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Robert R. Smith

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SCAEVOLA SERICEA (GOODENIACEAE) IN THE BAHAMAS

W. Hardy Eshbaugh and Thomas K. Wilson  
Miami University  
Oxford, Ohio

The genus Scaevola (Goodeniaceae) includes approximately 80 species. The majority, some 60 in number, are confined to Australia and neighboring islands. The section Scaevola is centered in the Pacific but there are two wide-spread littoral species characteristic of strand vegetation throughout much of the tropical region. Scaevola plumieri (L.) Vahl (Fig. 1a) is pantropical while S. sericea Vahl (S. taccada) (Fig. 1b) is erroneously reported to be confined to the eastern hemisphere, ranging from Madagascar and Mauritius to Ceylon, and tropical Australia to the central Pacific (Brizicky 1966; Jeffery 1980). St. John (1978) reports this species from Hawaii while Sudhaker (1982) records it for the Vishakhapatnam area of Andhra Pradesh, India.

Scaevola plumieri is cited as a common, wide-spread species throughout the Bahamas in the earliest treatments of the flora (Griesback 1859-1864; Britton and Millspaugh 1920). Prior to his untimely death Gillis had mapped (Fig. 2) the distribution of this taxon at virtually every collecting site he had visited during his years of study in this region. The Corrells (1982) also collected this species from throughout the Bahamas. At the same time the investigations of Griesbach (1859-64), Northrop (1902), and Britton and Millspaugh (1920) and other early investigators do not mention S. sericea in the Bahamas. This species is not included in more recent treatments of neighboring areas including Florida (Long and Lakela 1971), Jamaica (Adams

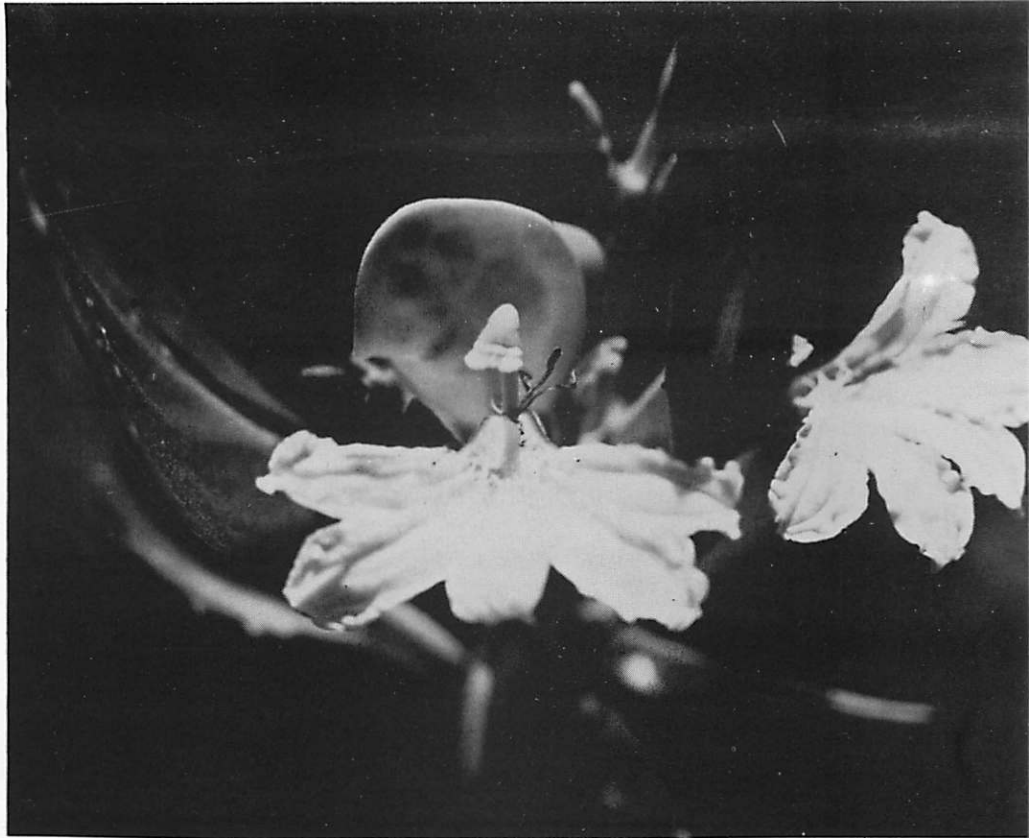


Figure 1a: Scaevola plumieri (L.) Vahl.



