

A NEW ELATERID FROM NECKER ISLAND (COLEOPTERA: ELATERIDAE)

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Abstract. An elaterid of the genus *Itodacnus* from Necker Island, Leeward Hawaiian Archipelago, is described as new. It is the second species of the genus known from the island.

A second species of *Itodacnus* from Necker Island is described as new and figured. The first species, *I. novicornis* Van Zwaluwenburg, described from Necker material in 1926 (BISHOP MUSEUM BULL. 31: 50-52), is the only previously reported elaterid known to be endemic to any island of the leeward chain. The new species becomes the tenth member of the genus which is restricted to the Hawaiian Archipelago.

The material was collected by Dr. J. W. Beardsley, University of Hawaii, in September, 1964 on a survey of the Leeward Islands. Extant specimens of *I. novicornis* in the Bishop Museum, including the ♂ holotype, were compared with Beardsley's material which contained five specimens of *I. novicornis* and five of the new species.

We are indebted to Mrs. Barbara Downs for preparing the illustrations.

KEY TO *Itodacnus* OF NECKER ISLAND

Vertex with surface broadly concave anteriorly; pronotum distinctly broader at apices of posterior angles than along mesal axis (42:38, etc.); length 11.3-16.5 mm**novicornis**

Vertex with surface flattened anteriorly; pronotum with breadth at apices of posterior angles and length along mesal axis subequal (29:29, 26:27, etc.); length 9.7-11.8 mm.....**paradoxus**, n.sp.

***Itodacnus paradoxus* Samuelson & Van Zwaluwenburg, n. sp.** Fig. 1a-b

♂ Body form slender. Head and pronotum fuscous, the latter with anterior margin and base including posterior angles red-fulvous, elytron brown-testaceous; antenna brown-testaceous; venter fuscous, prosternal lobe reddish; legs yellow-testaceous. Dorsum subdensely clothed with golden, suberect hairs; venter with finer, adpressed hairs.

Head: Labrum with anterior margin convex, surface punctate; vertex flattened anteriorly, remainder convex, surface coarsely punctate, punctures umbilicate, mostly 3-5 × as large as interspaces, interspaces usually convex, shiny. *Antenna* 8/15 as long as body, exceeding apex of posterior angle of prothorax by 2 segments; segment 1 slightly flattened, punctate, 2-3 subconical, broadened apically, 4-10 flattened, gradually broadened to apices, last flattened, apex briefly rounded; relative lengths/breadths of segments as follows: 11/5+ : 4/4 : 5+ / 4 : 16/5+ : 17/5+

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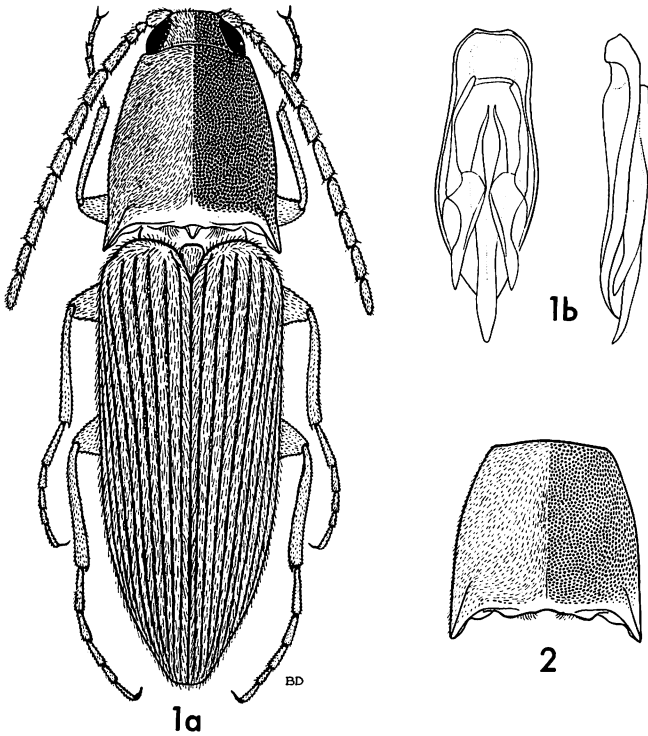


Fig 1. *Iodacnus paradoxus*, n. sp. (Holotype ♂): a, dorsal view: b, aedeagus, dorsal and lateral views. FIGURE 2. *I. novicornis*: pronotum, dorsal view (color pattern omitted: left side showing pubescence, right side showing puncturation).

