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The Genus Phanerostethus in Fiji (Coleoptera, Curculionidae)

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The cryptorhynchine genus Phanerostethus was erected by Sir Guy A. K. Marshall in 1931 [Insects of Samoa, 4 (5): 285] for the reception of a new species from Samoa. I recently described two new species from the Society Islands [B. P. Bishop Mus., Occ. Papers, 12 (23), 1936]. In this paper I describe two new species from Fiji, the fourth and fifth known species of the genus. Knowledge of the existence of this genus in Fiji is important to discussions of zoogeography in Oceania, for it makes one more link in the chain of distribution of Pacific insects.

The genus may be characterized briefly as follows: funicle of the antennae seven-segmented, the first two segments elongate; base of the pronotum higher than the apex and with the dorsal contours of the elytra and pronotum rather abruptly discontinuous at their point of junction; scutellum distinct, though small; elytra subtruncate at the base and there not broader than the base of the prothorax; without humeral calli; wings not functional; legs with the femora edentate; the pectoral channel squamose and the mesosternal receptacle with high side walls but open behind; ventrites all free, the sutures between them all distinct; body densely squamose both above and below.

KEY TO THE FIJIAN SPECIES

1. Ground color of the dorsal scaling black, with only a few patches of pale scales; prothorax about as long as broad; second elvtral interval with only a double row of setae and without distinct fascicles......

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1. Phanerostethus vitiensis, new species (fig. 1, a, b).

Derm black, with antennae and tarsi reddish; scaling above predominantly black with a few patches of yellowish scales; scales on head mainly black and very dense; pronotum with black scales and a conspicuous patch of yellowish scales at base before scutellum and usually with a patch of two or three yellowish scales on each side of disk just behind middle; elytra with black scales and with scattered patches of yellowish scales; legs with bases of femora and apices of tibiae usually with pale or white scales, otherwise with black scales; scaling on venter much paler, predominantly gray.

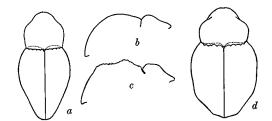


FIGURE 1.—Outline of new Phanerostethus: a, b, P. vitiensis; c, d, P. fasciculatus.

Head with punctuation hidden by dense scaling which is arranged somewhat like honeycomb, with numerous short, erect, white setae. Rostrum in male finely carinate on dorsum almost to antennae; female with carinae wanting and basal squamose and setose area not extending nearly to antennae as in the male; rostrum on both sexes otherwise shining, that of male finely and densely punctate, that of female reticulate. Antennae with first funicular segment stouter and but slightly longer than second, two as long as three plus four, three longer than four, segments three to seven becoming successively shorter and broader; club hardly longer than three preceding segments. Prothorax approximately as broad as long or slightly longer than broad; rather straightly expanded on sides from base to rounded middle, subapical constriction rather prominent and continued broadly and conspicuously across dorsum; base truncate, steeply and abruptly rising above level of base of elytra, reaching its highest point at about the basal fourth and there slightly higher than the highest point on the elytra; punctuation coarse and very close, punctures large and angular, interstices between them narrow and sharp; each puncture usually bearing a short erect, spatulate seta; pale scales before scutellum large and concave. Elytra subtruncate at base, about three fourths as broad as long; vaguely subcordate, but with apices jointly and broadly rounded, without subapical calli; intervals mostly rather narrow, their punctures largest near base, the tenth not reaching hind coxa, six and seven terminating at a distance from base of elytra; first interval flat, others conspicuously convex, first five intervals somewhat tuberculiform at

their basal extremities, fifth rather steep on its outer edge near base; the first interval with a few, scattered, erect setae, intervals two and four bristling with closely placed setae, other intervals on disk with fewer setae, intervals on sides with few setae. Legs with numerous, short, erect setae, those on femora mostly white and outstanding against dense black scaling. Sternum with pectoral canal squamose in its prosternal part, bare between fore coxae and in mesosternum; mesosternal receptacle with high side walls that project forward to fore coxae, terminating at about middle of mesocoxae in the male and almost at their posterior margins in the female; metasternum short, concave in both sexes, densely squamose. Venter densely squamose and with short, prostrate, squamiform setae; first ventrite very broadly and conspicuously concave throughout its length in the male, with scaling long and more or less fasciculate at margins and apex of median excavated area; the female with first ventrite slightly, transversely impressed at base, otherwise slightly convex, scales oval and not tending to be elongate and more or less hairlike and not fasciculate; first ventrite on a lower plane than last three, second sloping upward to join third. Length, 2.6-3.5 mm.; breadth, 1.2-1.8 mm.

Fiji: Viti Levu, Vanua Levu, Taveuni, Ovalau, Matuku, Moala, and Tuvutha Islands. Holotype female and allotype male, stored in Bernice P. Bishop Museum, and ten other specimens from Tholo-i-Suva, Viti Levu, June 29, 1924; one specimen from Matuku Island, July 3, 1924; one from Moala Island, July 13, 1924, and one taken from "Yangasa cluster" Tuvutha, Lau, August 11, 1924, all collected by E. H. Bryan, Jr. Seventeen specimens collected at Waiyevo, Taveuni, in February, March, October, 1924, and November 1923; four specimens collected at "Lovonivonu," June 7, 1924, and two from Kubulau and Davalevu, Vanua Levu, May 1924, all by H. S. Evans. One specimen from Ovalau, June 24, 1927, collected by H. W. Simmonds. One specimen collected by F. Muir in January 1906, and one labeled "Fiji" collected by A. Koebele. All the specimens collected by Evans and Simmonds were sent to me for study from the British Museum, through the kindness of Sir Guy A. K. Marshall.

