

OCCASIONAL PAPERS  
OF  
BERNICE P. BISHOP MUSEUM  
HONOLULU, HAWAII

---

Volume XXI

August 15, 1952

Number 3

---

A Central Pacific *Sesuvium*

By

OTTO DEGENER and  
F. RAYMOND FOSBERG  
U. S. GEOLOGICAL SURVEY

That the pantropic strand plant *Sesuvium portulacastrum* L. is a variable, complex species, is evident to anyone who examines an assortment of herbarium material from a considerable geographic range, or who has seen the plant growing in a number of widely separated places. The differences, however, are mostly of a rather intangible nature and appear much more so in dried material.

Adequate field study over an appreciable part of the range of this widespread species is impracticable to conduct; and intensive herbarium study would involve working out techniques of restoration of the fleshy leaves to their original shape and of comparison of surface characters for which time and facilities are not now available. Field studies on Christmas and Canton Islands and herbarium studies on other material, however, show that a readily identifiable entity segregates out of this complex in the Line and Phoenix Islands. This entity may be easily recognized by the plant's more than usually robust habit and the almost, or complete, absence of anthocyanin color; by its leaves having the ventral surface flattish and being bounded by two angles, rather than having the margins rounded; by the epidermis being dull, usually grayish green, rather than glossy and bright green; and by having the flowers commonly white or pale pink, rather than bright or purplish pink.

All specimens seen from Christmas and the Phoenix Islands deserve at least varietal status, as described below:

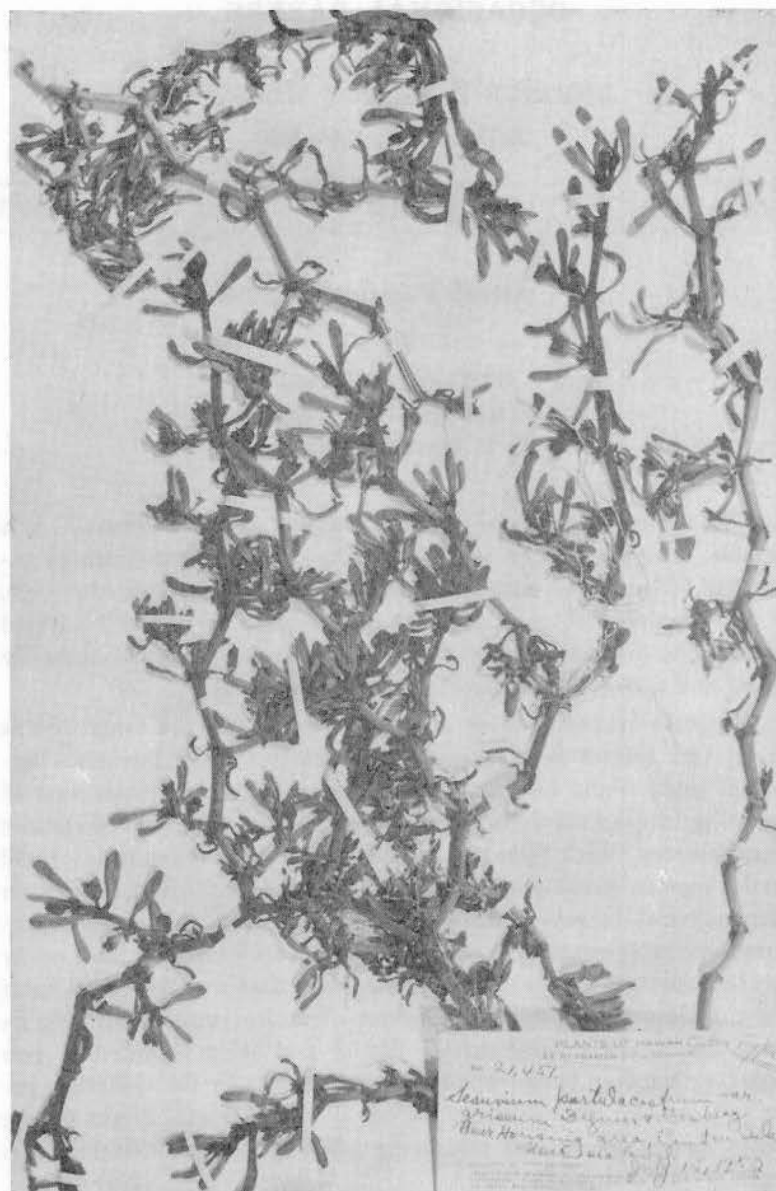


FIGURE 1.—*Sesuvium portulacastrum* var. *griseum*.

***Sesuvium portulacastrum* var. *griseum*, new variety (fig. 1).**

Planta viridis robusta, foliis angulatis, epidermato opaco griseo sicco minute ruguloso, floribus usiter albis.

Plant perennial, repent, fleshy, glabrous, forming mats up to 4 or even 6 m. across, up to 4 (or 6) cm. high, with stems somewhat zigzag, slightly shiny, pale green, never red, subterete, about 6 mm. thick, nodes conspicuous, often rooting, internodes commonly 3-5 cm. long, apparent side-branches developing alternately because of sympodial growth from apparent main branch, leafy. Leaves not glossy but dull (grayish at least when dry), somewhat marcescent, petioles thick, 10 mm. long, prominently dilated at base, blades oblong lanceolate to somewhat clavate (or even obovate), rounded beneath and flat or faintly concave above, up to 40 mm. long, 12 mm. wide, 3 mm. thick, obtuse to rarely rounded at apex. Flower terminal but appearing to be supra-axillary because of leafy branch arising below it and crowding it aside, with pair of subulate 2 mm. long early marcescent bracts at base of pedicel, this 4 mm. long; calyx tube pale green, slightly angular, 4 mm. long and about as wide; lobes fleshy, narrowly cuneate, acute at apex, unequal in length and width, about 6 mm. long and 3 mm. wide, pale green without and pale within with (white or) pale pink membranous margin an additional 0.5-2.0 mm. wide; stamens about 40, filaments white, variable in length, anthers pale yellowish; styles 3, filiform, somewhat longer than stamens.

The above description, with the exception of the parenthetical portions, is from living plants from Canton Island. No significant differences were found between seeds from this variety and those of plants from other regions.

The new variety is found in open, extremely saline areas, usually less than one meter above high tide.

Line Islands: Christmas Island, s. l., *Bergman 13*. Canton, *St. John and Fosberg 17493*; north side of lagoon, *Fosberg 13224*.

Phoenix Islands: Enderbury Island, s. l., *Lamb, 1938*. Phoenix Island, s. l., *Bryan 19*. Canton Island, s. l., *Bryan 24*; near housing area, July 15, 1950, *Degener 21451* (type); near airport, *Fosberg 30205*; saline flats near inner beach, east of airport, *Fosberg 30203, 30204*.

All collections cited are in the herbarium of Bernice P. Bishop Museum.

Further distributional records of this variety would be of great interest, particularly if they show it to be one of the few plants endemic to low coral islands.

