

Scaevola plumieri (Goodeniaceae) - Addition to the Flora of Gujarat State, India

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Abstract

Scaevola plumieri (L.) Vahl is reported here as a new record for the Gujarat state, India from Coastal region of Devbhumi Dwarka of Gujarat state. A detailed taxonomic description, phenology, the current status and photographs are provided here for easy identification.

Key words : New record, Gujarat flora, Goodeniaceae, *Scaevola plumieri*, Dwarka.

The Goodeniaceae (Asterales), as currently circumscribed³, contains approximately 400 species in 11 genera and constitutes a significant element of Australian and Pacific Island floras. While most genera of Goodeniaceae are almost entirely confined to Australia, one genus, *Scaevola*, has dispersed and radiated throughout much of the Pacific. Of approximately 130 species of *Scaevola*, approximately 40 occur outside Australia¹¹. Two of these are widespread strand species with distributions throughout the Pacific and Indian Oceans *Scaevola taccada* (Gaertn.) Roxb. or in the tropical Americas and Africa (*Scaevola plumieri*)¹. These two most successful dispersers, which together are pantropical in distribution, each occurring in both the northern and southern tropics, with overlapping distributions on the coasts of the Indian Ocean. Their wide distribution appears to be due in part to their ability to be transported both in avian guts and by oceanic floating (remaining viable after

floating in seawater for several months)^{9,14}.

During the field visit of Kuranga Lake and Kharakhetar Sarovar situated near Okha Madhi Beach, authors collected a plant specimen from the first line sand dunes. After critical study and the perusal of pertinent literature^{2,4,6,10} it was identified as *Scaevola plumieri* (L.) Vahl. After critical review of published literature¹⁶⁻¹⁸, detailed description, notes and photographs are provided here for easy identification. The voucher specimens were deposited in Department of Botany, M. D. Science College, Porbandar.

Scaevola plumieri (L.) Vahl is a surface-creeping (prostrate) shrub with rounded and leathery (coriaceous) leaves not exceeding 8 cm in length, while the fruit (drupe) is red when ripe. These features (and many more) clearly distinguish this species from its closest ally, *Scaevola taccada* (Gaertn.) Roxb.,

locally known as *Bhadraksh*, which is a large erect shrub usually over 1 m high, with rounded but larger leaves (15-21 cm long) which are papery (chartaceous) and clustered (rosettes) at ends- of branches¹².

Identification key :

1a. Calyx-lobes conspicuous, nearly equal to the ovary; drupe white..... *S. taccada*

1b. Calyx-lobes very short, much shorter than ovary; drupe purple..... *S. plumieri*

Taxonomic overview :

Scaevola plumieri (L.) Vahl, Symb. Bot. 2:36. 1791; Gamble, Fl. Pres. Madras 2:516. 1957; Nair and Kumari in Fl. Tamilnadu 2:55. 1987. *Lobelia plumieri* L., Sp. Pl. 929. 1753. *Scaevola lobelia* Murr., Syst. Veg. ed. 13. 178. 1774; Clarke in Hook. f., Fl. Brit. India 3:421. 1888. *Scaevola uvifera* Stocks in Wight, Jc. T. 1613. 1850.

A small, decumbent, branched shrub, of 30-50 cm height, often exhibiting a colonial growth pattern. Stems glabrous or essentially so, occasionally glandular, and the leaf axils are adorned with 0.5-2 mm long white - pilose hair. Leaves 2-7.5 cm long, 8-35 mm broad, alternate to sub-opposite, elliptic-obovate, gradually tapering to the base, entire, fleshy, and glabrous. Inflorescence a pedunculate axillary dichasial cyme, tends to become monochasial. Cymes can be simple to 1-compound, or 1-flowered by reduction, with a peduncle around 2.5-3.5 cm leng. Flowers sessile, bracts long, fleshy, 4 mm. Calyx 1.5-2 mm long, exhibiting variations from truncate or obscurely and obtusely lobed to clearly 5-lobed, with lobes that are broadly ovate to broadly triangular,

0.2-1 mm long, glabrous, and rounded to obtuse. Corolla white to pinkish-white adaxially, pale greenish to pale yellowish abaxially, a tube about 1.2-1.5 cm long, hairy within, and lobes measuring approximately 8 mm long, linear-oblong. The drupe is subglobose to ellipsoid, smooth, purple-black, with diameter of around 1.3 cm, Drupes single sided; Hard stone seeds, 1.5 cm radius, 0.53 gram¹³ (Fig. 1).

