

Description of *Lagocheirus delestali* n. sp. (Coleoptera: Cerambycidae) from the Reserva Biológica Alberto Manuel Brenes, Alajuela, Costa Rica

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Abstract

A new species of the genus *Lagocheirus* Dejean, *Lagocheirus delestali* Toledo & Esteban is described from specimens collected from the Reserva Biológica Alberto Manuel Brenes, Alajuela, Costa Rica during 2006 and 2007.

Additional key words: Cerambycidae, Costa Rica, *Lagocheirus*, Lamiinae, new species.

Resumen

Descripción de *Lagocheirus delestali* n.sp. (Coleoptera: Cerambycidae), nueva especie de la Reserva Biológica Alberto Manuel Brenes de Alajuela en Costa Rica

Se describe una nueva especie del género *Lagocheirus* Dejean, *Lagocheirus delestali* Toledo & Esteban a partir de especímenes colectados en la Reserva Biológica Alberto Manuel Brenes, Alajuela, Costa Rica.

Palabras clave adicionales: Cerambycidae, Costa Rica, *Lagocheirus*, Lamiinae, nueva especie.

Introduction

Lagocheirus Dejean belongs to the tribe Acanthocinini which is one of the most diverse tribes in the family Cerambycidae. The distribution of species of *Lagocheirus* is American, although their greatest richness is principally in Mesoamerica.

The genus has been revised twice, firstly by Dillon in 1957, and more recently by Toledo (1998), 10 years ago, and only included species from Mexico and Central America. Lately new distributional records and a new species from Jamaica were added to knowledge of the genus *Lagocheirus* Dejean (Toledo and Hovore, 2005).

An Entomological Biodiversity Project between the *Instituto Nacional de Investigación y Tecnología Agraria y Alimentaria* (INIA, Spain) and the University of Costa Rica (UCR, San José, Costa Rica) has involved entomological explorations, from 2003, at the Reserva Biológica Alberto Manuel Brenes, Costa Rica, with

collection of material of an unknown species belonging to the genus *Lagocheirus*.

Material and Methods

The species was obtained from the Reserva Biológica Alberto Manuel Brenes, a wild protected area created on 1 June 1975, as the San Ramón Forest Reserve. The reserve is administrated by the UCR and MINAE (*Ministerio de Ambiente y Energía*) of Costa Rica. The reserve covers 7,800 ha, and 90% of it corresponds to the San Lorencito River Basin. The area is limited to the North by Arenal-Monteverde and the Cloud Forest Reserve; to the East and South with primary and secondary forest, and to the West with the forest of Cidral in the locality of Miramar.

The insect specimens were attracted to the station lights, or to a light trap located about 100 m from the Station. The light trap had two kinds of lamps, one was mercury vapour (400 watts) at 4 m high and there were two further mercury vapour (125 watts) lamps placed against a vertical white sheet. The material

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Figure 1. *Lagocheirus delestali*. A) Holotype male. B) Paratype 1 female.

collected was deposited at INIA and in the *Museo de Insectos* (UCR).

Systematics

Lagocheirus delestali Toledo & Esteban, new species.

Type material

Holotype male labelled: **Costa Rica**, Alajuela, Estación de la Reserva Biológica Alberto Manuel Brenes, Alt. 850 m, 21 de abril de 2006, José Rafael Esteban Durán (José Rafael Esteban Durán collection, deposited in INIA, Madrid, Spain). Paratypes: three females, same data as holotype except: 26 de enero de 2006, Marco Antonio Zumbado; Trampa de luz, 2 de mayo de 2006, José Rafael Esteban Durán; 30 de abril de 2006, José Rafael Esteban Durán (Museo de Insectos de la Universidad de Costa Rica); cebo luminoso (400 + 2 × 125 W. Hg.), and one male 22-III-2007, cebo luminoso (400 + 2 × 125 W. Hg.) José Esteban, leg. (Museo de Insectos de la UCR).

Diagnosis

The following combination of morphological characters can distinguish this species from others: elytra with dark brown to black pubescence in the basal half, antennal segment III and IV biannulate, red brown.



Figure 2. Holotype male. Detail of pronotum and scutellum.



Figure 3. Holotype male, ventral view.

