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**A NEW SPECIES OF PROBOLOMYRMEX FROM BARRO
COLORADO ISLAND, CANAL ZONE**

(HYMENOPTERA, FORMICIDAE)

BY MARION R. SMITH, *Bureau of Entomology and Plant Quarantine,
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This article, in addition to describing a new species, *Probolomyrmex angusticeps*, gives a general summary of our knowledge concerning the taxonomy, distribution, and biology of the ants of this interesting genus. A good habitus picture of the genus is given by the excellent figures of *P. dammermani* published by Wheeler (Psyche 35:8, 1928).

Probably no genus of ponerine ants is more easily recognized than *Probolomyrmex*. It is distinguished by a number of excellent characters. The most peculiar and outstanding is the fusion of the cheeks, clypeus, and frontal carinae into a plate, which projects over the mandibles and bears the antennae near its apex. The fusion of the frontal carinae into a single vertical plate is another distinguishing character that immediately attracts attention. In addition, the ants may be recognized by their small size, extremely slender body, eyeless head, sutureless thorax, and absence of erect hairs on the body.

These ants are considered to be archaic, tropicopolitan, relict species of a group which at one time may have been cosmopolitan. What is known of their biology, together with the eyeless condition of the worker, indicates that the ants must be subterranean in habit. No one has succeeded in collecting more than 7 individuals from a colony, and the male has not yet been described.

The genus *Probolomyrmex* was described by Mayr in 1901 (Ann. k.k. Naturhist. Hofmus. Wien 16:2-3), on the basis of the worker caste of a single species, *filiformis*, from Port Elizabeth in Cape Colony, Africa. In 1914 Santschi (Portici, Lab. Zool. Gen. e Agr. Bol. 8:312) recorded the species a second time from 7 workers collected at Kakoulima in French Guinea, Africa. Mann was the first to find a *Probolomyrmex* in the New World. With some misgiving as to generic placement, he described *boliviensis* in 1923 (Psyche 30:16-18) from a wingless female collected beneath a stone and near a small colony of *Ponera* at Rurrenabaque, Bolivia. In 1928 Wheeler (Psyche 35:7-9) described a third species, *dammermani*, from 4 workers collected at Buitenzorg, Java. A fourth species, *petiolatus*, was described by Weber in 1940 (Psyche 47:76-78) from a single worker collected from leaves and humus on the forest floor on Barro Colorado Island, Canal Zone. The species here described is therefore the fifth form to be recorded in this unusual genus of ants.

***Probolomyrmex angusticeps*, new species**

Worker.—Length 3.5 mm.

Head unusually slender, approximately one and three-fourths times as long as broad; sides noticeably constricted in the posterior three-eighths; posterior border broadly but weakly emarginate; posterior corners distinctly but not strongly angulate. Antenna 12-segmented; scape (not including pedicel) failing by approximately one-sixth its length to reach the posterior border of the head; funiculus clavate but not strongly so, second segment unusually small, transverse, the eighth, ninth and tenth segments broadly transverse, the apical segment approximately

as long as the combined lengths of the 3 preceding segments. Mandibles hidden from above by the projecting plate composed of the fused cheeks, clypeus and frontal carinae. Frontal carinae united into a single, vertical plate. Eyes lacking. Thorax, in profile, about two and three-fourths times as long as broad, highest at the promesonotal junction, sloping posteriorly from this point; epinotum with a pair of distinct, but small, tuberculate teeth. Thorax, from above, without sutures, widest at the pronotum, strongly compressed throughout the remainder of the thorax, especially dorsally. Legs moderately long and slender; each tibia with a single, pectinate spur. Petiolar node, in profile, highest at the posterodorsal border, the anterior face convex, posterior face concave, terminating posteriorly in a broad but short peduncle. Petiole concave beneath, with a small, but distinct, anteroventral tooth. Petiolar node compressed, approximately one and eight-tenths times as long as broad, widest in its posterior third; postero-dorsal border weakly emarginate, forming on each side a distinct, but small, blunt tubercle. Gaster extended, slender; first segment compressed, widest posteriorly, and approximately one and one-half times as long as broad; second gastric segment narrowest apically, almost twice as long as broad, approximately one and one-third times as long as the first gastric segment.

Body opaque; finely and densely reticulate, also with rather coarse, foveolate punctures of various sizes.

Devoid of hair, but covered with extremely fine, closely appressed, grayish pubescence.

Body ferrugineous, appendages lighter.

Type locality.—Barro Colorado Island, Canal Zone.

Described from the holotype and a paratype worker, both collected by James Zetek, Dec. 1946-Feb. 1947. Both specimens recorded under U. S. N. M. No. 58833, have been placed in the collections of the United States National Museum. The paratype, although smaller than the holotype (3.3 mm.), does not differ appreciably from the latter.

Dr. Neal Weber who has kindly compared the paratype with that of the holotype of his *petiolatus*, also from Barro Colorado Island, made the following comments: "Distinctly larger and darker. The head is proportionally more elongate with the scapes longer and more slender. Epinotal teeth much less obtuse and more prominent. Petiolar node rising much more gradually, and longer, less sharply pedunculate posteriorly. First and second gastric segments more elongate. Sculpturing similar but somewhat coarser. *Petiolaris* is more concolorous, your species has appendages paler than the body."

Since the only other New World species, *boliviensis* Mann, is known only from the female sex, it is impossible to compare the new species with that form.