

**OCCASIONAL PAPERS**  
**OF**  
**BERNICE P. BISHOP MUSEUM**  
**HONOLULU, HAWAII**

Volume XXII

July 22, 1957

Number 4

**A New Variety of Silversword**

By **J. F. ROCK**  
RESEARCH ASSOCIATE IN BOTANY, BISHOP MUSEUM

AND

**MARIE C. NEAL**  
BOTANIST, BISHOP MUSEUM

Described herein is a new variety of the Hawaiian silversword (*Argyroxiphium sandwicense* DC.). It was collected by Mr. L. William Bryan, Associate Forester of the Hilo branch of the Board of Agriculture and Forestry, from the slopes of Mauna Loa above the Kau Forest Reserve in Kahuku, where it was found in flower and fruit. The variety is named *kauense* after the district in which it occurs.

**Argyroxiphium sandwicense** DC. var. **kauense** Rock and Neal,  
var. nov. (fig. 1).

Planta 1.3 m. alta, 55-62 cm. diam.; folia ensiformis anguste linearis, triquetris, pilis griseo-argentibus vestita, 26-30 cm. longa, 3-4 mm. lata; racemi 40-42 cm. longi, viscosi; cephalia parva, oblonga, heterogama; involucri campanulata, 12 mm. alta, viscosa; ligulae 1-2, rarissime 3-4, pistillatae, pallide-luteae, 3-fidis; discus conicus, disci-flores tubulati 75-100; achenia atra.

Plant 1.3 m. tall, leaf rosette 55-62 cm. in diameter; leaves narrow linear, densely pubescent with dark grayish-silvery hair, triquetrous, 26-30 cm. long, 3-4 mm. wide; involucre campanulate 12-14 mm. high, 1-12 mm. wide; bracts linear acuminate, hirsute, viscous; disk conical, glabrous; ray florets pistillate, ligule pale yellow, 1-2, rarely 3-4, inconspicuous, making the flower heads appear aligulate, stigmatic lobes long, dark purplish; disk florets 75-100, tubular, glabrous, purple, stigmatic lobes short, hirsute; achenes of ray florets geniculate at the apex, pappus none; achenes of disk florets not geniculate, pappus consisting of straw-colored, unequal, puberulate, more or less united paleae, the acuminate apices and margins pubescent with white hair; mature achenes black, 7-10 mm. long, 1.5 mm. wide.



FIGURE 1.—*Argyroxiphium sandwicense* var. *kauense* (photo from L. William Bryan).

Hawaii: Southern slopes of Mauna Loa, above Kapapala, Kau, sterile, August 1911, *C. N. Forbes 430H* in Bishop Museum; Kau, Ke A Pohina, altitude 6,500 feet, sterile, August 29, 1922, *W. H. Meinecke* in Bishop Museum; Kahuku, above Kau Forest Reserve at Charlie Stone, altitude 6,700 feet, flowering and fruiting, July 1956, type *L. William Bryan 25670* in Bishop Museum.

This variety differs from the species in the much shorter raceme and, mainly, in its very narrow, non-flat, triquetrous leaves which, instead of being bright silvery, are dark grayish silvery; in the much smaller flower heads, campanulate involucre, the paucity of ray florets, mostly 1-2, rarely 3-4, which are pale yellow and not conspicuous; in the geniculate ray achenes without pappus; and in the persistent paleae of the disk achenes which are not geniculate.

The plant, according to Mr. Bryan, is abundant, several hundred having been observed above the Kau Forest Reserve at an altitude of 6,700 feet. D. D. Keck, who has seen only sterile specimens collected by Forbes and Meinecke, relegated it to *A. sandwicense* DC. var. *macrocephalum* Gray, although he relegates the varietal name to synonymy.

It cannot be a hybrid between *A. sandwicense* DC. and *A. virescens* Hbd. because the latter does not occur on the island of Hawaii, but only on the northwestern slopes of Haleakala on Maui. A hybrid does occur in the latter locality, but it has flat non-triquetrous leaves which are also broader than in our variety from Kau.

Generated at University of Hawaii on 2022-11-01 02:34 GMT / https://hdl.handle.net/2027/uc1.32106019433603  
Public Domain in the United States; Google-digitized / http://www.hathitrust.org/access\_use#pd-us-google