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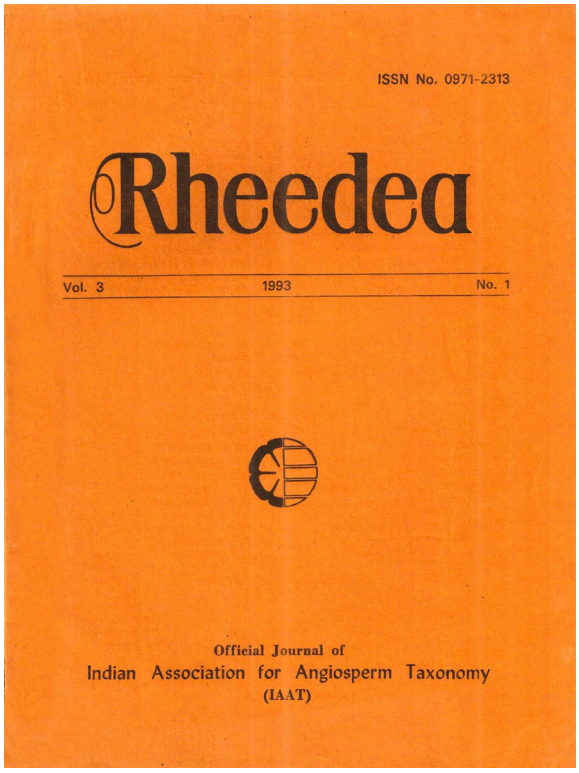

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Annona glabra L. (Annonaceae): A new record for India

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Abstract

Annona glara L., so far known only from the mangrove swamps of tropical America, West Africa and Sri Lanka, has been discovered and described from the western coast of India. It is a new addition to the Indian flora.

Floristic studies along the Malabar coast of India have, in recent times, brought to light quite a number of new taxa and new records proving, beyond doubt, that this area is floristically much richer than has been expected and that further explorations here would be highly useful and rewarding. The latest addition to this long list is a unique and intersting species of *Annona*, *A. glabra*, first described by Linnaeus (1753) from Carolina in America. Since then, this species has been reported from the mangrove swamps of coastal America, from Florida to Brazil and across the Atlantic in west Africa from Senegal to Congo. Reported as introduced and subspontaneous in some Asiatic countries (Morawetz *et al.*, 1987), this taxen has, of late, been recorded from Sri Lanka were it is "a recent introduction.....widely naturalised in secondary vegetation, especially hedges, margins of forests and along paddy fields in the humid south west at low elevations only; most abundant near the coast" (Huber, 1985). But, perusal of relevant literature shows that this taxon has not been reported from India, so far.

The authors collected this interesting specimen during their explorations in the coastal district of Alappuzha (Kerala) along the banks of Vembanat Lake, where it has a sizeable population and seems naturalised. We think that a brief account of the habitat of the species here, would be of interest to botanists, as it would help understand the uniqueness of this species itself, to a certain extent. Vembanat lake, covering an area of about two hundred sq. kms. boardering Alappuazha and Kotayam Districts of Kerala, is a huge expanse of backwater. The entire lake is affected by tidal action and the influx of sea water. Consequently,

the water in the lake is saline except during monsoon. In order to prevent the intrusion of salt water into the paddy fields of Kuttanad, a regulator, now called the 'Thanneermukkam regulator' was built a few years ago between Thanneermukkam and Vitchur. This particular species is now running wild along both the freshwater side and the backwater side of the regulator. The taxon being a mangrove species, the populations along the fresh water side are, possibly, the remnants of the old ones which existed there before the construction of the regulator. It is also found growing along the shores of an adjoining, uninhabited island called 'Pathiramanal'.

It is a long way from the Atlantic to Sri Lanka and south West India where the Bay of Bengal and the Arabian Sea unite with the Indian Ocean. One would naturally wonder as to how this species has been able to traverse all the way and perch on these areas. Human intervention may be ruled out because this taxon has been known neither to be useful nor grown in any of these parts. Kessler (1987) has, however, suggested that "some indications are existing to believe that the species is long distance dispresed due to its floating fruits". Our observations also reveal that the fruits with a leathery pericarp and the seeds are floating and are capable of long range dispersal through oceanic currents. Moreover, the occurance of almost all seedlings in the shallow water along the shoreline suggests that the seeds liberated after the decay of the fruitwall are brought to the shore by water current where they germinate and give rise to new plants.

As this taxon is rather new to Indian botanists, a complete description, illustrations and other relevant notes are provided here.

Annona glbra L., Sp. Pl. 537. 1753; Huber in Dassan. & Fosb., Rev. Handb. Fl. Ceylon 5: 74. 1985.

