PANICUM, ZANTHOXYLUM, PSYCHOTRIA, AND SICYOS

HAWAIIAN PLANT STUDIES—2

By

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FAMILY GRAMINEAE

Panicum pellitoides F. B. H. Brown and H. St. John, new species (fig. 1).

Annual, 6-27 cm. tall, apparently erect, several-branched at base; culms papillose pilose, the internodes finally much exceeding the leaf sheaths; axillary branches none or frequent from the middle and upper axils; leaf sheaths 10-35 mm. long, strongly nerved, papillose pilose; ligule of hairs about 2 mm. long, scarcely separable from the general leaf pilosity; blades 6-65 mm. long, 1-4 mm. wide, flat or the margins inrolling on drying, linear and long tapering to the sharp tip, papillose pilose; panicles terminal, 13-75 mm. long, 5-50 mm. wide, at first narrow, later mostly ovoid and with divaricate branches, at first partly included in the uppermost leaf sheath, the axis and larger branches pilose, the branchlets and pedicels sparsely pilose and scabrous; spikelets 1.5-2.2 mm. long, ellipsoid; glumes pale greenish, elliptic-ovate, acute, pilosulous on the upper part, with hairs 0.5 mm. or less in length; first glume prominently 3-nerved; second glume slightly the longer, 5-nerved; sterile lemma 7-nerved, about 1/10 shorter than the second glume; fertile lemma 1 mm. long, 7-nerved, polished and shining, lead-colored; anthers cylindric, 0.5 mm. long, reddish brown; grains 1.1 mm. long, elliptic, flesh-colored.

Planta annua 6-27 cm. alta ramosa ad basim, culmis pilosis, ramis axillaribus multis vel nullis, vaginis 10-35 mm. longis valde nervosis papilloso-pilosis, laminis 6-65 mm. longis 1-4 mm. latis planis vel marginibus incurvatis linearibus acuminatis papilloso-pilosis, paniculis terminalibus 13-75 mm. longis, 5-50 mm. diametro angustis deinde ovoideis cum ramulis divaricatis, spiculis 1.5-2.2 mm. longis ellipsoideis, glumis pallidi-viridibus elliptici-ovatis acutis ad apicem pilosulis cum pilis ad 0.5 mm. longis, lemmatibus infertilibus 7-nervosis, lemmatibus 1 mm. longis 7-nervosis lucidis plumbagineis, antheris cylindraceis 0.5 mm. longis ferrugineis, granis 1.1 mm. longis ellipticis.

Molokini: 100 feet altitude, east of center of Molokini, Aug. 13, 1925, Harold Palmer no. 16.

Island of Hawaii: erect annual, plowed field in dry pasture land, 3000 feet altitude, Puu Papapa, Waikoloa, South Kohala, April 26, 1932, G. R. Ewart 3rd no. 190; also same locality, June 16, 1932, G. R. Ewart 3rd no. 257 (type in Bishop Mus.).

* This is the second of a series of papers designed to present descriptions, revisions, and records of Hawaiian plants. The first has been published as Occ. Papers, vol. 10, no. 4, 1933.

