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A new species of *Cephaloleia* Chevrolat, 1837 (Coleoptera: Chrysomelidae: Cassidinae) from Dominica

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Abstract. A new species of *Cephaloleia*, *C. simplex* from Dominica, is described and illustrated. The species of *Cephaloleia* known from the Caribbean are reviewed and a key to those species is presented.

Introduction

The genus *Cephaloleia* Chevrolat, 1837 contains 209 New World species (Uhmann 1957; Staines 1996, 1998, 2002). There are four species reported from the Caribbean: *Cephaloleia barroi* Uhmann, 1959 from Cuba; *C. brunnea* Staines, 1996 from Trinidad; *C. rubra* Staines, 1996 from Trinidad; *C. sandersoni* Staines, 1996 (=*Demotispa coeruleata* Sanderson, 1967) from Jamaica (Staines 1996).

Most *Cephaloleia* species are not associated with a host plant. Many species with plant associations feed on members of the Zingiberales (see Staines 2004 for a review of the literature). However, a few species (for example: *C. facetus* Staines, *C. formosus* Staines, *C. vagelineata* Pic) feed on or are associated with various Arecaceae (Sandino 1972, Staines 1996). The palm feeders seem to fall into two morphological groups: oval, strongly convex (such as *C. sandersoni*) and small, flattened species with truncate elytral apices (such as *C. facetus*). Based on genetic data McKenna and Farrell (2005) found that some Arecaceae-feeding *Cephaloleia* species formed a distinct clade with other Cephaloleiini genera which feed on Arecaceae. This area needs more investigation to clearly determine the generic placement of a number of species.

For this study, measurements were taken with an ocular micrometer. Pronotal length and width were measured along the midlines. Elytral width was measured at the humeri. Elytral length was measured from the base to the apex along the midline. Total length was measured from the base of the antennae to the apex of the elytra. In recording label data from type specimens, a double slash (//) separates data on different labels; brackets ([ ]) include explanatory or label color information. Collection acronyms are from Arnett et al. (1993).

Genitalia were extracted and examined. No taxonomic differentiating characters were found on genitalia.

Key to the species of *Cephaloleia* known from the Caribbean

1. Body oval; color metallic blue **2**
— Body elongate; color brownish **3**

2(1). Vertex of head densely punctate, medial sulcus absent; antennomere I not clavate, subequal in length to II; lateral margin of pronotum nearly straight on basal third, then converging toward apex; antennae and legs yellow; venter black, covered with short setae; protibia with groove beneath; total length 4.8 mm (Figure 1); Cuba ..... ***C. barroi* Uhmann 1959**
— Vertex of head finely punctate, medial sulcus present; antennomere I clavate, I two times length of II; lateral margin of pronotum evenly arcuate from base to apex; antennae and legs dark; venter dark brown with bluish reflections, only last sternite with setae; protibia without groove beneath; total length 4.7-5.4 mm (Figure 4); Jamaica ..... ***C. sandersoni* Staines 1996**

3(1). Antennomere I incrassate with projection on apex; interantennal carina present; prosternum rugose at sides; total length 5.0-6.0 mm (Figure 3); Trinidad ..... ***C. rubra* Staines 1996**

— Antennomere I not incrassate, without projection on apex; interantennal carina absent; prosternum punctate at sides **4**

4(3). Vertex of head with medial sulcus; antennomere II two times length of I; III longer than I and II combined; II cylindrical; abdominal sterna 1 and 2 not fused at middle; elytra with scutellar row reaching 1/3 elytral length; suture of elytra not darkened; tibia not punctate; total length 3.0 mm (Figure 5); Dominica ..... **C. *simplex* Staines, new species**

— Vertex of head without medial sulcus; antennomere II shorter than I; III subequal in length to I; II transverse; abdominal sterna 1 and 2 fused at middle; elytra with scutellar row not reaching 1/3 elytral length; suture of elytra darkened; tibia punctate; total length 4.0-4.1 mm (Figure 2); Trinidad ..... ***C. brunnea* Staines 1996**

***Cephaloleia simplex* Staines, new species**
(Figure 5)

Cephaloleia sp. Peck 2006: 195 (faunal list).

Holotype: female, Dominica, St. Paul Parish, Mornes Trois Piton Nat'l. Pk., trail to Middleham Falls, 15°21'06" N, 61°20'06" W, el. 2200 ft., V-20-VI-2-2000// L. Benavides, E. Chavez, J. Dye & E. Kretsch, Malaise trap, 2000/10// Holotype Cephaloleia simplex Staines 2007 [red label] (TAMU).

Description. Yellowish-brown; eyes and antennae (except basal antennomere) nearly black, venter brownish except pro- and mesosterna blackish; base of pronotum much narrower than base of elytra. Head: vertex punctate, alutaceous between punctures; medial sulcus present; front nearly vertical; interantennal carina absent; clypeus small, punctate; maxillary and labial palps yellowish. Antenna: extends beyond humerus; antennomeres cylindrical; I short; II two times length of I; III longer than I and II combined; IV-VI subequal in length; VII-X subequal in length, shorter than preceding; XI two times length of X, bluntly pointed at apex. Pronotum: wider than long; lateral margin straight and slightly divergent for basal 7/8 , then rounded and convergent; anterior angle with small tooth; posterior angle acute; convex; central 1/3 sparsely punctate; moderately coarsely punctate at sides; pronotal length 0.9 mm (n=1); pronotal width 1.1 mm. Scutellum: large; pentagonal; alutaceous; acutely pointed at apex. Elytron: lateral and apical margins smooth; exterior apical angle rounded; humerus rounded, impunctate; puncture rows with few punctures; scutellar row reaching basal 1/3; elytral length 2.9 mm; elytral width 1.6 mm. Venter: pro-, meso-, and metasterna smooth medially, punctate laterally; abdominal sternite 1 punctate; sterna 2-5 with white setae. Leg: short, robust; coxa and femur punctate. Total length: 3.0 mm.

