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A note on the occurrence of *Talinum portulacifolium* (Forssk.) Asch. & Schweinf. (Talinaceae) in Odisha

A. K. Biswal¹ and N. C. Rout²¹ Department of Botany, North Orissa University, Takatpur, Baripada - 757 003, Odisha, India² Herbarium, Environment & Sustainability Department, CSIR-Institute of Minerals and Materials Technology, Bhubaneswar - 751013, Odisha, India

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ABSTRACT

Wild occurrence of *Talinum portulacifolium* (Forssk.) Asch. & Schweinf. (Talinaceae), an exotic of Tropical African origin, from different forest areas and urban habitats of Odisha has been reported in this paper. Though the species has got thoroughly naturalized in a wide range of habitats, it has not so far been reported in Floras and literature on flora and vegetation of Odisha. The probable cause of escape from cultivation and establishment in nature has been discussed. Nomenclature, botanical description, phenology, pattern of distribution of the species have been provided with ecological notes on its occurrence and spread in the state of Odisha.

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Talinaceae is a small dicotyledonous plant family within the order of the Cariofilales. It includes two genera, *Talinella* and *Talinum* and about 27 species distributed in America and Africa, including Madagascar (Christenhusz & Byng, 2016). This family has been recognized by modern classification systems such as the system APG III (Bremer *et al.*, 2009). Previously, the genera that constitute this family had been arranged in Portulacaceae, but phylogenetic analyses on molecular data indicate that the two genera that constitute the family forms a monophyletic clade to be considered as a separate family.

The members of the family are succulent shrubs, lianas or herbaceous in habit and are native to the Americas, Africa and Madagascar. They have tubers and underground parts. Some species exhibit Crassulacean acid metabolism (CAM). Leaves alternate, sometimes clustered on short shoots, flat, mucilaginous, slightly succulent. Flowers bisexual, actinomorphic, in terminal panicle inflorescence. The fruit is a berry, mucilaginous and indehiscent.

The genus *Talinum*, commonly known as “fame flower” and “flame flower” is represented by about 15

species (Nyffeler & Eggli, 2010), which are native of America and South Africa. Species of *Talinum* are mostly herbs and have succulent stems and leaves. The stems are decumbent, ascending or erect, 30 – 100 cm high. The basal leaves usually form a small rosette of up to 6 leaves from which arise the stem and a panicle inflorescence. Two species namely, *Talinum portulacifolium* (Forssk.) Asch. ex Schweinf. and *T. triangulare* (Jacq.) Willd. are introduced and naturalized in several parts of India. They are grown as ornamental plants, leafy vegetables or as a medicinal herb.

During the course of botanical studies in Odisha, the authors collected plant specimens from as many as ten districts, which were later identified as *Talinum portulacifolium* (Forssk.) Aschers & Schweinf. (Talinaceae). The nomenclature, botanical description, notes on ecology, distribution, factors responsible for invasion of the species and uses have been provided.

Talinum portulacifolium (Forssk.) Aschers & Schweinf., Bull. Herb. Boiss. 4. App. 172. 1896; Manilal & Sivar., Fl. Calicut 40. 1982; M.K.V. Rao in B.D. Sharma & Sanjappa, Fl. India 3: 9. 1993; Sasidh., Fl. Chinnar WLS 29.

[†] Corresponding author; E-mail: anilkbiswal@yahoo.com

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Herbs or sub-shrubs, robust, glabrous with rootstock. Leaves subsessile, 6 - 8 x 2 - 3 cm, obovate or oblanceolate, obtuse or rotund and mucronate at apex, entire, fleshy, glossy above, obscurely nerved. Inflorescences terminal, racemose or paniculate. Flowers 1.5 - 2 cm across; bracts 1- 6 mm long, linear; pedicels 0.7 - 1.5 cm long. Sepals 2, 4 - 6 x 3 mm, ovate-lanceolate, acuminate, 3-nerved. Petals 5, pink, purple, or white, 9 - 12 x 5 - 6 mm, obovate to ovate-rotund. Stamens many; filaments 2 - 3.5 mm long, unequal, basally connate; anthers ca 1 mm long, oblong. Ovary superior, ca 2 mm long, 1-loculed; ovules many on free central placenta; styles 3-armed. Capsules 5 - 7 mm in diam., globose, 3-valved. Seeds ca 35 in each capsule, 1 mm long, ovoid or sub-reniform, black, shining, with concentric striations (Fig. 1).

Flowering & Fruiting: February-August

Distribution: Tropical Africa, Arabian Peninsula, East Asia, Introduced and cultivated in several tropical countries; India (Tamilnadu, Kerala, Karnataka, Andhra Pradesh, Odisha).

Uses: The plant is gathered from the wild for use as a food and medicine. It is sometimes cultivated in tropical Africa and India as a vegetable, and is also grown as an ornamental plant.

Specimens examined: North Orissa University campus, Takatpur, Baripada, N. C. Rout & A. K. Biswal, NOU 2394, Dt. 22.09.2015, IMMT Campus, Bhubaneswar, N. C. Rout & A. K. Biswal, NOU 2708 Dt. 14.9.16; Joranda, Dhenkanal District, A. K. Biswal, NOU 2624, Dt. 20.10.2016.

The species has been naturalised in several states of India, especially in the western peninsula of the country. It might have been introduced as a medicinal herb or as a leafy vegetable. *Talinum portulacifolium* is found to occur sporadically in more than 10 districts of Odisha. The species is mostly found in marshy wastelands, as weed in gardens and along forest fringes. However, it is likely that because of its exotic origin, It does not find place in regional floras (Haines, 1921-25; Mooney, 1950 and Saxena & Brahmam, 1994-96) and other floristic literature. Even, there is no mention of its occurrence in the flora of the neighbouring states like West Bengal, Jharkhand, Bihar, Chhatisgarh and



Fig. 1. *Talinum portulacifolium* (Forssk.) Aschers & Schweinf. Habit and Habitat

Madhya Pradesh. Therefore, the species turned out to be new plant record for Odisha state and also for Eastern India. The species does not appear to be an invasive one and rapid colonizer.

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