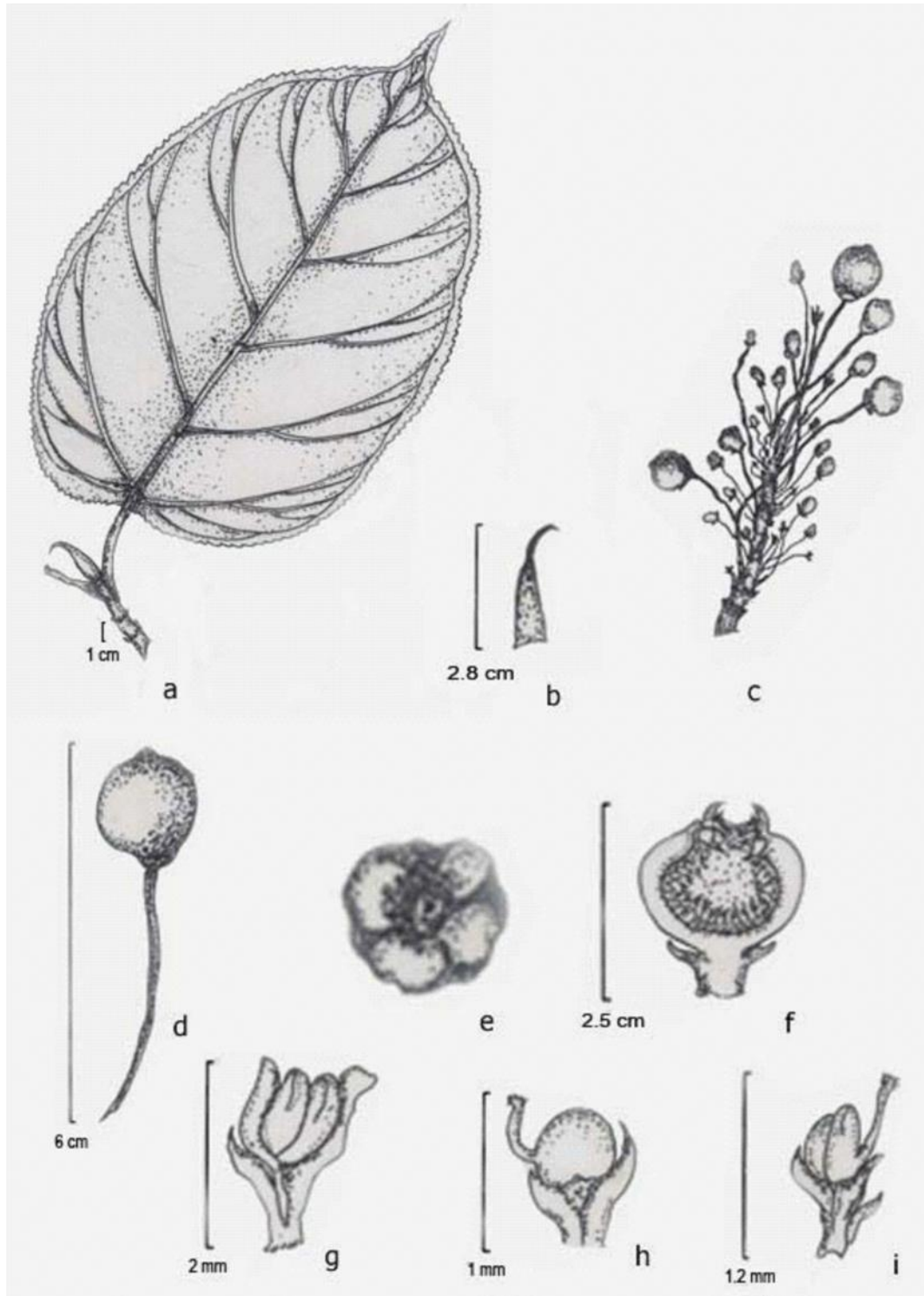
**Flowering:** September – October; **Fruiting:** March – April

**Ecology:** Tropical Moist Evergreen forest at around 700 – 900 m. Populations rare with few individuals mostly on moist shady hill slopes.

