

## Flora of Singapore precursors, 37: Notes on Goodeniaceae in Singapore

I.M. Turner<sup>1,2</sup>

<sup>1</sup>Singapore Botanical Liaison Officer,  
Royal Botanic Gardens, Kew,  
Richmond, Surrey, TW9 3AE, UK  
i.turner@kew.org

<sup>2</sup>Singapore Botanic Gardens, National Parks Board,  
1 Cluny Road, Singapore 259569, Singapore

**ABSTRACT.** The nomenclature and typification of *Scaevola taccada* (Gaertn.) Roxb. and its synonyms are reviewed. In total, nine new lectotypifications are presented.

**Keywords.** Lectotype, *Scaevola*, Sea Lettuce

### Introduction

The Goodeniaceae are a predominantly Australasian family with scattered outliers across the Asia-Pacific region and southern South America plus a couple of coastal *Scaevola* species that form a pantropical strand presence. Currently (Shepherd et al., 2020), seven genera are recognised with a total of 532 species. Only one species, *Scaevola taccada* (Gaertn.) Roxb., is native to Singapore. It is the Sea Lettuce, a spreading shrub with fleshy bright green leaves and white flowers and fruits, commonly found on sandy and rocky shores over a wide area of the Indian and Pacific Oceans.

In preparing the family account for the *Flora of Singapore*, it was necessary to review the synonymy and typification of *Scaevola* and *Scaevola taccada*. As might be expected for a widespread and frequently collected species, *Scaevola taccada* has a fairly extensive synonymy with many local phenotypes given intraspecific recognition.

### Nomenclatural synopsis

***Scaevola*** L., Mant. 2: 145 (1771), nom. cons. – TYPE: *Scaevola lobelia* L., nom. illeg. superfl. (= *Lobelia plumieri* L. = *Scaevola plumieri* (L.) Vahl).

*Lobelia* Mill., Gard. Dict. Abr. ed. 4, 2: [textus s.n.] (1754), nom. illeg. hom., non *Lobelia* L. (1753). – TYPE: *Lobelia plumieri* L. (= *Scaevola plumieri* (L.) Vahl).

*Diaspasis* R.Br., Prodr. Fl. Nov. Holland. 586 (1810). – TYPE: *Diaspasis filifolia* R.Br. (= *Scaevola filifolia* (R.Br.) K.A.Sheph.).

*Scaevola* sect. *Crossotoma* G.Don, Gen. Hist. 3: 730 (1834). – *Crossotoma* (G.Don) Spach, Hist. Nat. Vég. Phan. 9: 583 (1840). – TYPE: *Scaevola spinescens* R.Br.

*Scaevola* sect. *Pogonanthera* G.Don, Gen. Hist. 3: 729 (1834). – *Pogonanthera* (G.Don) Spach, Hist. Nat. Vég. Phan. 9: 583 (1840), nom. illeg. hom., non *Pogonanthera* Blume (1831). – *Scaevola* subsect. *Pogonanthera* (G.Don) Carolin, Telopea 3: 490 (1990). – TYPE: *Scaevola striata* R.Br. (lectotype designated by Carolin (1990: 490)).

*Scaevola* sect. *Xerocarpa* G.Don, Gen. Hist. 3: 728 (1834). – *Xerocarpa* (G.Don) Spach, Hist. Nat. Vég. 9: 583 (1840), nom. rej. – TYPE: *Scaevola crassifolia* Labill. (lectotype designated by Carolin (1990: 489)).

*Camphusia* de Vriese, Ned. Kruidk. Arch. 2(1): 148 (1851). – TYPE: *Camphusia glabra* (Hook. & Arn.) de Vriese (= *Scaevola glabra* Hook. & Arn.).

*Merkusia* de Vriese, Ned. Kruidk. Arch. 2(1): 150 (1851). – TYPE: *Merkusia crassifolia* (Labill.) de Vriese (= *Scaevola crassifolia* Labill.) (lectotype designated by Carolin (1992: 85)).

*Temminckia* de Vriese, Ned. Kruidk. Arch. 2(1): 141 (1851). – TYPE: *Temminckia mollis* (Hook. & Arn.) de Vriese (= *Scaevola mollis* Hook. & Arn.) (lectotype designated by Carolin (1992: 85)).

*Molkenboeria* de Vriese, Natuurk. Verh. Holl. Maatsch. Wetensch. Haarlem 10: 38 (1854). – TYPE: *Molkenboeria striata* de Vriese, nom. illeg. superfl. (= *Scaevola calliptera* Benth.).

