

A New Mangrove Associated Species Record (Conocarpus L. -Combretaceae) from Tamil Nadu

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ABSTRACT

The genus *Conocarpus* L., (Combretaceae) a naturalized mangrove genus of India, is reported as an addition to the flora of Tamil Nadu. The species *Conocarpus erectus* L. was known to occur in Western Africa, tropical and subtropical America. A detailed description along with details on habitat, distribution, and photographs and related genus key is provided here.

KEY WORDS: Mangrove associate, Combretaceae, New record

INTRODUCTION

The family Combretaceae belongs to the order Myrtales and comprises 20 genera and 500 species (Heywood *et al.*, 2007; APG III, 2009). The family is distributed throughout the tropics, with some extensions to subtropical and warm-temperate regions (Stace, 2007; Krachai and Pornpongrungrueng, 2015). In the state of Tamil Nadu, the family Combretaceae is represented by 6 genera, namely, *Terminalia* L., *Anogeissus* Wall., *Calycopteris* Lamk., *Lumnitzera* Willd., *Combretum* L., and *Quisqualis* L., subsequently, genus *Conocarpus* is now added to the Flora of Tamil Nadu, which has not been reported earlier from Tamil Nadu (Henry *et al.*, 1987; Matthew, 1983; 1999; Manickam *et al.*, 2003a; 2004b; Murugan and Gopalan, 2006; Nair and Henry, 1983; Ravikumar *et al.*, 2004; Stephen and Vajravelu, 1999). During the floristic collection trips to coastal regions of Pudukkottai district, Tamil Nadu, an interesting Combretaceae plant with globose fruits have been collected by the author, which on a critical study has been identified as *Conocarpus erectus* L., belonging to the family Combretaceae. It is native to North America and the shores of tropical America and Africa (Boone, 1988). Previously, this specimen was also been collected in India only from Andhra Pradesh (Nagireddy *et al.*, 2015). Which after through a critical study and identification, it turned out to a new record

for the state of Tamil Nadu. A critical examination of the literature revealed that so far this genus and species has not been reported from Tamil Nadu. Therefore, this genus and a species are reported here with description, herbarium image, illustrations, and relevant notes based on collector's information for its identification.

TAXONOMIC DESCRIPTION

C. erectus L., Ge. Pl. 1753; Exell Fl. of Malesiana, 4: 533-534. 1954; Engl. & Diels Monogr. Afr. Combretac. 32; Chev. Bot. 259 (Figure 1).

Shrub 1.5-4 m in height but can become a tree up to 20 m or more in height, usually has an erect trunk or multiple trunks, branchlets slightly winged, finely appressed pubescent. Leaves spirally arranged, elliptic to lanceolate, Cretaceous to somewhat fleshy, 2-10 cm long, acute at both ends, narrowed to a short-winged biglandular, petiole, 3-9 cm long, 2-3.5 cm broad, glabrous or nearly so, with several pairs of arcuate lateral nerves. The twigs are slender, yellow-green, angled, flattened, or winged. Inflorescences are terminal or axillary, panicles of tiny greenish-white flowers grouped in spheroidal heads 3-5 mm in diameter, inconspicuous; calyx 4, acute-acuminate, white hairs present outside; petals 0. Stamens 4-5, exerted, much longer than the calyx; anthers dorsifixed, globose-slightly

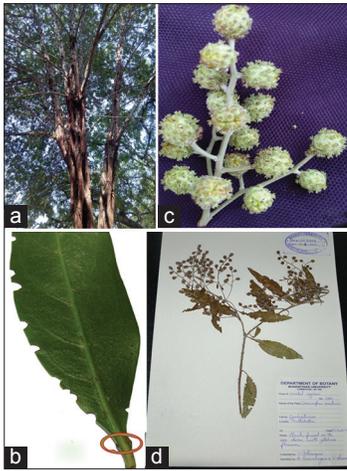


Figure 1: *Conocarpus erectus* L., (a) habit, (b) leaf with glands present to the base of petiole, (c) inflorescence, and (d) deposited herbarium specimen

angled at the margins. Fruit brownish red, look like old leather buttons and dry, individual fruits (drupes) are 2-winged, overlapping and separating at maturity; two-winged seeds are densely packed into globose clusters.

Fl. and Fr.: Throughout the year.

ECOLOGICAL FUNCTIONS

The tree is found about 100 mts from the sea in few numbers. The trees now spotted are about 10-15 years old, and the origin of the trees is unknown. Buttonwood is a seaside shrub or tree with highly salt-resistant foliage. It protects the soil during storm surges and helps stabilize dunes. As the trees withstand salt spray, they can be recommended to be planted in the seashore areas to reduce the damages caused by sea intrusion and to prevent soil erosion.

IUCN status: Least concern 2016.3 <http://dx.doi.org/10.2305/IUCN.UK.2010-2.RLTS.T178806A7612125.en>.

ECONOMIC IMPORTANCE

It is a favorite fuel for smoking fish and makes an excellent firewood emitting very little smoke while burning. It has also been used as a source for charcoal. The wood is heavy and durable in water, making it useful for boats, barges, and other maritime construction. Although very durable, the wood is susceptible to attack by dry wood termites. The plant is used as folk remedy in anemia, catarrh, conjunctivitis, gonorrhoea, diabetes, diarrhea, fever, headache, bleeding, tumors, orchitis, prickly heat,

swellings, and syphilis (Bashir *et al.*, 2015). Buttonwood has been used as an astringent and as a folk remedy for many ailments (Brown, 2011). Natural products assume an imperative part in the treatment of various infections. The history of utilization of plants to various conditions is extremely old. The foremost records discovered demonstrate that plants have been utilized in Mesopotamia and Egypt thousands of years ago (Hussein, 2016).

Although the previous reports state that the tree has a varied economic and ethnobotanical uses in different countries, the people of the study regions are not aware of the uses of the tree species.

Specimen examined: India: Tamil Nadu (Pudukkottai district). Herbarium deposited by Dhaarani, Sarvalingam, and Rajendran (Bharati-007006), the Department of Botany, Bharathiar University, Coimbatore, Tamil Nadu, India.

CONCLUSION

The species are found rare in its new habitat in Pudukkottai, Tamil Nadu; it is witnessed that it will take some years to get naturalized in its new habitat, and it is important to create awareness about the plant in the study area as it has many ecological and economic values.

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Author Queries???

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