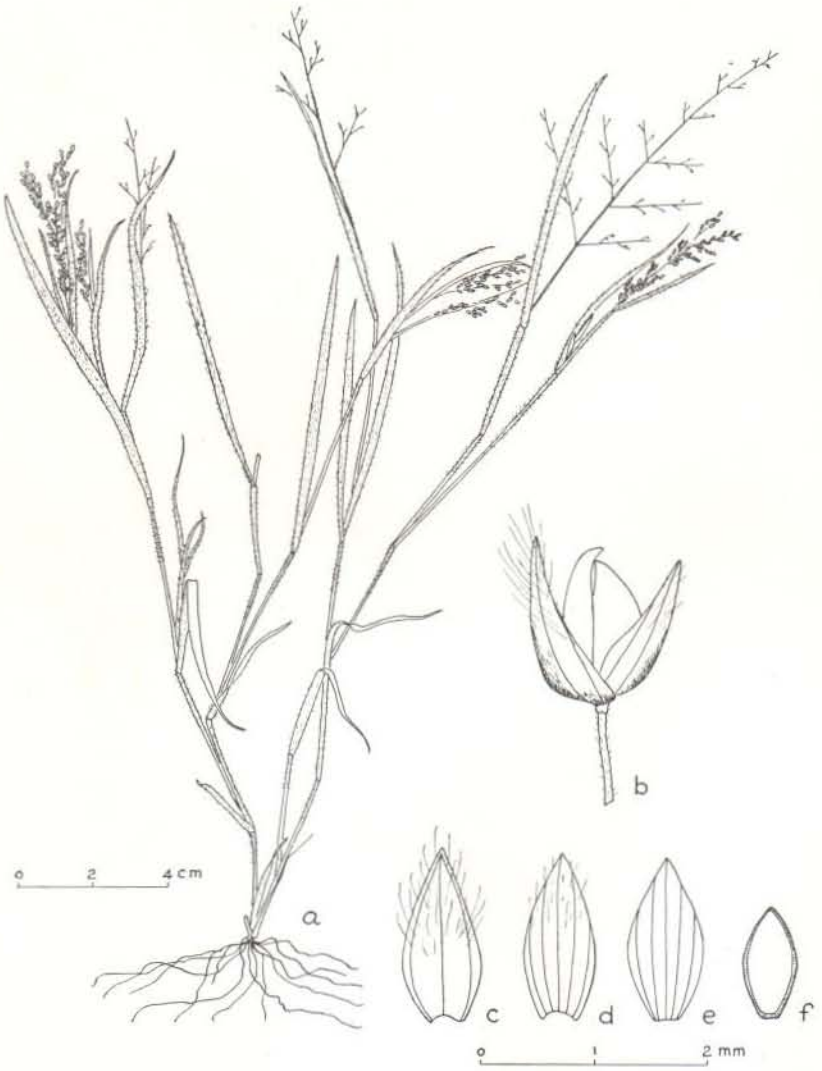

FIGURE 1.—*Panicum pellitoides*, new species: *a*, habit view of plant; *b*, spikelet; *c*, first glume, dorsal view; *d*, second glume, dorsal view; *e*, sterile lemma, dorsal view; *f*, floret.

The occurrence of this new plant in a plowed field merits further comment. It grew in a natural grassland, used for pasture. This area had been plowed only once, and the native grasses were still prominent in its vegetation. Hence the described habitat does not necessitate the conclusion that the plant is an introduced crop or weed. On the contrary, the grass seems definitely an endemic Hawaiian species, and finds its closest relative in another Hawaiian species of *Panicum*.

This new species is named in allusion to its resemblance to *P. pellitum* Trin, which is also Hawaiian. The available specimens show that it occurs on Maui and Molokai. The older species may be distinguished by the prominent ligule, of hairs about 1 mm. long; panicle branches ascending; spikelets 2-4 mm. long; glumes lanceolate, long acuminate; first glume long pilose on the upper part, hairs 1-2 mm. long; and fertile lemma 1.2-1.3 mm. long. In contrast, *P. pellitoides* has the ligule scarcely distinguishable from the general leaf pilosity, of hairs about 2 mm. long; panicle branches divaricate at maturity; spikelets 1.5-2.2 mm. long; glumes elliptic-ovate, acute; both glumes pilosulous on the upper part, hairs 0.5 mm. or less in length; and fertile lemma 1 mm. long.

Family RUTACEAE

Zanthoxylum semiarticulatum St. John and Hosaka (fig. 2): in Degener, Fl. Hawaiiensis, Family 179, Dec. 15, 1932.