*Nigromnia* Carolin, Nuytsia 1: 392 (1974). – TYPE: *Nigromnia globosa* Carolin (= *Scaevola globosa* (Carolin) Carolin).

**1. *Scaevola taccada*** (Gaertn.) Roxb., Hort. Bengal. 15 (1814). – *Lobelia taccada* Gaertn., Fruct. Sem. Pl. 1: 119, t. 24, f. 5 (1788). – *Scaevola bela-modagam* Schult. in Roemer & Schultes, Syst. Veg., ed. 15 bis 5: 163 (1819), nom. illeg. superfl. – *Scaevola sericea* var. *taccada* (Gaertn.) Makino, Bot. Mag. Tokyo 18: 68 (1904). – TYPE: [Published illustration] ‘Bella-modagam’ in Rheede, Hort. Malab. 4: t. 59 (1683), lectotype designated by St. John (1960: 204).

*Scaevola sericea* Vahl, Symb. Bot. 2: 37 (1791). – *Lobelia sericea* (Vahl) Kuntze, Revis. Gen. Pl. 2: 377 (1891). – *Scaevola frutescens* var. *sericea* (Vahl) Merr., Philipp. J. Sci., C 7: 354 (1912). – *Scaevola taccada* var. *sericea* (Vahl) H.St.John, Taxon 9: 205 (1960). – TYPE: Savage Island [Niue], *Anon. s.n.* [J.R. Forster, J.G.A. Forster & A. Sparrman leg.] (lectotype C [C10012812], designated by St. John (1960: 206); possible islectotype BM [BM001041524]).

*Scaevola koenigii* Vahl, Symb. Bot. 3: 36 (1794). – *Lobelia sericea* var. *koenigii* (Vahl) Kuntze, Revis. Gen. Pl. 2: 377 (1891). – *Lobelia koenigii* (Vahl) Saff., Contr. U.S. Natl. Herb. 9: 310 (1905). – *Scaevola frutescens* var. *koenigii* (Vahl) Domin, Biblioth. Bot. 22(89): 646 (1929). – TYPE: India Orientalis, ad littora fratri zeylanici, *J.G. Koenig s.n.* (lectotype BM [BM014140222], designated here).

*Roemeria lobelia* Dennst., Schlüssel Hortus Malab.: 13, 19, 30 (1818). – TYPE: [Published illustration] ‘Bella-modagam’ in Rheede, Hort. Malab. 4: t. 59 (1683), lectotype designated here.

*Scaevola velutina* C.Presl, Reliq. Haenk. 2: 58 (1831). – *Lobelia velutina* (C.Presl) Kuntze, Revis. Gen. Pl. 2: 377 (1891). – TYPE: In insula Guaham Marianarum [Guam], *T.P.X. Haenke s.n.* (lectotype PR [PR25252], designated here).

*Scaevola leschenaultii* DC., Prodr. 7: 506 (1839). – TYPE: Java, *Leschenault s.n.* (holotype P [P00048473]).

*Scaevola plumerioides* Nutt., Trans. Amer. Philos. Soc., n.s., 8: 252 (1842). – TYPE: Sandwich Isles [Hawaii], Atooi, *Nuttall s.n.* (lectotype BM [BM001041523], designated here; possible isolectotype PH [PH00022589]).

*Scaevola chlorantha* de Vriese, Ned. Kruidk. Arch. 2(1): 137 (1851). – TYPE: India, Herb Wight prop. 2412 (n.v.).

*Scaevola lambertiana* de Vriese, Ned. Kruidk. Arch. 2(1): 139 (1851). – TYPE: India, Bombay, *Lambert s.n.* (holotype K [K001419197]).

*Scaevola macrocalyx* de Vriese, Ned. Kruidk. Arch. 2(1): 138 (1851). – *Scaevola koenigii* var. *macrocalyx* (de Vriese) Miq., Fl. Ned. Ind. 2: 580 (1857). – TYPE: India, Decan, *Hügel s.n.* (holotype W [W0192364]).

*Scaevola latevaga* Hance, Ann. Bot. Syst. 2: 1054 (1852). – TYPE: In ins. Hongkong ad litora maris arenosa [Hong Kong], *Hance s.n.* (n.v.).

*Scaevola piliplena* Miq., Fl. Ned. Ind. 2: 581 (1857). – *Lobelia piliplena* (Miq.) Kuntze, Revis. Gen. Pl. 2: 378 (1891). – TYPE: Java, *T. Horsfield s.n.* (lectotype U [U0112387], designated here).

