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**A NEW GENUS OF MIMETIC LONGHORNED BEETLE FROM
ST. LUCIA, LESSER ANTILLES (COLEOPTERA: CERAMBYCIDAE:
RHINOTRAGINI)**

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Abstract.—A species originally described as *Fortuneleptura romei* Touroult, 2011 (Lepturinae) is placed in a **new genus, *Iyanola* Lingafelter & Ivie** (Cerambycinae: Rhinotragini). Along with the new genus description, the species is redescribed and additional collection data is recorded. A key to the genera and species of Rhinotragini (Cerambycidae: Cerambycinae) of the West Indies is presented.

Key Words: Endemic, wood-borer, mimicry, taxonomy, identification

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We describe a new genus of St. Lucia Cerambycidae to accommodate the striking mimetic species, *Fortuneleptura romei* Touroult (2011). In Touroult's work, that species was placed in the subfamily Lepturinae, but we provide morphological justification for its correct placement in the Cerambycinae in the tribe Rhinotragini. The tribe Rhinotragini is a primarily continental group with nearly 50 genera and 450 species known in the Western Hemisphere (Monné and Bezark 2013), almost exclusively in the Neotropical Region, with only two species reaching the extreme southern U.S. This group has perhaps a greater degree of diversified mimicry than any other group of insects (Linsley 1963). This species, along with other longhorned beetle species in the genera *Calocosmus* Chevrolat, *Trichrous* Chevrolat, and *Pseudotho-nalmus* Guerrero, are members of at least

one Batesian mimicry complex, one of which was described by Darlington (1938) and Lingafelter (2013). Including the species described herein, only 4 species (in 4 genera) of rhinotragines occur in the West Indies: *Acyphoderes aurulenta* (Kirby), *Bromiades brachyptera* (Chevrolat in Guérin-Méneville), *Odontocera josemarti* Zayas, and the new combination, *Iyanola romei* (Touroult) (Monné and Bezark 2013; Zayas 1975). This is the *Iyanola romei* (Touroult) is the only rhinotragine known from the Lesser Antilles, the others being known only from the Greater Antilles. A key to all the genera and species of West Indian Rhinotragini is presented.

MATERIALS AND METHODS

Specimen depositories, curators, and acronyms are as follows: California State Department of Food and Agriculture,

Sacramento, California (S. Gaimari & A. Cline, CDFA); National Museum of Natural History, Smithsonian Institution, Washington, DC (S. Lingafelter, USNM); West Indian Beetle Fauna Project, Bozeman, Montana (M. Ivie, WIBF). Label data is not verbatim, but rather summarized and standardized to avoid redundancy and format inconsistency.

RESULTS AND DISCUSSION

Iyanola Lingafelter & Ivie, new genus

Diagnosis.—*Iyanola* shares with other genera of Rhinotragini the following combination of characters: elongate frons, eyes finely faceted, anterior coxal cavities weakly angulate laterally, elytral epipleura weakly or incompletely developed, metepisternum large, subtriangular, much broader anteriorly than posteriorly, and elytra attenuated with apices separated (Linsley 1962). In addition, the hind wing venation is reduced with the following veins absent or incomplete: MP3, MP4, CuA1, and CuA2 (terminology after Lingafelter 1998).

Iyanola is easily distinguished from the other West Indian genera of *Acyphoderes* Audinet-Serville, *Odontocera* Audinet-Serville, and *Bromiades* Thomson by having fully developed elytra without epipleura. *Acyphoderes* and *Odontocera* each have subulate elytra with narrow epipleura and widely diverging apices, exposing most of the hind wing. *Bromiades* have incomplete, attenuate elytra extending only to the basal abdominal tergites and exposing most of the hind wing and abdomen.

Species of the small tribe Eroschemini which includes only three species, one of which occurs in the West Indies (*Tethylimmena basalis* Gahan, St. Vincent), are superficially similar, but differ in having a short frons, elytral epipleura present, and antennomeres 3–10 strongly flattened.

Etymology.—The genus name, feminine in gender, is from a Carib name for St. Lucia, “*Iyanola*” meaning “island of the iguanas.”

Type Species.—*Iyanola romei* (Touroult), by present designation.

Iyanola romei (Touroult), new combination

Fortuneleptura romei Touroult, 2011: 1
(Figs. 1–3)

Description.—(based primarily on females; only one male known): Moderate size, 6–10 mm long; 2.0–2.5 mm wide at humeri; integument mostly pale yellow-orange with exception of variably developed black maculae on elytra and pronotum, and antennomeres 2–11 (and sometimes part of scape and tarsi) which are black. Elytra and pronotum covered with dense, erect to suberect, golden pubescence. Golden setae shorter but denser on pronotum compared to elytra; moderately dense on head vertex and venter.