Figure 1b: Scaevola sericea Vahl.

1972), etc. Various students of the Bahamas flora have not included S. sericea in their additions to this flora (Correll 1974, 1975; Gillis 1974; Gillis and Pector 1975; Gillis et al. 1973; Hill 1974; Lewis 1971).

The first mention of S. sericea in the Bahamas that we are aware of is by Hill (1976) under the name S. taccada. Here, we should note that we have selected the name S. sericea in favor of S. taccada, in spite of St. John's (1960) and Fosberg's (1961) reasoning, being persuaded that Jeffrey (1980) is indeed correct in his arguments that the name for this taxon is S. sericea. Although Correll and Correll (1982) use the name S. taccada, they note that a variety sericea occurs in the Bahamas. An examination of the Correll material (FTG) indicates that S. sericea was the name used for several collections (Correll 51351, Correll and Correll 45693).

Hill (1976) notes that S. sericea is an escape along the beach area on the east side of Cat Cay, Bimini (D. S. Correll and H. B. Correll 35639 12 Jul 1975 FTG) and on Walker's Cay, Abaco near the airstrip (D. S. Correll 45480 23 Jun 1975 FTG). In an earlier study by Howard (1950) on the vegetation of the Bimini Island group S. sericea is not mentioned, apparently being absent from his study sites. In 1980 D. S. Correll joined our course on the Tropical Flora of the Bahamas, being taught at the Forfar Field Station at Blanket Sound, Andros Island, for a week of field excursions. During one afternoon session, along the beach at Staniard Creek, the class encountered an unusual Scaevola that was later identified by Correll as S. sericea (D. S. Correll 51351 17 May 1980 FTG). In subsequent years we have located

additional population of S. sericea at Conch Sound, and along the beach at Blanket Sound (Eshbaugh and Wilson 81-75 = T. K. Wilson 1537 MU) on North Andros Island (Fig. 2). In 1984 a young seedling plant of S. sericea was discovered at Pigeon Cay to the east of the Forfar Field Station.



Figure 2: Distribution of Scaevola plumieri in the Bahamas as plotted by William T. Gillis. Known sites for Scaevola sericea. Original distribution map supplied by Dr. John Beaman from the records of W. T. Gillis on deposit at Michigan State University (MSC).

It is doubtful that this seedling will become permanently established as it was growing in a marginal habitat on the windward side of the island. What is important is that S. sericea is spreading on Andros Island and is permanently established along the east coast of the island. With this information one now finds S. sericea included in the most recent floras of the Bahamas including the Flora of the Bahamas Archipelago by D. S. Correll and H. B. Correll (1982) and A Contribution to the Vascular Flora of Andros Island, Bahamas by Nickrent, Eshbaugh, and Wilson (1983).

Two interesting questions can be asked. First, what was the original source of Scaevola sericea in the Bahamas? Second, once established what mechanisms led to the effective dispersal and colonization of S. sericea in the northern region of the Bahamian Island archipelago?

At this time we can only speculate that S. sericea, in the Bahamas, represents a very recent introduction, perhaps as an escape from an ornamental planted somewhere in the Bahamas or neighboring Florida. It is grown as an ornamental in the Fort Pierce, Florida (St. Lucie County) area and has been seen at the Jack Island Beach County Park (T. K. Wilson 85-41 14 Jun 85 MU). Collections of S. sericea are also known from Indian River County (T. K. Wilson 85-49 MU), Monroe County (Correll and Correll 54027 FTG) and Dade County (Sutherland s.n. FTG, Morton s.n. FTG, Popenoe and Saunders 2163 FTG). The state of Florida has also used S. sericea as a planting both along roadsides and in parks. Several conservation organizations have initiated a move to stop the planting of this species because of concern on how easily it

spreads once established (D. F. Austin, personal communication).