This species was described from material with fruit and with staminate flowers. Repeated trips to its known stations failed to produce material with pistillate flowers, so the plant was eventually published as a new species. Now it is possible to supply the lack in the original publication, as one branch with good pistillate flowers and several others with old flowers or young fruit were discovered in September 1933 at the South Opaeula Gulch locality.

Pistillate panicles oppositifolious, in anthesis 4-7 cm. long, 2.5-4 cm. in diameter, ovoid, minutely puberulous throughout; peduncles 2.5-3.5 cm. long; pedicels 3-5 mm. long, articulate at base; flowers with a sweet fragrance; calyx with 4 short broadly deltoid, minutely puberulous lobes; the 4 (or 5) petals unequal, 3.5-5 mm. long, oblong-ovate, one or more of them cucullate at tip, within white, with several longitudinal veins, without green, minutely puberulous, with several large, dark, internal glands, and many minute dots, the margins thin and whitish; ovary borne on a thick glandular and glutinous disk, body of the ovary asymmetric obovoid, green, closely glandular punctate; stigma depressed, subterminal.

Oahu: open moist woods, 1600 feet altitude, ridge south of South Opaeula Gulch, Paalaa, Koolau mountains, September 24, 1933, H. St. John no. 13339; also F. R. Fosberg no. 10313. The following collection, also from Oahu, is the first from the Waianae Mountains: small valley north of main ridge leading to summit, 2000 to 2700 feet, Puu Hapapa, July 30, 1933, W. B. Storey and Jack Dunn.

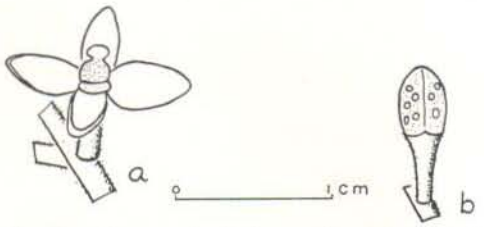

FIGURE 2.—*Zanthoxylum semiarticulatum* St. John and Hosaka: *a*, open pistillate flower; *b*, pistillate bud.

Zanthoxylum semiarticulatum is distinguished by its puberulent petiole, rhachis, and petiolules; lateral petiolules non-articulate; leaflets obtusely short-pointed; terminal leaflet 7-13.5 cm. long; staminate flowers with the calyx minutely puberulent, calyx lobes ovate-deltoid, becoming reflexed; petals 5-6 mm. long, white; anthers 1.5 mm. long; pistillate flowers with calyx lobes about 0.2 mm. long, membranous, broadly deltoid, minutely puberulous. The most nearly similar species is *Z. oahuense* Hillebrand, which is also a native of the mountains of Oahu. It differs in having the petiole, rhachis, and petiolules glabrous; petiolules all articulate at or above the middle; leaflets caudate acuminate; terminal leaflet 5-8 cm. long; staminate flowers with the calyx lobes rotate, shallow or merely undulate; petals 3-4.5 mm. long, greenish; anthers 0.8-1 mm. long; pistillate flowers with calyx lobes 1-1.2 mm. long, ovate, foliaceous, puberulent and ciliate. Complete pistillate flowers of *Z. oahuense* have not yet been collected.

FAMILY RUBIACEAE

Psychotria grandiflora Mann, Am. Acad. Arts Sci., Proc., vol. 7, p. 170, 1867.

Straussia grandiflora Caum, B. P. Bishop Mus., Occ. Papers, vol. 9, no. 5, pp. 9-10, pl. 7, 1930.

Careful examination and comparison of the type of *Straussia grandiflora* Caum reveals that it is really a *Psychotria* and that it is

identical with *Psychotria grandiflora* Mann. Mr. Caum tells me that the identity of the specific names was due to chance and that he had no thought of making a transfer.

FAMILY CUCURBITACEAE

Sicyos Hillebrandii St. John, new name.

Sicyos laciniatus Hillebrand, Fl. Hawaiian Is., p. 138, 1888; not *S. laciniata* Linnaeus, Sp. Pl., ed. 1, p. 1013, 1753.