Description

Male (Fig. 1A). Length: 21 mm; humeral width: 9.1 mm. Form robust, elongated, slightly sub-depressed; integument dark brown to piceous; pubescence dense, very short, appressed, white-yellowish, beige, reddish-brown and black. Head regularly with reddish-brown pubescence; upper interocular space with sparse, irregular pubescence and long black setae; antennae with sparse, short, appressed reddish-brown pubescence, segments III and IV whitish-brown biannulate, segments V to VII with central whitish-beige annulate. Pronotum with a black basal vitta, extending from basal margin to the base of basal tubercles, median lateral black vitta extending from basal margin to the base of lateral tubercles (Fig. 2). Scutellum clothed with blackish pubescence, with lateral margins reddish-brown. Elytra with dark-brown to black pubescence in basal half, and whitish-beige, dark brown and black pubescence in the apical half; basal half limited apically by a transverse whitish-beige vitta extending in a zig-zag from lateral side to the elytral suture and extending to the apex, apical third with a transverse black vitta extending in a zig-zag from lateral side to near suture, limited an-



Figure 4. Holotype male. Detail of 6th and 7th antennal segments.

terior and posteriorly by a whitish-beige vitta that continues to the suture, and with a whitish-beige macula of pubescence on the suture near the apex; pro- and mesosternum (Fig. 3) with whitish brown sparse irregularity, metasternum almost glabrous at the anterior half and at middle and densely clothed with whitish brown pubescence at the apical half. Abdomen irregularly clothed with whitish brown pubescence at the sides and the margin of the segments. Legs with short, whitish-beige pubescence, tibia annulate basal and medially with reddish brown pubescence; tarsus with dense beige pubescence; claws black.

Head. Front slightly convex; longitudinal median line extending from epistoma to occiput; antennal tubercles slightly prominent and divergent, eyes with lower lobe wider than long and longer than genae; upper interocular space broader than upper eyes lobes; antennae with segment VIII extending beyond elytral apices, scape with dense, scattered punctures, scape shorter than segment III and slightly longer than segment IV, segment VI with apical appendix, shorter than the width of the segment, with an apical set of long black setae (Fig. 4), segments V to XI gradually decreasing in length. Pronotum 1.2 times broader than long, base broader than apex; disk with prominent subconical tubercles, apical tubercles slightly prominent,



Figure 5. Holotype male. Detail of mesosternum.

basal tubercles prominent and rounded, median discal tubercle small and elongated, lateral tubercles prominent, subconical, unarmed at apex; disk with small punctures around tubercles, basal and apical depressions with coarse punctures. Scutellum subtriangular, apically emarginate. Elytra 1.5 times longer than broad; basal gibbosity scarcely evident, with a single prominent basal tubercle; humeral angles coarsely granulate; disk densely, coarsely granulate-punctate on basal one-third, punctures sub-equal granules, punctures becoming simple, finer, and less dense to the apex; each elytron vaguely tricostate, base with three rows of elevated and dense tufts of black setae; apices slightly rounded. Prosternal process 1.7 times the width of a coxal cavity; mesosternal process almost as wide as coxal cavity, coarsely punctate laterally (Fig. 5); metasternum sparse and finely punctate. Abdomen sparsely, finely punctate; first sternite slightly longer than two to four, which are sub-equal in length, fifth sternite tapered, emarginate at apex. Legs regularly, finely punctate.

Female. Similar to the male, except for the antennae with the VI segment without an apical projection and IX extending beyond elytral apices. Length: 15-20 mm (Fig. 1B).

Remarks

This species closely resembles *Lagocheirus plantaris indistinctus* Dillon & Dillon, but can be distinguished from it because *L. delestali* has lateral elytra margins in parallel until 3/5 near the apex; antennae with segment II longer; pronotum with lateral tubercles sub-conic and more acute at the apex and scutellum with a thin line of brown pubescence at the lateral margin.

Phenology

The flight period of the specimen is from January to May. It basically coincides with the period of activity of adults of other species of this genus which have been collected in this ecosystem from December to June.

Etymology

We dedicate this beautiful species to Dr. D. Pedro Del Estal Padillo, Professor of Entomology, Escuela Técnica Superior de Ingenieros Agrónomos, Universidad Politécnica de Madrid (Spain), for his contribution to knowledge of the entomological fauna of the Reserva Biológica Alberto Manuel Brenes, Costa Rica.

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