Dispersal in this genus is attributed to both the sea and birds (Guppy 1912; Ridley 1930). We are inclined to favor bird dispersal for S. sericea at the intra island level, in that the fruits of both S. plumieri and S. sericea are food for various species and more especially pigeons (white-crowned). Nonetheless, Guppy (1917) argues that the seed is adapted for sea dispersal and will float and presumably germinate after 50 days. Thus, sea dispersal may be a more plausible explanation for short distance inter island distribution. It will be interesting to follow the colonization of S. sericea in the decades ahead.

#### REFERENCES

- Adams, C. D. 1972. Flowering Plants of Jamaica. Univ. of West Indies, Jamaica. Mono.
- Britton, N. L. and C. F. Millspaugh. 1920. The Bahamas Flora. New York. Privately Published.
- Brizicky, G. K. 1966. The Goodeniaceae in the southeastern United States. J. Arnold Arboretum 47: 293-300.
- Correll, D. S. 1974. Flora of the Bahama Islands - new additions. Fairchild Trop. Gard. Bull. 29: 11-12; 15.
- Correll, D. S. 1975. Flora of the Bahama Islands - new additions, II. Fairchild Trop. Gard. Bull. 30: 11-12.
- Correll, D. S. and H. B. Correll. 1982. Flora of the Bahama Archipelago. Vaduz. J. Cramer.
- Fosberg, F. R. 1961. Scaevola sericea Vahl versus S. taccada (Gaertn.) Roxb. Taxon 10: 225-226.
- Gillis, W. T. 1974. Name changes for seed plants in the Bahama Flora. Rhodora 76: 67-138.
- Gillis, W. T., R. A. Howard, and G. R. Proctor. 1973. Additions to the Bahama flora since Britton and Millspaugh - I. Rhodora 75: 411-425.
- Gillis, W. T. and G. R. Proctor. 1975. Additions and corrections to the Bahama Flora - II. Sida 6: 52-62.



- Griesbach, A. H. R. 1859-64. Flora of the British West Indian Islands. London.
- Guppy, H. B. 1917. Plants, seeds, and currents in the West Indies and Azores. London.
- Hill, S. R. 1974. Range extensions and new records for the Bahama Flora. Rhodora 76: 471-477.
- Hill, S. R. 1976. Additions to the Bahama Flora. Sida 6: 321-327.
- Howard, R. A. 1950. Vegetation of the Bimini Island Group. Ecol. Monogr. 20: 317-349.
- Jeffrey, C. 1980. On the nomenclature of the strand Scaevola species (Goodeniaceae). Kew Bulletin 34: 537-545.
- Lewis, W. H. 1971. Additions to the Flora of the Bahama Islands. Rhodora 66: 6-15.
- Long, R. W. and O. Lakela. 1971. A Flora of Tropical Florida Coral Gables, FL.
- Nickrent, D. L., W. H. Eshbaugh, and T. K. Wilson. 1983. A Contribution to the Vascular Flora of Andros Island, Bahamas. Oxford, OH. Privately published.
- Northrop, A. R. 1902. Flora of New Providence and Andros. Mem. Torrey Bot. Club 12: 1-98.
- Ridley, H. N. 1930. The Dispersal of Plants Throughout the World. London.
- St. John, H. 1960. The name of the Indo-Pacific strand Scaevola. Taxon 9: 200-208.
- St. John, H. 1978. A new color form of Scaevola taccada (Goodeniaceae) - Pacific Plant Studies 38. Phytologia 40: 390.
- Sudhaker, S. 1982. Scaevola taccada (Goodeniaceae) an interesting record from the Vishakhapatnam area Andhra Pradesh, India. Bull. Bot. Survey India 22: 217-221.