Flowering: March-April

Fruiting: May - June

Habitat :

Scaevola plumieri occurs among first line vegetation on coastal low sand dunes along with *Ipomoea pes-caprae* (L.) R.Br., *Lotus garcinii* Ser., *Cyperus conglomeratus* Rottb., and *Asparagus dumosus* Baker. Major pioneer species in dune environment. The plant was also observed on lagoon-shore habitats in Sri Lanka instead of its usual sea-shore habitats, indicating its ability to tolerate lowered salinity levels under brackish conditions¹².

Distribution :

Scaevola plumieri is found in the Atlantic region on the east coast of the Americas^{8,9} and the north west coast of Africa north of Angola^{5,20}. In the western Indian Ocean region, it occurs from Sri Lanka to eastern and southern Africa^{5,17,20}. Rare in Western Pakistan⁷ (e-Flora Pakistan), coast of Karachi and Sind⁴. In India is recorded from Tirunelveli of Tamil Nadu^{10,15}, Udupi district of Karnataka².

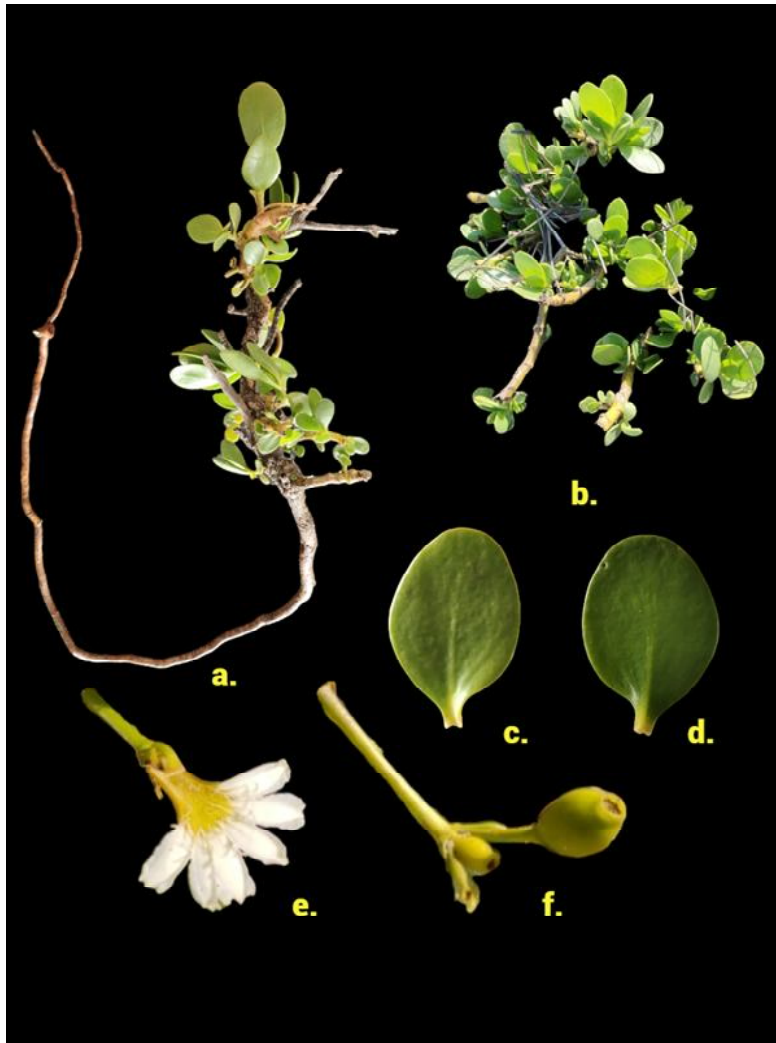


Fig. 1: *Scaevola plumieri* (L.) Vahl: a. Habit, b. Habit, c. Leaf ventral surface, d. Leaf dorsal surface, e. Flower, f. Fruit (Form Kunal N. Odedra & Sarman Ratiya, KS012; Images by Sarman Ratiya)

Specimen examined :

India, Gujarat, Devbhumi Dwarka district, Near Kharakheta Sarovar, Okha Madhi Beach (22°03'57.7"N 69°07'03.6"E). 11.02.2024, *Kunal N. Odedra & Sarman*

Ratiya, KS012 (Department of Botany, M. D. Science college, Porbandar).

The authors extend their sincere appreciation to Mr. Chirag Solanki, Program Officer at TCSR, for his invaluable recom-

mentation of the excellent location for our field excursion. Additionally, we express our gratitude to Dr. N. K. Odedra, Associate Professor in the Department of Botany at M. D. Science College, Porbandar, for his assistance in identifying the plant and offering valuable suggestions during the field excursion.

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