$17/5+ : 17/5+ : 16/5 : 16/4+ : 15/4 + 17/4$. *Prothorax* with breadth at apices of posterior angles and mesal length subequal ($29 + : 30$); side feebly sinuate, outline subevenly convex from apex to weak prebasal concavity, thence straight to apex of posterior angle and slightly divergent from mesal axis; posterior angle unicarinate; base from ventral aspect with sublateral emargination fairly shallow and obtusely angulate; disc with vague median impression along basal $2/5$, punctures coarse, umbilicate, mostly $3-4\times$ as large as interspaces, interspaces convex. *Scutellum* about $5/9$ as broad as long, sides gradually narrowed to acute apex, surface punctulate. *Elytron* $5\times$ as long as broad; humeral carina absent; disc with 9 striae, each well-impressed and bearing single series of punctures; interstices weakly convex, punctulate and more or less shagreened. *Ventral surfaces* coarsely punctate; prosternal lobe rather evenly and strongly convex in outline; metacoxal lamina with posterior angle acute. *Legs* punctulate; tarsi simple. *Aedeagus* slender, weakly constricted behind middle, preapical region gradually narrowed to briefly rounded extremity; each paramere with lateral outline emarginate along more or less middle $1/3$.

	<i>I. novicornis</i>	<i>I. paradoxus</i> , n. sp.
Labrum: outline of anterior margin.	± straight	convex
Vertex: surface of anterior region.	broadly concave	flat
No. of antennal segments exceeding posterior angle of pronotum in ♂	3	2
Pronotum: discal punctures X as large as interspaces.	1.5—2X	3—4X
Pronotum: interspaces between punctures.	flat, shagreened	convex, ±smooth
Pronotum: sublateral emargination of base from ventral aspect.	relatively deep, rounded	relatively shallow, obtusely angulate
Prosternal lobe: outline of anterior margin.	straight	convex
Metacoxal lamina: posterior angle.	obtuse	acute
Abdomen: 8th tergite, outline of apex in ♂ (retracted, pregenital segment)	convex	emarginate
Body length of ♂ ♂ in mm.	range 11.3—15.6 average 14.4 (n=8)	range 9.7—11.8 average 11.0 (n=5)

Length: 11.3 mm; breadth 3.1.

♀ Unknown.

Holotype ♂ (BISHOP 6929), Leeward Hawaiian Archipelago: Necker I, on *Chenopodium oahuense*, 26, 27. IX. 64, Beardsley; 4 ♂ paratopotypes (Bishop Museum, Univ. of Hawaii), same data as holotype.

Paratypes. Color similar to holotype, one specimen with dorsum slightly paler with pronotal disc castaneous, elytron fulvous. Prothorax with relative proportions of breadth at apices of posterior angles/mesal length as follows: 25+/26, 25+/27, 30+/30+, 30/32. Length/breadth in mm as follows: 9.7/2.6, 10.4/2.7, 11.7/3.15, 11.8/3.15.

Differs conspicuously from *I. novicornis* Van Zwal. by smaller size and more slender body form; color of pronotal disc evenly fuscous instead of having central and lateral areas generally paler, red-fulvous. Other differences are tabulated above.

Necker Island, land area of 41 acres and an elevation of 84 m, is the

smallest and most isolated island in the archipelago supporting endemic elaterids. It is, therefore, of extreme interest that a second species of *Itodacnus* was found there. *I. noivcornis* and *I. paradoxus* n. sp. apparently are relics which have converged on the island from a common ancestral elaterid. These species probably are not results of successive invasions because of their unique structural similarities. Together, they differ from all other congeners by having antennal segment 3 strongly reduced, with segments 2+3 much shorter than 4; they also possess distinctive parameres, each emarginate along more or less the middle $1/3$ of the lateral margin.