**TAMARIX INDICA WILLD. (TAMARICAEAE) - A NEW DISTRIBUTIONAL RECORD AT THE TAMIRAPARANI ESTUARY OF TOOTHUKUDI, SOUTHEASTERN COAST OF TAMIL NADU, INDIA**

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**ABSTRACT**

*Tamarix indica* willd. (Tamaricaceae) – A species reported from the Tamiraparani estuary of Toothukudi, southeastern coast of Tamil Nadu, India. The details description of this species is given along with the Photograph and herbarium specimen. Its relations with allied taxa are also discussed.

**Keywords:** Tamarix indica, Tamiraparani Estuary, New Record

**INTRODUCTION**

The coast of Tamil Nadu is known for its rich and specialized vegetation, especially in regions such as Pichavaram, Muthupet, and Toothukudi. The coastal zone of the state is a dynamic system and has a remarkable biodiversity comprising of over 3000 species. This is mainly attributed to the presence of diverse habitats such as sand dunes, muddy mangrove swamps, coral reefs, salt marshes, lagoons, estuaries, seagrass beds, creeks, salt pans, rocky coasts and backwaters. The long coastline and river-derived nutrients produce a variety of biologically rich and productive ecosystems. About 70 species including 17 mangroves and 53 mangrove associates are recorded in Tamil Nadu coast (Kathiresan, 2009). *Tamarix indica* Willd. (Tamaricaceae) locally known as “Siru savukku”, is found mostly in saline and sub saline regions, usually in newly formed alluvial land on river-beds and coastal areas. In Tamil Nadu *T. indica* is distributed in isolated populations along the Cauvery delta extending over Tiruchirapalli and Thanjavur districts and in Coimbatore, mostly in patchy riverine and salty habitats. The authors have now recorded this species in Toothukudi district (8°40'52.15"N – 78°05’58.01”E) of Tamil Nadu along the Tamiraparani river bed. The documentation of this species further adds to our understanding of its extended distribution.

**MATERIALS AND METHODS**

Toothukudi coast has a major port and it is a rapidly Industrial developing area. The study area situated at Palayakayal of the Toothukudi coast of Tamil Nadu, southeast coast of India. Field photographs of the *Tamarix indica* Willd were taken during the field survey. Fresh specimen was collected and dried in the field survey with a field drier. Specimen of plant species was collected from the site and was identified using various regional flora, Flora of the Presidency of Madras, Flora of the Tamil Nadu Carnatic, The flora of Tamil Nadu, The flora of Coimbatore, The flora of the Gulf of Mannar (Gamble and Fisher, 1915-1936; Mattew, 1983; Nair and Henry, 1983; Hentry et al., 1987, 1989; Chandrabose and Nair, 1988; Daniel and Umanaheswari, 2001).

**RESULT AND DISCUSSION**

The family Tamaricaceae is represented by 3 genera and 16 species in India. The genus *Tamarix* is represented by 9 species in India (Shetty and Pandey, 1993) and also represented by four species in coastal regions of India (Banerjee et al., 2002). In Tamil Nadu, three species namely *Tamarix dioica* Roxb. *T. ericoides* Rottl. and *T. gallica* L. have been reported by Gamble and Fisher (1915-1936). However, Ramamurthy has recorded *Tamarix indica* [*T. troupii* Hole] from river beds of Tiruchirapalli and Thanjavur districts and *T. ericoides* Rottl. From Chengalpattu in Kanchipuram district and Tiruchirapalli district (Nair and Henry, 1983). Similarly, Chandrabose and Nair (1988) recorded *T. indica*
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from Coimbatore, but included in their Flora of Coimbatore as *T. troupii*. Daniel (2001) neither collected nor reported any *Tamarix* species in their work on “The Flora of the Gulf of Mannar” from Ramanathapuram to Kanniyakumari coast. Since its first report, *T. indica* has not been reported by any other subsequent workers from southern Tamil Nadu. During a floristic diversity study in Toothukudi District of Tamil Nadu, a population of a few individuals of *T. indica* has been recorded by the authors at Palayakayal. A detailed description of the species with photographs is provided to enable its easy identification.


Small trees, up to 6 m high. Stem bark reddish-brown, glabrous. Leaves subulate, 2 - 3 mm long, amplexical or auriculate at base, appressed, younger leaves, imbricate, acute, 1 - 2 mm long. Inflorescences simple or densely compound racemes, 3 - 12 x 0.3 - 0.4 cm; rachis minutely papillose or glabrous.

**Figure 1: Study area map**

**Figure 2: Herbarium specimen of *Tamarix indica***

Bracts triangular, ca 1 mm long, irregularly denticulate at the margin, acuminate at apex. Pedicels shorter than bracts, ca 0.5 mm long. Sepals 5, 2-whorled, connate at base, outer lobes ovate, 0.75 - 1 x 0.5 mm, narrower than inner, deeply denticulate at apex, margins membranous. Petals 5, free, elliptic or elliptic-ovate, 1 - 2 x 0.75 - 1 mm, obtuse at apex. Stamens 5; filaments filiform, inserted in between the 10 lobes of the fleshy disc, outside below the disc lobes; anthers unequal, apiculate. Ovary trigonous with 3 clavate styles. Fruits capsules, 4 - 6 mm across, 3 – 4 valved, tapering towards the apex. Seeds 8 - 10, tufted silky hairy at apex.
Flowering & Fruiting: August – December.

Distribution: India, Myanmar, Malaysia, Pakistan, Afghanistan, Bangladesh and Sri Lanka. In India, it is found in Odisha, Andhra Pradesh, Gujarat, Tamil Nadu and Andaman Islands.

Specimens Examined: INdia, East India, Roxburgh s.n. (Acc. No. K000641938 image, K); Orissa, Cuttack, Paradeep, 6.3.1991, S.C. Jena 3403 (RPRC); Tamil Nadu, Toothukudi, Palayakayal, 11.11.2011, K. Muthukumar 934 (St.John’s College, Palayamkottai).

Implication: This species is medicinally used. Its extended distribution in the southeast coastal regions of Tamil Nadu is significant. It is reassessed as Threatened because of reducing population size, stress posed on the coastal flora, and due to recent climatic variations in the region. The present habitat of T. indica provides an opportunity for its conservation but at the same time further studies need to be carried out, keeping in mind the recent environmental changes and habitat replacement.

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