

ON TWO NEW SPECIES OF PROTERHINUS FROM THE MAR-  
QUESAS AND THE INCLUSION OF THIS GENUS  
IN THE FAMILY AGLYCYDERIDAE \*

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Using the family name Aglycyderidae to include the Proterhinae, the species therein contained are chiefly found in the Hawaiian islands, where the genus *Proterhinus* is represented by a great variety of forms. The two earliest known species, however, belonged to the genus *Aglycyderes* and were described, one from the Canary Islands (*A. setifer* Wollaston) and the other (*A. wollastoni* Sharp) from New Zealand, where subsequently a second species was discovered. For many years the genus *Proterhinus* was known only from Hawaii, but nearly thirty years ago a species was discovered on Samoan coconuts. This species does not appear to present any very striking characters to distinguish it from Hawaiian species, though at present only the male sex is known. In 1924 a much more remarkable form was discovered by E. H. Bryan, Jr., in the Phoenix Islands.<sup>8</sup> The two new species described below extend the distribution of the genus still further, being recent discoveries by Mumford and Adamson in the Marquesas. Each of these species, in one way or another, exhibits remarkable characters. I have recently been able to make some comparison between the two first described species of *Aglycyderes* and the Marquesan and Phoenix Islands *Proterhinus*. The fore part of the head of the male in the insect from Phoenix Islands and in one of the Marquesan species bears a very considerable resemblance to that of *A. wollastoni* of New Zealand and differs greatly from any known Hawaiian *Proterhinus*, in which the sides of the head immediately in front of the eyes are so rounded as to form an expansion or feeble lobe over the insertion of the antennae. This feature is not present in *Aglycyderes*, where the outline is almost straight, nor can it be said to exist definitely in *Proterhinus phoenix*, the fore parts of the male head of which so greatly resemble *Aglycyderes*. On the other hand, both Marquesan species are obviously like Hawaiian species in this expansion, although in the face of the male one of them approaches the Phoenix

<sup>8</sup> Perkins, R. C. L., Descriptions of New Hawaiian Coleoptera, Hawaiian Ent. Soc. Proc., vol. 7, p. 511, 1931.

\* Pacific Entomological Survey Publication I, article 3.

Islands species. It would appear therefore that the form from Phoenix Islands and also one of the Marquesan forms do make a connecting link between Hawaiian *Proterhinus* and the New Zealand *Aglycyderes* and it might be questioned whether the New Zealand form is not as distinct from its Canary Islands congener, as it is from *P. phoenix*. As it is, the essential difference between *Aglycyderes* and *Proterhinus* would appear to be in the development of wings in *Aglycyderes*, while *Proterhinus* is flightless. Neither the male nor the female of *Aglycyderes* has a definite rostral portion of the head, whereas in females at least of typical *Proterhinus* there is a true and distinct beak; but in the males of the *Proterhinus* there is not very much difference between the rostral portion of the head and that of females of *A. wollastoni*. In one species at least of Hawaiian *Proterhinus* the female resembles the male in the rostral portion of the head, and the sexes are hardly to be distinguished without dissection, and in a few the female rostrum is short and broad and not more developed than in males of some other species. Although *P. phoenix*, male, so greatly resembles that of *Aglycyderes wollastoni* in the form of the head anteriorly, yet its female has a very well developed rostrum, quite distinct from the rest of the head. In the Marquesan species, which has a somewhat similar form of head, the female has a much shorter rostrum, not exceeding in length the rostral portion of the male head of some Hawaiian *Proterhinus*. The sculpture in general of the Phoenix and Marquesan *Proterhinus* is unlike that of *Aglycyderes wollastoni*, whose sculpture is almost reproduced in some Hawaiian *Proterhinus*. In such Hawaiian species the pronotum in sculpture and form may also greatly resemble *Aglycyderes*, and it is notable that such species of *Proterhinus* are to be found among those which in my earliest studies of the genus I considered to be the most primitive members of the Hawaiian series. The clothing of *Aglycyderes* resembles that of *Proterhinus* in the appressed, curved, thickened setae, often hyaline, as well as in the erect clothing, which is present also on the eyes of most, if not all, species, unless abraded. *A. wollastoni* is remarkable for its antennae, the scape hardly extending beyond the sides of the head, being hidden, or only the extreme tip visible, in dorsal aspect. The sculpture of *A. setifer* is unlike that of any other of the family, the surface in profile being everywhere coarsely shagreened, due to minute elevations; the setae on the eyes are not prominent, but closely appressed. The denticulations along the sides of the pronotum are to be found, though less strong, in some of the more primitive Hawaiian forms. The excretion which, in the specimens I have examined, largely conceals the surface of *A. setifer* is a good deal similar to that on many Hawaiian *Proterhinus*.