Small, glabrous trees, 5-6m tall. Bark cracked, grey outside and red within. Branches brownish green. Leaves distichous, petioled; petiole to 2cm, jointed at base; lamina 7—20 × 4—9 cm, larger on young, flushing shoots and smaller on adult ones, ovate, oblong or elliptic, acute at apex, rounded or cuneate at base, entire, coriaceous, glabrous; secondary veins 7—9 pairs, ascending and arched towards margin, without domatia, green above, paler beneath. Flowers on short, extra-axillary tubercles, solitary or paired; young buds subglobose; open flowers broadly ovoid, to 2cm across, creamy yellow, fragrant. Pedicel 1.5 to 2cm long, recurved at anthesis. Sepals 3, ovate-orbicular, acute, to 3 × 3 mm, glabrous. Petals 6 in two whorls, creamy yellow, thick and fleshy, broadly ovate-acute; the outer three larger, 2 × 1.5cm, base inflexed and somewhat subcordate, margins thickened towards apex; the inner three smaller, to 1.7 × 1.2cm, often with reddish blotches within, base acute. Stamens numerous, to 3mm long; filaments short; anther cells long and parellel; connective prolonged concealing the anthers. Carpels many, free, 1-ovuled. Fruits subglobose or ovoid, smooth, lemon-yellow when ripe, to 7 × 5cm, fleshy. Seeds many, straw-coloured

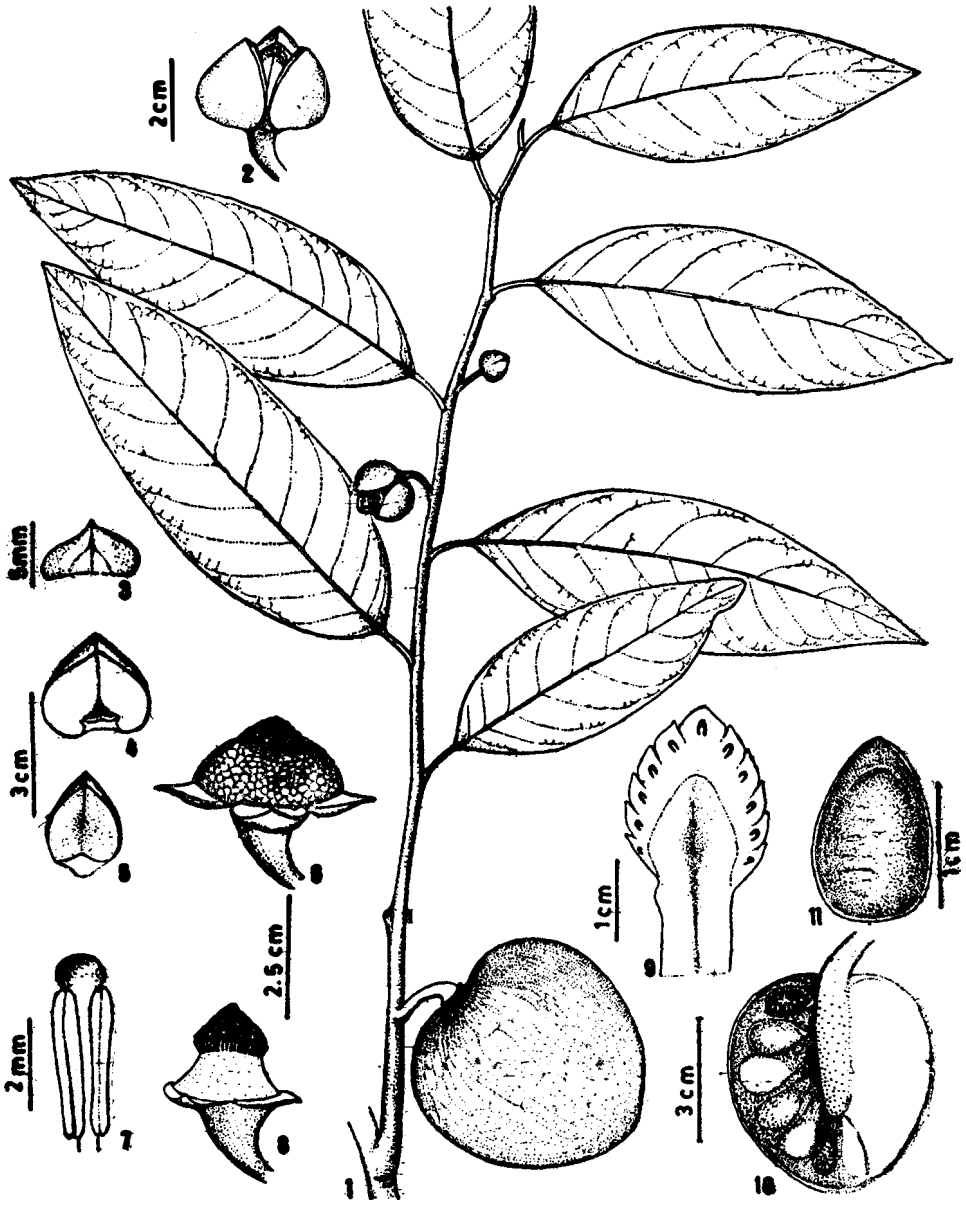

Fig. 1—11. *Annona glabra*. 1. Twig with flower and fruit, 2. Single flower, 3. Sepal, 4. Outer Petal, 5. Inner Petal, 6. Flower with Petals removed showing essential parts, 7. Single stamen, 8. Receptacle with carpels, 9. L. S. of receptacle & carpels, 10. L. S. of fruit (note the ruminate endosperm in seeds). 11. Seed.

lenticular and often strongly margined, ovoid, obovoid or oblong, rounded at ends, smooth, embedded in a yellow pulp, to 1.8 × 0.8cm, with ruminate endosperm.

Specimens examined: *Sunil* 1461, 1501 (CALI).

Note: This species was found growing in association with halophilous species such as *Hibiscus tiliaceus*, *Cerbera manghas*, *Calophyllum inophyllum and Derris uliginosa.*

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