Head with shallow interantennal tubercle region; tubercles weakly elevated. Head moderately covered with golden and translucent pubescence; not conspicuously punctate on vertex, sparsely punctate on frons. Frons and genae very elongate. Eyes finely faceted; lower lobe large, deeply notched by insertion of scape. Narrowest width at junction of upper and lower lobes approximately 6–8 facets wide. Lower lobe about equal in height to gena below it, over 50 ommatidial facets in height. Lower eye lobes widely separated on frons. Antenna 11-segmented, without spines; with vestiture of short, appressed pubescence and fringe of longer, golden hairs along venter of basal antennomeres 1–5. Antennomeres black with exception of mostly or entirely flavous scape.

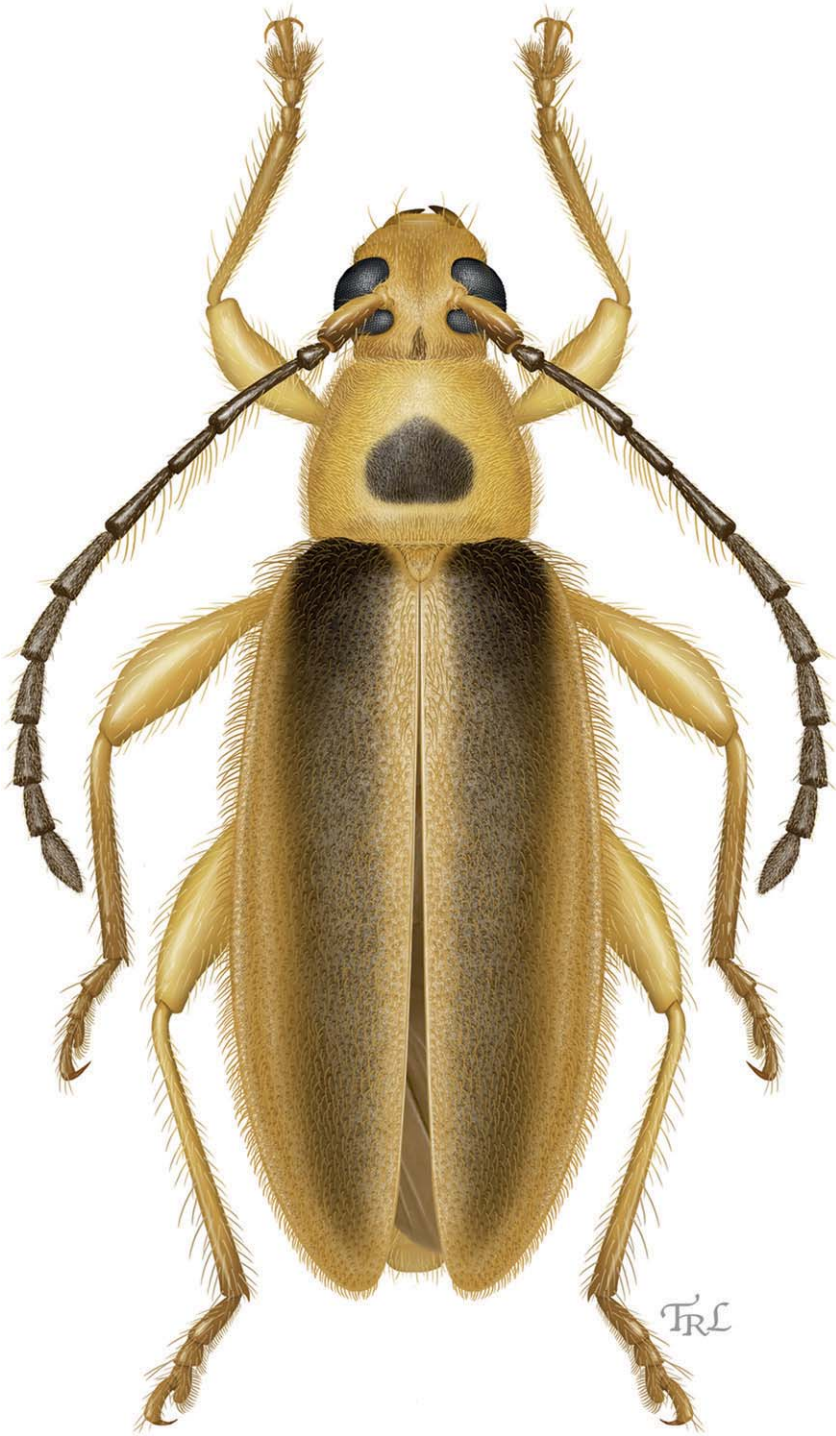


Fig. 1. *Iyanola romei* (Touroult) (Cerambycidae: Rhinotragini). Digital painting adapted from female specimen in USNM. Illustrated by Taina Litwak (SEL, USDA).