Etymology. From simplex (Latin= simple) for the unadorned appearance of this species.

Comparative notes. *Cephaloleia simplex* keys to couplet 83 in Staines (1996). It differs from *C. distincta* Baly by the following combination of characters: antennomere I not compressed at base, elytra not strongly punctate-striate, prosternum punctate at sides, size small (3.0 mm); *C. distincta* is known from Costa Rica and Panama.

Larval host plants. Unknown. The probable host plant of this species is one of the Zingiberales native to Dominica. Hodge (1954) records *Heliconia caribaea* Lam., *H. bihai* L. (Heliconiaceae); *Canna lambertii* Lindl. (Cannaceae); *Renealmia racemosa* (L.) A. Rich. (Zingiberaceae); *Costus cylindricus* Jacq. (Costaceae); *Calathea lutea* (Aubl.) G. F. W. Meyer, *C. allouia* (Aubl.) Lindl., and *Ischnosiphon ariuma* (Aubl.) Koern. (Marantaceae) as native to the island. Additionally, *Alpinia speciosa* (Wendl.) K. Schum., *Hedychium*

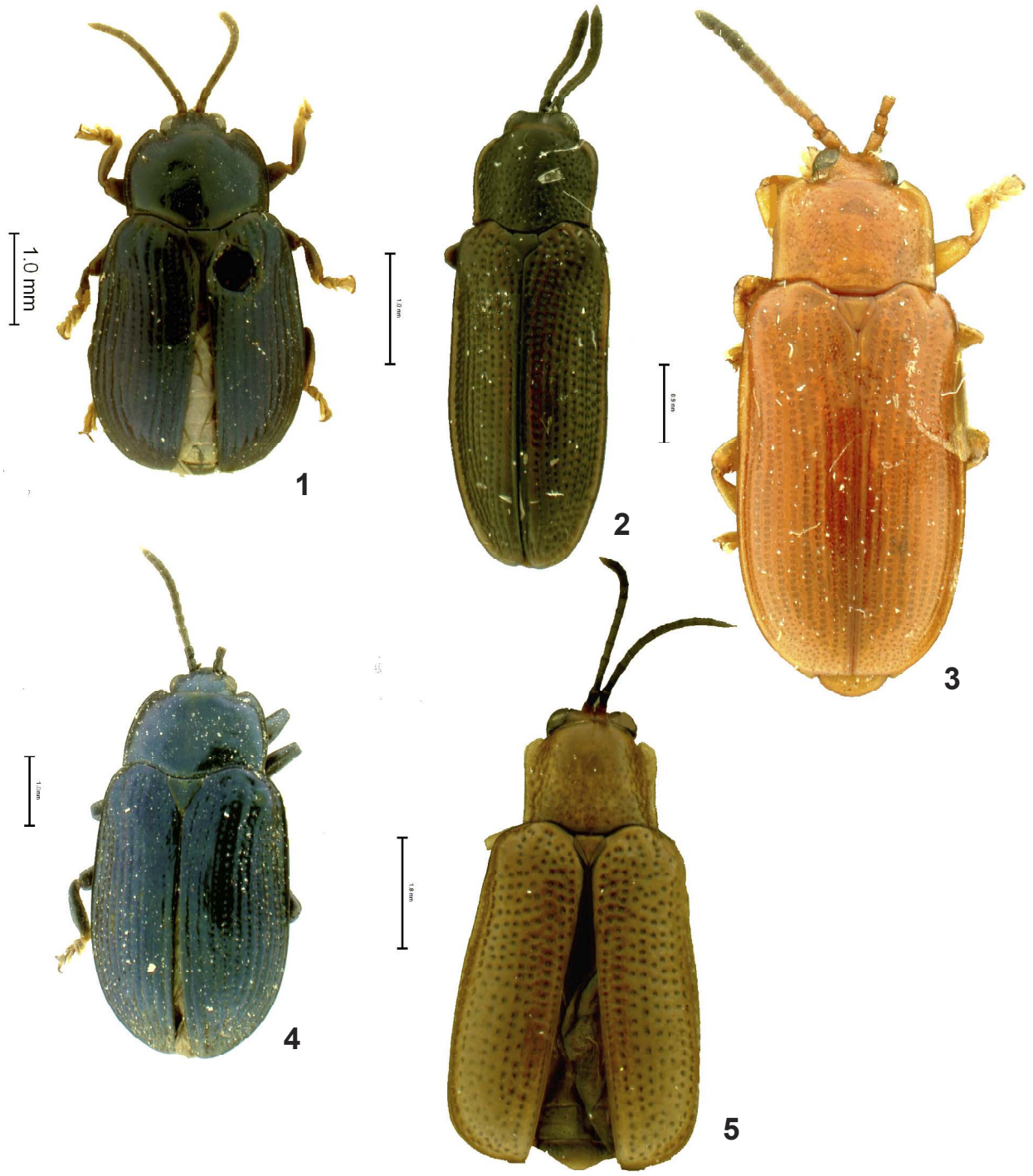

Figure 1-5. Habitus images of Caribbean *Cephaloleia* species. **1)** *C. barroi* Uhmann. **2)** *C. brunnea* Staines. **3)** *C. rubra* Staines. **4)** *C. sandersoni* Staines. **5)** *C. simplex*, new species.

coronarium Koenig, *Curcuma longa* L. (Zingiberaceae), and *Maranta arundinacea* L. (Marantaceae) have been introduced to Dominica.

Immatures. Unknown.

Biology. Unknown.

Distribution. Dominica.

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