

## The Native Species of *Senecio* (Compositae) in Hawaii Hawaiian Plant Studies 53<sup>1</sup>

HAROLD ST. JOHN<sup>2</sup>

TWO SPECIES OF *Senecio* were described by early botanists as native to the Hawaiian Islands. One, *S. capillaris* Gaud., was re-studied by the writer (St. John 1965:432) and assigned to a different genus, as *Tetromolopium capillare* (Gaud.) St. John. The other species, *S. sandwicensis* Less. has long seemed dubious. Its type specimen was collected in 1816 by J. F. von Eschscholtz on the voyage of the Russian ship, the *Rurick*. It has never been collected again. Through the courtesy of the curator of the herbarium of the Botanical Institute, Academy of Science, Leningrad, the holotype sheet was received as a loan. It bears a good specimen, with two stems, five leaves, and an ample inflorescence. It has been studied carefully, and the writer is convinced that it is a genuine *Senecio*. He has had long experience with the Hawaiian flora, and to him this plant does not have an Hawaiian aspect. It looks like a meadow species from the Northern Hemisphere.

It is possible that there is an error in the label, and that the collection was made elsewhere on the world voyage. With this in mind, the writer has checked the species of *Senecio* known to grow at the other localities visited on the *Rurick* voyage, viz: Canary Islands, Brazil, Tierra del Fuego, Washington Island, the Marquesas, Pitcairn, Samoa, Marshalls, Kamtschatka, California, Japan, Macao, China, Ryukyu Islands, Java, and St. Helena Island. None of these many species agree in structure with *S. sandwicensis*. Consequently, it should be accepted as a true Hawaiian species, but one certainly now extinct. To make it better known, a more detailed diagnosis, a photograph, and a line

drawing of it (Figures 1, 2) are here presented. It seems to be most similar to *S. hydrophilus* Nutt., of the northwestern United States.

*Senecio sandwicensis* Less., Linnaea 6: 526, 1831; Hbd., Fl. Haw. Is. 229, 1888.

Figures 1, 2

ORIGINAL DIAGNOSIS: "Herba verisimiliter perennis. Caulis fortasse pluripedalis, erectus, inanis, teres, simplex? superne pro maxima parte foliis paucis, parvis, remotis, subsemiamplexicaulibus obsessus. Folia ima petiolata, oblongo elliptica, obtusa, glaberrima, integerrima, carnosula, penninervia, avenia, circiter 3<sup>||</sup> longa, 1<sup>||</sup> lata, basi in petiolos plano-dilatatos acuminata. Panicula terminalis, decomposita, suprafastigiata, dichotoma, ramis inferioribus elongatis, foliis parvis suffultis, superioribus magnopere decrescentibus. Capitula discoidea homogama, multi (20-) flora, parum majora quam in *S. Jacobaea*, pedicellis suis apice squamatis pl. longiora. Involucrum floribus brevius, l-seriale, basi parum et irregulariter auctum, foliolis numerosis, contiguis, plurinerviis, apice obsolete barbatis, esphacelatis, alternis margine latius scariosis et obtusis, alternis margine angustissime scariosis et acuminatis. Rhachis subnuda, plana. Achaenia immatura glaberrima, oblonga. Pappus albus, scaber, setaceus, mediocris, corolla multo brevior. Corollae glabrae, luteae, regulares, limbo cylindraceo a tubo distincto eumque superante."

EXPANDED DIAGNOSIS OF HOLOTYPE: Herb, probably perennial, 34 cm tall; stem 21 cm tall, erect, simple, terete, glabrous; cauline leaves about 4, all reduced to bracts 15–25 mm long, 4–5 mm wide, lanceolate; basal leaves with petioles 4–5.4 cm long, glabrous;

<sup>1</sup> Manuscript received 15 December 1975.

<sup>2</sup> Bernice P. Bishop Museum, P.O. Box 19000-A, Honolulu, Hawaii 96819.



FIGURE 1. *Senecio sandwicensis* Less., holotype in herb (LE)



FIGURE 2. *Senecio sandwicensis* Less., drawing of holotype. *a*, habit,  $\times \frac{1}{2}$ ; *b*, flowering head,  $\times 2$ ; *c*, disk floret, with achene, pappus, corolla, and anthers,  $\times 5$ ; *d*, pappus bristle,  $\times 25$ .

the blades 7.5–10 cm long, 1.9–3.2 cm wide, narrowly elliptic, entire, pinnately veined; bracts of pedicels few, small, remote from the heads; heads discoid, several in a glabrous panicle; phyllaries in 1 series, equal, 7 mm long, 1.8–2 mm wide, lance oblong, the

body foliaceous, green, glabrous, but the broad margins pale and hyaline; disk florets about 20; achenes 3.5–5 mm long, 0.5–0.7 mm in diameter, prismatic, glabrous, dark brown; pappus hairs 3–4 mm long, numerous, white; disk corolla 6 mm long,

(yellowish?), the tube 2–2.3 mm long, narrowly tubular, glandular, the limb 3.7–4 mm long, the lower 1/3 narrowly ellipsoid, the upper 2/3 ellipsoid, the 5 lobes 0.5–0.6 mm long, ovate, erect; filaments fused to the corolla tube to its summit, the free tips 1.5 mm long, filiform, contorted; anthers 2.5 mm long, narrowly oblong, included except for the free tips 0.2–0.3 mm long, ovate; the 2–3 stigmatic lobes 0.1–0.2 mm long.

HOLOTYPE: Sandwich Islands, O Wahu, Eschscholtz, Hb. Cham[isso], (LE). (= Hawaiian Islands, Oahu). Type examined.

#### LITERATURE CITED

- ST. JOHN, HAROLD. 1965. The identity of *Senecio capillaris* Gaudichaud. Hawaiian Plant Stud. 26. Missouri Bot. Gard., Ann. 52(3):432–433.