*Scaevola koenigii* var. *glabra* Matsum., Bot. Mag. 14: 57 (1900). – *Scaevola frutescens* var. *glabra* (Matsum.) Masam., Mem. Fac. Sci. Taihoku Imp. Univ. 11(Bot. 4): 436 (1934). – TYPE: [Taiwan], Botol Tobago, *Miyake s.n.* (n.v.).

*Scaevola fauriei* H.Lév., Repert. Spec. Nov. Regni Veg. 10: 150 (1911). – *Scaevola sericea* var. *fauriei* (H.Lév.) O.Deg. & I.Deg., Phytologia 6: 321 (1958). – *Scaevola taccada* var. *fauriei* (H.Lév.) H.St.John, Proc. Biol. Soc. Washington 88: 74 (1975). – TYPE: Hawaii, Kauai, Koloa, December 1909, *Faurie 651* (lectotype P [P00698437], designated here; isolectotypes A [A00033463], BM [BM001041522], P [P00698436]).

*Scaevola frutescens* f. *moomomiana* O.Deg. & Greenwell, Fl. Hawaii fam. 340 (1949). – *Scaevola sericea* f. *moomomiana* (O.Deg. & Greenwell) O.Deg. & I.Deg., Phytologia 6: 321 (1958). – *Scaevola taccada* f. *moomomiana* (O.Deg. & Greenwell) T.Yamaz., Fl. Japan 3a: 419 (1993). – TYPE: Hawaii, Molokai, Moomomi, 19 April 1928, *Degener 7730* (lectotype NY [NY00278854], designated here; isolectotype PH [PH00022584]).

*Scaevola taccada* var. *tuamotuensis* H.St.John, Taxon 9: 207 (1960). – TYPE: Pitcairn Islands, Henderson Island, 21 June 1934, *Fosberg 11348* (lectotype BISH [BISH1001981], designated here; isolectotypes BISH [BISH1001979, BISH1001980], P [P00698440], US [US00147144]).

*Scaevola sericea* f. *saintjohnii* O.Deg. & I.Deg., Taxon 10: 227 (1961). – TYPE: Hawaii, Kauai, Omoe, 16 March 1961, *O. Degener 27313* (lectotype US [US00426838], designated here; isolectotypes B [B 10 0277711], BISH [BISH1010022], BM [BM001041521], G [G00439495], M [M0175740], MIN [MIN1002400]).

*Scaevola taccada* var. *bryanii* H.St.John, Proc. Biol. Soc. Washington 88: 75 (1975). – TYPE: Hawaiian Leeward Islands, Midway Island, Sand Island, 4–8 ft high, on the sand mounds, 21 August 1902, *Bryan s.n.* (holotype BISH [BISH1010026]).

*Scaevola taccada* f. *punicea* H.St.John, Phytologia 40: 390 (1978). – TYPE: Micronesia, Marshall Islands, Likiep Atoll, Likiep Island, cult., 28 August 1946, *St. John & Cowan 21782* (holotype BISH [BISH1001978]; isotypes L [L0001759], US [US00956009]).

*Notes.* The type of *Scaevola koenigii* Vahl would seem likely to be a Koenig specimen in C and has been effectively lectotypified to such (Jeffrey, 1980: 543). But there is no specimen now present, and the original card index of the Vahl herbarium makes no note of a specimen (O. Ryding, pers. comm.). Therefore, a Koenig specimen in BM, that was probably available to Vahl, is here selected as lectotype.

For the names listed above, where type material has not been located, the synonym status is based on the original descriptions, reported localities and earlier revisions.

ACKNOWLEDGEMENTS. Thanks are due to Christian Bräuchler (W) and Otakar Šída (PR) for information on specimens.

## References

- Carolin, R. (1990). Nomenclatural notes, new taxa and the systematic arrangement in the genus *Scaevola* (Goodeniaceae) including synonyms. *Telopea* 3(4): 477–515.
- Carolin, R. (1992). *Scaevola*. In: George, A. (ed.) *Flora of Australia*, vol. 35, pp. 84–146. Canberra: Australian Government Publishing Service.
- Jeffrey, C. (1980). On the nomenclature of the strand *Scaevola* species (Goodeniaceae). *Kew Bull.* 34: 537–545.
- Shepherd, K.A., Lepschi, B.J., Johnson, E.A., Gardner, A.G., Sessa, E.B. & Jabaily, R.S. (2020). The concluding chapter: Recircumscription of *Goodenia* (Goodeniaceae) to include four allied genera with an updated infrageneric classification. *PhytoKeys* 152: 27–104.
- St. John, H. (1960). The name of the Indo-Pacific strand *Scaevola*. *Taxon* 9: 200–208.