2



3

Figs. 2–3. *Iyanola romei* (Touroult). 2, anterior view of head showing large, finely faceted eyes, and elongate frons and genae; 3, schematic drawings of elytra and pronotum showing variation in black maculae. Illustrated by Taina Litwak (SEL, USDA). Illustrated by Taina Litwak (SEL, USDA).

Antennomere 3 longest, 4 shortest; antennomeres 5–10 successively decreasing in length; 11 slightly longer than 10, tapering apically. Antennae reaching apical one-third to one-fourth of elytra. Pronotum about 1.25X wider than long; widest as base, tapering anteriorly; without lateral tubercles. Pronotum without distinct median callus, but with vaguely defined, broad, triangular region on disk containing a variably developed black macula. Entire pronotum covered with dense, golden, suberect pubescence; without distinct punctures. Prosternum impunctate; sparsely pubescent. Prosternal process becoming very narrow between procoxae, then abruptly expanded behind procoxae, closing them posteriorly. Mesosternum short, impressed anteriorly to mesocoxae, with initially narrow, then abruptly expanded, protruding process between mesocoxae, but without lateral extensions into mesocoxae. Elytral fully developed; attenuate with apices moderately separate revealing part of hind wing. Apices rounded, without spines. Elytra with dense vestiture of golden pubescence comprised of mixture of longer, suberect setae, and short, curved, semiappressed setae; densely punctate but inconspicuous due to dense pubescence. Elytra marked with a variably produced black macula at base, sometimes extended into long vitta toward apex. Scutellum narrowly rounded posteriorly, densely golden pubescent on posterior half; without conspicuous punctures. Legs moderate in length, femora clavate with weak peduncles, most developed on metafemora, least on profemora. Femoral apices without spines. Abdominal sternites tapering to apex; terminal ventrite rounded, without modification.

Discussion.—This unusual rhinotragine is apparently endemic to St. Lucia. It is part of a mimicry complex that includes a least two new species of

Lampyridae. All known specimens except one (briefly described in Touroult’s original paper) are female, and there are no notable morphological differences between the sexes. This species was originally placed in the Lepturinae, in the genus *Fortuneleptura* Villiers, however it possesses all the features typical of the tribe Rhinotragini in the Cerambycinae.

Material examined.—7 female specimens (all from ST. LUCIA): Bordelais, trap site 185 m, 13.9689°N, 60.8859°W, 19–25 JUNE 2009, malaise, C. A. Maier & E. A. Ivie (1 USNM); Barre de l’Isle, 13.9326°N, 60.9577°W, 285 m, 18–30 May 2009, canopy malaise, R. C. Winton, L. L. Ivie, A. R. Cline, & S. D. Gaimari (1 USNM; 2 WIBF); Barre de l’Isle, 13.9326°N, 60.9577°W, 285 m, 14 June 2009, C. A. Maier (1 WIBF); Barre de l’Isle, north side, 13.93268°N, 60.95775°W, 285 m, S. D. Gaimari, A. R. Cline, R. Winton, 22 May 2009 (09-06) (1 C DFA); Barre de l’Isle, south side, 13.92471°N, 60.95891°W, 289 m, A. R. Cline, S. D. Gaimari, R. Winton, 22 May 2009 (09-06) (1 C DFA).

Key to Rhinotragini of the West Indies

1. Elytra evenly attenuate at apices, extending only to basal 1–2 abdominal tergites, nearly entire abdomen and hind wings exposed
Bromiades brachyptera (Chevrolat in Guérin-Méneville)
- 1'. Elytra either entire or subulate, extending to at least the middle of abdomen
. 2
- 2(1'). Elytron entire, not subulate, lacking distinct epipleuron and humerus, attenuate at apex, covered in distinct, golden pubescence . . . *Iyanola romei* (Touroult)
- 2'. Elytron subulate along most of suture, with partial, narrow epipleural margin and well-defined humerus; sparsely pubescent or glabrous 3

- 3(2'). Antennomeres 5–9 strongly flattened. Pronotum with distinct middle and lateral ridges *Acyphoderes aurulenta* (Kirby)
- 3'. Antennomeres 5–9 cylindrical or only flattened toward apices. Pronotum without distinct ridges *Odontocera josemarti* Zayas

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