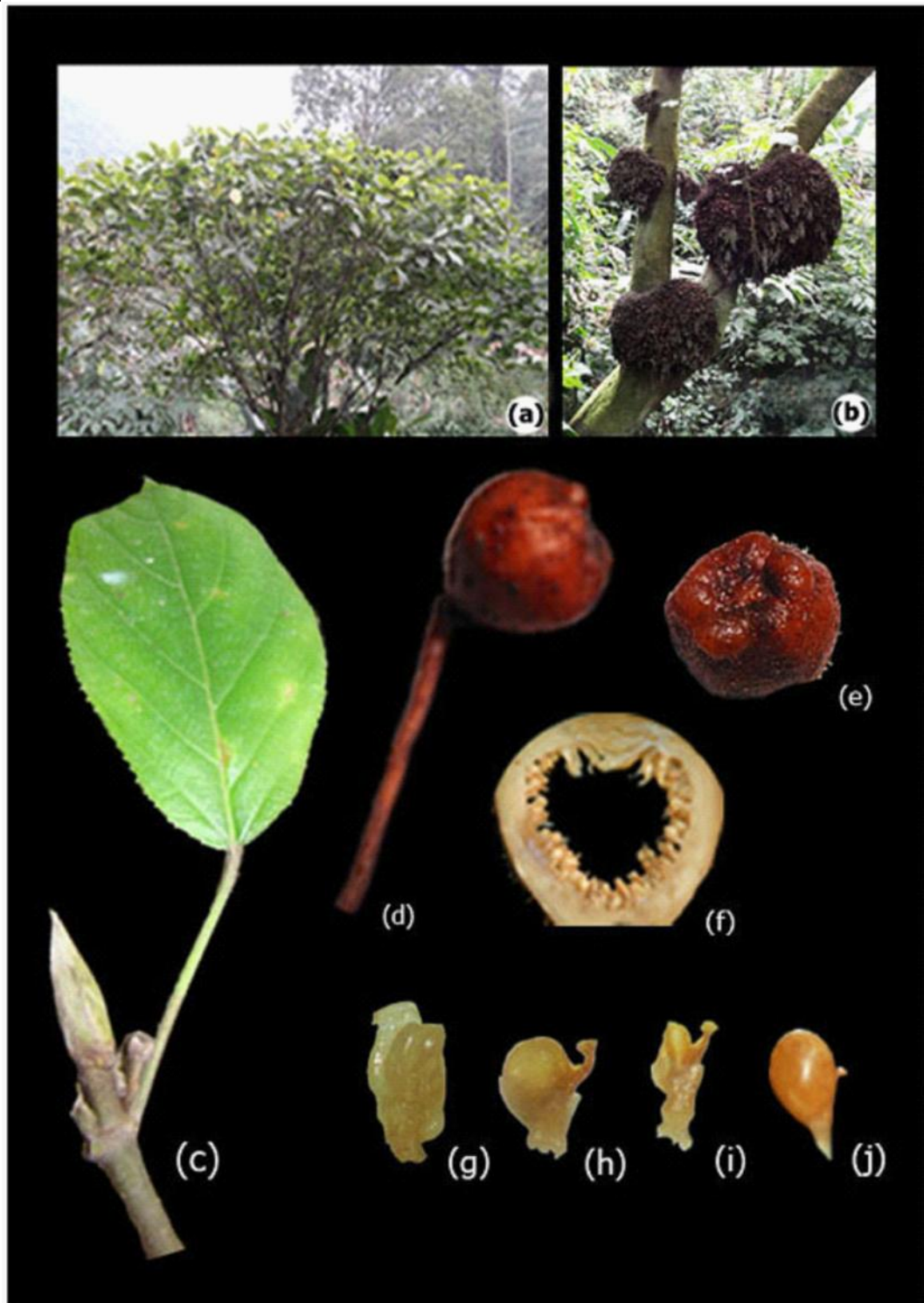
**Distribution:** INDIA: Arunachal Pradesh, Assam, Bihar, Manipur, Sikkim; BHUTAN and BANGLADESH.

**Exsiccatae:** INDIA, **Arunachal Pradesh**, Lohit district, Near Tohangam, 700 m, 16.12.2010, R. Buragohain 234; West Kameng district, on the way to Nashiphu near Sessa Army camp, 900 m, 01.03.2012, R. Buragohain 952 (NERIST)

**Additional specimen examined:** Sikkim Himalaya, 1887, King 8732 (MH); Lohit, Arunachal Pradesh, 1969, A.S. Rao ? (ASSAM)



**PLATE I. *Ficus conglobata* King:** a. Habit; b. Stipule; c. Young receptacles; d. Receptacle; e. Receptacle(Top view); f. Receptacle(L.S); g. Male flower; h. Gall flower; i. Female flower.



**Fig.2. *Ficus conglobata* King :** a. Habit; b. Trunk with receptacles; c. Stipule with leaf; d. receptacles; e. Receptacle(Top view); f. Receptacle(L.S); g. Male flower; h. Gall flower; i. Female flower; j. Achene

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