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A New Species of *Garnotia* from Rarotonga

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HAWAII AGRICULTURAL EXPERIMENT STATION

***Garnotia rarotongensis*, new species (fig. 1).**

Plantae perennae, culmi caespitosi 20-30 cm. alti glabri, vaginae glabrae jugulae pilosae 10-35 mm. longae, auriculae acuminatae 1-2 mm. longae, ligulae 1-2 mm. longae, laminae involutae vel planae 10-20 cm. longae scabrae in superficie glabrae in paginis inferioribus, paniculae strictae 8-15 cm. longae, spiculae 3.5-4 mm. longae pilosae ad basem, glumae aequae 3.5-4 mm. longae 3-nerviae primae aristis 5 mm. longis secundae aristis 2 mm. longis, lemmae 3.5-4 mm. longae glabrae vel scaberulae ad apices, aristae 10-12 mm. longae geniculatae, palea 3 mm. longae acuminatae glabrae vel pilosae.

Tufted perennial; culms ascending, unbranched, 20-30 cm. tall, glabrous; sheaths striate, short, 10-35 mm. long, pilose at throat and on the collar, glabrous otherwise, with membranaceous, acuminate, straight, 1-2 mm. long auricles; ligule conspicuous, membranaceous, fimbriate, 1-2 mm. long; blades usually involute, occasionally flat and 1-2 mm. wide, 10-20 cm. long, glabrous on lower surface, scabrous on upper; panicles rather strict, 8-15 cm. long with ascending, closely appressed, few-flowered, 1-3 mm. long branches; spikelets pilose at base with short, sparse hairs not over 0.3 mm. long, somewhat compressed, 3.5-4 mm. long borne in pairs on angled, sparsely scaberulous, rather slender, unequal pedicels, the shorter ones 1-2 mm. long, the longer 3-3.5 mm. long; glumes equal, 3.5-4 mm. long, 3-nerved, scabrous on the nerves, glabrous or minutely scaberulous between them, first glume with awn 5-6 mm. long, the second flat or depressed on back with awn 2-4 mm. long; lemmas rounded on back, minutely scaberulous at tip and otherwise glabrous, acuminate, 3-3.5 mm. long, acuminate with twisted 8.5-12 mm. long awn; palea 3 mm. long, acuminate, pilose along edges and tip.

Rarotonga: Te Manga, hillsides and ridges, alt. 1,500 ft., June 15, 1927, *G. P. Wilder 549* (type, Bishop Museum).

This species is related to several other endemic Polynesian *Garnotias*. It differs from all of them in the membranaceous 1-2 mm. long auricles and the conspicuous 1-2 mm. long ligules. It resembles *G. stricta* Brongn. in the short sparse hairs at the base of the spikelet but is entirely different otherwise. It differs from *G. raiateensis* J. W. Moore in the longer unbranched culms, longer involute leaf blades, shorter hairs at base of spikelet and larger glumes with longer awns. It is closest to *G. sandwicensis* Hillebr. but differs from it in the previously mentioned auricles and ligules,

more slender, fewer-flowered panicles, more slender pedicels, somewhat compressed spikelets and shorter hairs at base of spikelet.

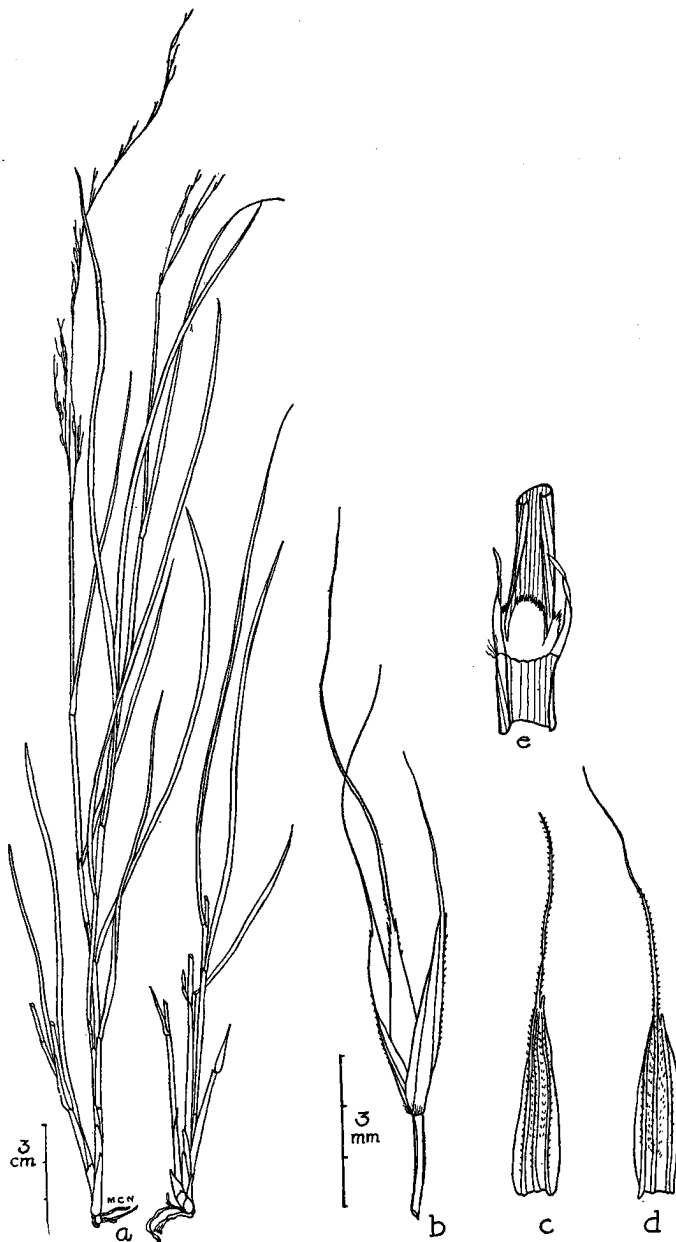


FIGURE 1.—*Garnotia rarotongensis*: a, habit; b, spikelet; c, second glume; d, first glume; e, ligule and auricles.