*Proterhinus mumfordi*, new species (figs. 3, 4).

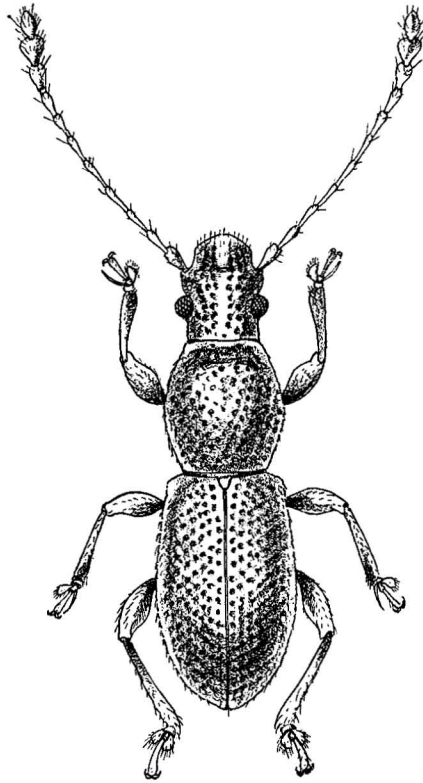


FIGURE 3. *Proterhinus mumfordi* new species male,  $\times 32$ .

Black, becoming red or reddish in parts, the pronotum obscure reddish, as also the head in front of the antennae, which are clear rufotestaceous; the femora at base and apex, the tibiae and tarsi also rufescent. A narrow, elongate species, sparsely clothed with appressed pale setae, no doubt considerably abraded in the single specimen obtained. On the four anterior legs the second tarsal joint has the posterior lobe modified to form a narrow spine-like process, which extends back beyond the normal lobe as far as the apex of the claw-joint. Female unknown.

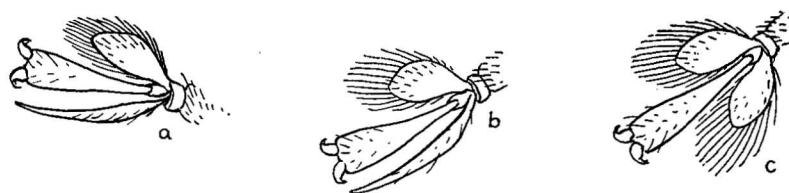


FIGURE 4. *Proterhinus mumfordi* new species, tarsi of left side: a, foreleg; b, middle-leg; c, hind-leg,  $\times 100$ .

Rostral portion of head short and transverse as in most male *Proterhinus* and defined, as usual, by the clothing and sculpture, and also by its color; eyes rather large, the antennae long, longer than the head and pronotum together, the scape and all the funicle joints elongate, the first of these notably stouter than the second, but subequal in length, the following joints also subequal, but the apical ones become stouter apically and the last is stouter and rather shorter than the preceding and also shorter and considerably less stout than the first of the three club joints. The pronotum is rather narrow, with evenly rounded sides and appearing almost elongate, though really about as long as its greatest width, nearly devoid of clothing in the type, and with coarse punctures, but not definite impressions. The surface is partly covered with gum and the unique type, being apparently already abraded, has not been subjected to cleaning or manipulation by me. The elytra, which are simply convex, without ridges, elevations, or impressions, bear appressed white setae, sparsely distributed, and there are also very short, white, erect ones observable along the sides and posteriorly. The humeral angles are not at all produced or acute and the length of the elytra is equal to that of the head and pronotum together, or about twice their own basal width. The punctures are less close and coarse than in many species and appear considerably less so and less definite than those of the pronotum. The basal abdominal sternites appear to be smooth and shining in the middle and bear little or no definite sculpture there. Length, 2 mm.

