

NEW SPECIES OF HAWAIIAN PANICUM  
AND ERAGROSTIS

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***Panicum konaense*** Whitney and Hosaka, new species (fig. 1).

Planta annua erecta 10-50 cm alta ramosa nodis pilosis vaginis infra pilosis, ligulis 1-1.5 mm longis, laminis 5-18 cm longis 1.5-3.5 mm latis, paniculis terminalibus 5-15 cm longis 1-5 cm latis, spiculis 1.8-2.1 mm longis pilosis, glumis exterioribus 2 mm longis elliptici-ovatis 3-nervosis, glumis interioris 1.8 mm longis 5-nervosis, lemmatibus sterilibus 1-1.5 mm longis 7-nervosis, lemmatibus fertilibus 1 mm longis 7-nervosis.

Plant annual, 10-50 cm tall, several branched at base, ascending, conspicuously papillose-pilose at the nodes; sheaths half to three fourths the length of the internodes, pilose at base, glabrous to hirtellous above, glabrous on the inner surface, strongly veined, purplish when young, straw-colored when old; ligule 0.8-1.5 mm long, a line of dissected hairs; blades 5-18 cm long, 1.5-3.5 mm wide, linear-lanceolate and tapering to a sharp point, glabrous to hirtellous on the outer surface, sparsely pilose on the inner surface, veins prominent on the outer surface, mature leaves more or less involute; panicles terminal, strict, 5-15 cm long, 1-5 cm wide, the branches and branchlets angular, scabrous to hirtellous; spikelets 1.5-2 mm long, elliptic-ovate, purplish to pale greenish when young, straw-colored when old; glumes elliptic-ovate, papillose-pilose throughout, with hairs 0.5-3 mm long; first glume 1.5-2 mm long, 0.5-0.7 mm wide, prominently 3-nerved; second glume 1.4-1.8 mm long, prominently 5-nerved, extending slightly beyond the first glume; sterile lemma 1-1.5 mm long, faintly 7-nerved, glabrous; fertile lemma 1 mm long, polished and shiny, light brown; anthers 0.5 mm long, reddish-brown; seed 0.8 mm long, elliptic.

This new species of *Panicum* is close to two other Hawaiian species, *P. pellitum* Trinius from Molokai and Maui, and *P. pellitoides* Brown and St. John from Molokini and Hawaii.

*P. pellitum* differs in having conspicuous ligules, with hairs 1 mm long; blades 5-15 cm long, as much as 5 mm wide, pilose throughout; spikelets 2-3 mm long, long acuminate; glumes pilose on the upper part, hairs 1-2 mm long; fertile lemma 1.2 mm long. *P. pellitoides* differs in having plants 6-27 cm tall; culms papillose-pilose; ligule of hairs 2 mm long; blades 3.0-8.0 cm long, 1-4 mm wide; papillose-pilose; branches pilose; spikelets 1.5-2.2 mm long; glumes pilosulous on the upper part, hairs 0.5 mm long. *P. konaense* is distinguished from these two species by having plants 10-50 cm tall; culms pilose only at the nodes; ligule 1-1.5 mm long; blades 5-18 cm long, 1.5-3.5 mm wide, glabrous to hirtellous on the outer surface, sparsely pilose on the inner surface; spikelets 1.5-2 mm long; glumes pilose throughout, hairs 0.5-3 mm long; fertile lemma 1 mm long.

Island of Hawaii: Kahuku ditch trail, November 1935, A. Meebold no. 20945; Puuwaawaa, Kona, 1801 lava flow, April 7, 1936, L. D. Whitney no. 4136 (type, in Bishop Museum).



FIGURE 1.—*Panicum konaense*: a, habit; b, ligule; c, node; d, spikelet; e, first glume, dorsal view; f, second glume, dorsal view; g, sterile lemma, dorsal view; h, floret.

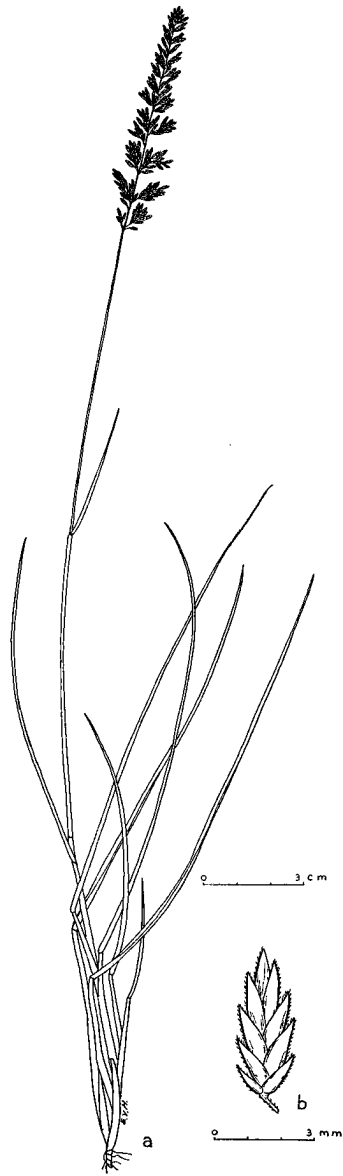


FIGURE 2.—*Eragrostis mihauensis*: a, habit; b, spikelet.

***Eragrostis niihauensis* Whitney, new species (fig. 2).**

Perennis robusta; culmi glabri vel hispiduli 40-45 cm alti, vaginis pubescentibus, laminae infra glabrae involutae rigidae 15-40 cm longae, panicula 5-8 cm longa, 12-20 mm lata, rami divaricati, axiles ramorum pilosi, spiculae 4-6 florum 3-4 mm longae, 1 + mm latae, rachi et pediceli pubescenti, glumae acutae vel acuminatae inaequales primae 0.75 mm longae secundae 1-1.5 mm longae, carinae scabrae, lemmae 1.5-2 mm longae obtusae scaberulae, paleae 1.5 mm longae, carinae scabrae.

Plants perennial; culms glabrous to hispidulous, in dense tufts, robust, 40-45 cm tall; sheaths short pubescent; blades 15-40 cm long, mostly basal, glabrous, involute, stiff, ending in a rigid point; panicles 5-8 cm long, 12-20 mm wide, rigid and somewhat spikelike; but the short pediceled branches spreading, pilose in the axils; spikelets 4-6 flowered, 3-4 mm long, 1 + mm wide, florets scarcely disclosing the glabrous rachilla; glumes acute to becoming acuminate, unequal, the first 0.75 mm long, the second 1-1.5 mm long, scabrous on the keels, lemmas obtuse, scaberulous, strongly so at the tip; palea scabrous on the keels.

This species has been referred to *Eragrostis monticola* (Gaudichaud) Hillebrand but differs from it in being more robust, having stiffer leaves, wider panicles with stiffly spreading branches, shorter and broader spikelets, shorter, more acute, slightly unequal glumes, scaberulous lemmas, and short pubescent sheaths.

Niihau: February 1912, Kalua Keale (type, in Bishop Museum).