This species is most closely allied to *Phanerostethus dilophus* Marshall from Samoa, but it is very distinct from that species. On the Samoan species the alternate intervals are elevated and somewhat tuberculate and there is a callosity at the top of the declivity on interval three. These and many other characters disagree with this new Fijian species, which is the only known species on which the scaling is predominantly and outstandingly black.

2. Phanerostethus fasciculatus, new species (fig. 1, c, d).

Derm piceous to black; scaling subject to considerable variation, that above basically dark brown, variegated with variable pale spots; head with an almost white longitudinal median stripe on crown between lateral patches of brown

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scales, forehead with pale scales, often the entire front of head with pale scaling or without the vitta on crown; rostral scaling brown; prothorax with dark brown scales with a complete or broken longitudinal vitta of pale yellowish brown scales from base to apex, this line either expanded before middle to form a rough diamond-shaped pale patch or with a patch of pale scales on either side before middle to form a rough cross, usually, but not always, with an irregular band or series of patches of pale scales beginning at base before elytral interval five and running forward to lateral constriction, then turning inward toward the median vitta; basic elytral scaling similar to that on the pronotum, dark brown or almost black, variegated with patches of yellowish brown or almost white scales, lateral half of posterior calli on interval two pale, intervals seven and eight almost always with a conspicuous patch of white scales above the suture between ventrites one and two that is the most outstanding mark on the dorsum and easily seen with unaided eyes, this lateral patch usually connected with the pale, posterior part of the posterior fascicle on the second interval with an irregular band of pale brown scales; scaling below pale to dark brown; femora with dark brown scales and usually paler scales near base and a pale subapical band; tibiae dark brown with paler scales and setae on the distal half.

Head with the derm and punctuation entirely hidden by very dense scaling; scales depressed and not tending to be arranged like honeycomb; with erect spatulate setae forming a single row along inner margins of eyes and a few scattered between eyes, otherwise without distinct setae; interocular area with a conspicuous, rather long, narrow, deeply impressed, longitudinal median sulcus. Rostrum with little or no scaling at the base but with lines of rather dense erect spatulate setae, setose almost to antennae in male, only half so far in the female; male with a well-developed median carina from near base almost to antennae, and with two finer, irregular carinae on either side, female with carinae much finer and less developed; shiny, densely and minutely punctate beyond antennae in both sexes. Antennae with scape as long as first four funicular segments; first funicular segment one sixth longer than second and one third broader at apex, second segment as long as two plus half of three, three and four equal, five almost as long as four and slightly longer than six, seven somewhat shorter than six and transverse; club as long as preceding four segments together. Prothorax distinctly transverse (as 8:6 or 7:5), strongly rounded on sides in basal two thirds, then strongly and angulately constricted, basal two thirds strongly gibbose, rising far above the base of the elytra, reaching its highest point in basal third and there no higher than the highest part of the elytra; subapical constriction strongly marked, deeply, broadly, prominently continued across the dorsum; sculpture almost entirely concealed by dense scaling; coarsely, deeply and densely punctate throughout, punctures moderately large, rounded, their interstices narrower than their diameters, each puncture usually bearing a stout, erect, clavate or spatulate seta that rises well above the scaling. Scutellum very small, often hardly discernible. Elytra but slightly longer than broad (6.5:5.5), base slightly sinuous, emarginate at each stria and therefore conspicuously crenulate from suture to humeri; humeri rather sharp and slightly embracing baso-lateral prothoracic angles, lateral outline thence rather angulately expanded for about one sixth the length, thence broadly rounded to apex; longitudinal dorsal outline strongly convex throughout, excepting for an inconspicuous depression behind the scutellum, outline interrupted by the fascicles on the second interval; striae well impressed, conspicuous

throughout, their punctures deep, rounded, broader than striae, tenth stria discernible only at the apex, and feeble there, ninth stria joining second, eighth joining third and therefore enclosing fourth to seventh at apical fifth; intervals slightly convex, at least twice as broad as strial punctures on disk, derm concealed by very dense scaling, usually with a single row of stout, erect spatulate setae, second interval expanded before and just behind middle and there with conspicuous fascicles of erect scales and setae, fourth interval with similarly placed but much less developed and inconspicuous loose fascicles consisting mainly of condensed setae. Legs densely squamose and setose; femora not strongly clavate, edentate; tibiae with some fine hair below; first hind tarsal segment as long as two plus three plus half of four, two only very slightly longer than broad, hardly longer than three, three deeply bilobed, almost twice as broad as long, four as long as two plus three. Sternum with anterior half of sides of mesosternal receptacle strongly produced into very conspicuous anteriorly inclined processes that reach a level lower than most ventral part of mesocoxae; metasternum at its narrowest point between mid and hind coxae only one fifth as broad as a metacoxa. Venter with the intercoxal process broadly arcuate, twice as broad as a metacoxa; first ventrite flattened in male, hardly more convex in female, posterior margin broadly concave in middle third; entire venter very densely clothed with ovate scales that conceal the derm; ventrites one and two coarsely punctate near their bases, venter elsewhere inconspicuously finely or minutely punctate and coarsely reticulate. Length, 3.5-4.5 mm.; breadth, 2.0-2.75 mm.

Fiji, Tuvutha Island, Lau Province. Holotype male, allotype female, stored in Bernice P. Bishop Museum, and 16 paratypes collected by E. H. Bryan, Jr., September 10 and 11, 1924. This species is widely spread in Fiji. There is a good series of specimens in the British Museum from several other localities in Fiji.

Because of its broad form and coloration this species is very distinct from any of the other described members of the genus.

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