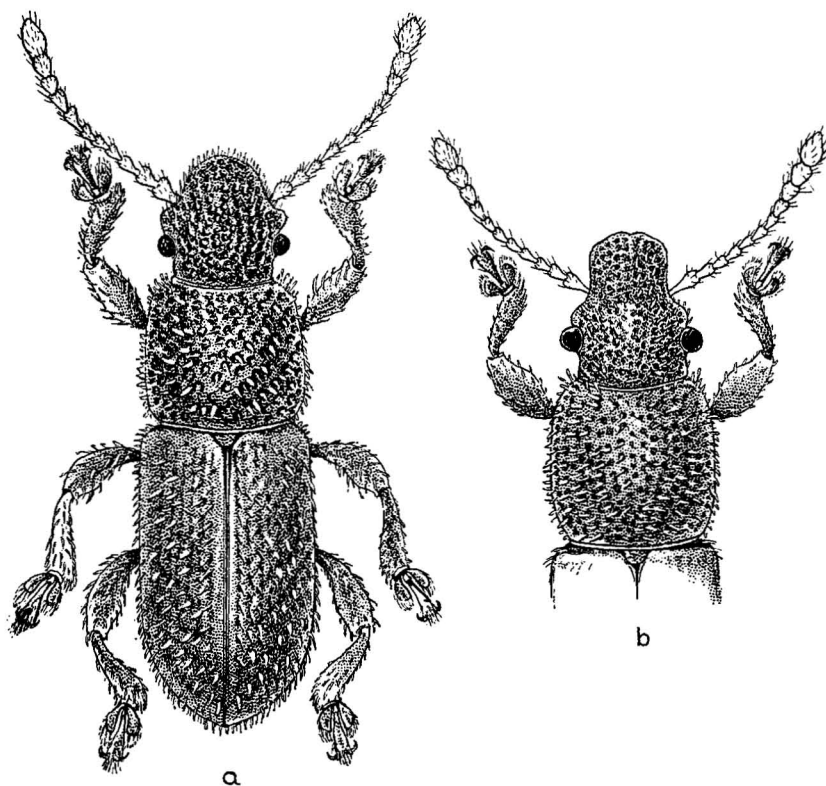


FIGURE 5. *Proterhinus adamsoni* new species: a, male,  $\times 32$ ; b, female,  $\times 32$ .

Nukuhiva: Ooumu, altitude 3600 feet, November 10, 1929, taken by miscellaneous sweeping, holotype male, Mumford and Adamson.

**Proterhinus adamsoni**, new species (fig. 5).

A small, narrow and elongate species of an obscure red color more or less infuscated in parts, the legs and antennae red. Head of male in front view very wide, the apical part being subsemicircular in outline and not at all rostrate, the female with a short but distinct rostrum, nearly parallel-sided and coarsely subrugosely punctate.

Head sparsely clothed with pale decumbent setae; antennae of moderate length, reaching back to the hind margin of the pronotum in the female, the scape elongate and clavate, much longer than the ovate second joint, the third more slender than this, the club distinctly three-jointed, its basal joint being notably longer and stouter than the preceding. Pronotum straight or hardly at all rounded at the sides, longer in the female than in the male, but probably variable in this character, vaguely flattened or impressed in the middle posteriorly, coarsely punctured, but more sparsely in the female than in the male of the pair examined. The clothing is not dense and consists of pale appressed setae, which, as usual, are wide and curved in form and glassy, as seen under a compound microscope; along the margins somewhat similar outstanding setae are notable. Elytra ordinarily convex or cylindrical, basally with subparallel sides, the humeral angles not produced nor acute, the clothing white and sparse, similar to that on the pronotum, the erect setae short, but conspicuous at the sides and apically, the punctures somewhat fine and indefinite, and in some aspects in the female they are seen to be arranged in somewhat oblique longitudinal series. Legs with the short, white, erect setae numerous, and no special modification of the tarsi. Basal sternite of abdomen with sparse, feeble, or obsolete punctures. Length, 2.2 mm.

In the shape of the head of the male, this species bears considerable resemblance to *P. phoenix* of the Phoenix Islands, and, to a certain extent, in the form of the pronotum, but the legs show no special modification. The spinose armature of the basal tarsal joint in the male of *P. phoenix* and the modification of one lobe of the second joint into a spine in *P. mumfordi* are very remarkable.

Hatutu [Hatutaa]: middle of east side of island, altitude 800 feet, September 30, 1929, on *Waltheria lophantus*, two males including the holotype, allotype female, Adamson.

The type specimens of both species have been deposited in Bernice P. Bishop Museum.