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Pleasing fungus beetles of the West Indies
(Coleoptera: Erotylidae: Erotylinae)

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Abstract. The pleasing fungus beetle fauna (Coleoptera: Erotylidae: Erotylinae) of the West Indies is reviewed. Keys to adults of all genera and species, descriptions, illustrations, and distribution maps are presented. Representative larvae for most genera are also diagnosed and illustrated.

Four **new genera** are described: *Altisessor* (type species *Altisessor ater*, new species), *Antillengis* (type species *Oocyanus brunnipes* Kuhnt 1910), *Cubyrus* (type species *Ischyryus sapphirus* Skelley 1998b), and *Notaepytyus* (type species *Ischyryus flavitarsis* Lacordaire 1842). Within *Dacne* Latreille 1796, a **new subgenus** is created: *Ameridacne* (type species *Dacne brodzinskiyi* Skelley 1997a).

Seventeen **new species** are described: *Altisessor ater*, *Altisessor centralis*, *Altisessor hottensis*, *Altisessor oriens*, *Altisessor viridis*, *Antillengis epochthidius*, *Notaepytyus baorucoensis*, *Notaepytyus cubanacan*, *Notaepytyus cyanoros*, *Notaepytyus cyclosignatus*, *Notaepytyus decoregens*, *Notaepytyus elateroides*, *Notaepytyus elongatus*, *Notaepytyus ignotensis*, *Notaepytyus inversus*, *Notaepytyus lavegaensis*, and *Notaepytyus neibaensis*.

Most species previously placed in *Epytus* Dejean 1836 (= *Oocyanus* Hope 1841) are transferred to *Notaepytyus* resulting in the following five **new combinations**: *Notaepytyus flavitarsis* (Lacordaire 1842), *Notaepytyus fulvitarsis* (Lacordaire 1842), *Notaepytyus haitensis* (Curran 1944), *Notaepytyus modestus* (Olivier 1807), and *Notaepytyus tarsalis* (Lacordaire 1842). The species *Oocyanus gundlachi* Zayas 1988 is transferred to *Altisessor*, resulting in *Altisessor gundlachi* (Zayas) **new combination**. These changes restrict *Epytus* to a single species, *Epytus cyaneus* (Duponchel 1825). Three species previously synonymized under other taxa are reinstated as valid species: *Oocyanus tarsatus* Lacordaire 1842 **new status**, *Brachysphaenus* (*Oogaster*) *suturalis* Lacordaire 1842 **new status**, and *Oocyanus brunnipes* Kuhnt 1910 **new status**. They are transferred into different genera resulting in three **new combinations**: *Notaepytyus tarsatus* (Lacordaire), *Iphiclus* (*Neogaster*) *suturalis* (Lacordaire), and *Antillengis brunnipes* (Kuhnt). Three additional **new combinations** presented are *Cubyrus sapphirus* (Skelley), *Dacne* (*Ameridacne*) *brodzinskiyi* (Skelley) and *Dacne* (*Ameridacne*) *ducke* (Skelley).

To stabilize nomenclature, **lectotypes** are designated for the following six species: *Brachysphaenus suturalis* Lacordaire 1842, *Erotylus modestus* Olivier 1807, *Ischyryus flavitarsis* Lacordaire 1842, *Ischyryus tarsalis* Lacordaire 1842, *Galleruca guadeloupensis* Fabricius 1792, and *Oocyanus tarsatus* Lacordaire 1842. Additionally, the lectotype of *Galleruca guadeloupensis* Fabricius is here designated as the **neotype** of *E. marginatus* Olivier 1792, thus fixing the identity of both names by creating an objective synonym.

Key Words. Erotylidae, Erotylinae, West Indies, new genus, new species, *Altisessor*, *Ameridacne*, *Antillengis*, *Cubyrus*, *Dacne*, *Epytus*, *Iphiclus*, *Notaepytyus*, *Neogaster*, *Oocyanus*.

Introduction

The West Indies has been a place of numerous studies on evolution and island biogeography (e.g., Woods 1989). These islands have high levels of endemism, and also include the amber fossil record in the Dominican Republic. Such comparative data are available in few other regions on earth. With the exception of a possible recent introduction into Jamaica, the Greater Antillean Erotylinae fauna is distinct at the generic level, which strongly reflects the long isolation of the native fauna.

Recent interest in the West Indian beetle fauna produced several checklists: Peck (2005) for Cuba, Peck (2006) for Dominica, Turnbow and Thomas (2008) for the Bahamas, Perez-Gelabert (2008) for Hispaniola, and Woodruff et al. (1998) for Grenada and the Grenadines. Recent survey work has also resulted in the collection of many new taxa. The majority of native West Indian erotyline species are restricted to single islands or single mountain ranges on an island (Table 1, Fig. 1). Several taxa are brachypterous or found only at higher elevations where additional sampling is still needed.

This paper presents a foundation for taxonomic work, corrects nomenclatural problems, and establishes a more solid classification.

Table 1. Checklist of West Indian Erotylinae (Erotylidae).

EROTYLIDAE (Erotylinae) of the West Indies	
Tribe Dacnini	
<i>Dacne (Ameridacne) brodzinskyi</i> Skelley [amber fossil]	Dominican Republic
Tribe Megalodacnini	
<i>Antillengis brunnipes</i> (Kuhnt)	Cuba
<i>Antillengis epochthidius</i> Skelley, n. sp.	Hispaniola
Tribe Erotylini	
<i>Aegithus clavicornis</i> (Linnaeus)	Grenada, Dominican Republic (recently established)
<i>Aegithus lebasii</i> Lacordaire	Jamaica (recently established)
<i>Iphiclus (Neogaster) guadeloupensis</i> (Fabricius)	Guadeloupe
<i>Iphiclus (Neogaster) suturalis</i> (Lacordaire)	Dominica
Tribe Tritomini	
<i>Altisessor ater</i> Skelley, n. sp.	Hispaniola
<i>Altisessor centralis</i> Skelley, n. sp.	Hispaniola
<i>Altisessor gundlachi</i> (Zayas)	Cuba
<i>Altisessor hottensis</i> Skelley, n. sp.	Hispaniola
<i>Altisessor oriens</i> Skelley, n. sp.	Puerto Rico
<i>Altisessor viridis</i> Skelley, n. sp.	Cuba
<i>Cubyrus sapphirus</i> (Skelley)	Cuba
<i>Epytus cyaneus</i> (Duponchel)	Cuba
<i>Ischyryus quadripunctatus quadripunctatus</i> (Olivier)	St. Lucia, St. Vincent
<i>Notaepytus baorucoensis</i> Skelley, n. sp.	Hispaniola
<i>Notaepytus cubanacan</i> Skelley, n. sp.	Cuba
<i>Notaepytus cyanoros</i> Skelley, n. sp.	Jamaica
<i>Notaepytus cyclosignatus</i> Skelley, n. sp.	Hispaniola
<i>Notaepytus decoregens</i> Skelley, n. sp.	Hispaniola
<i>Notaepytus elateroides</i> Skelley, n. sp.	Jamaica
<i>Notaepytus elongatus</i> Skelley, n. sp.	Hispaniola
<i>Notaepytus flavitarsis</i> (Lacordaire)	Bahamas, Cuba, Hispaniola
<i>Notaepytus fulvitarsis</i> (Lacordaire)	Hispaniola
<i>Notaepytus haitensis</i> (Curran)	Hispaniola
<i>Notaepytus ignotensis</i> Skelley, n. sp.	Hispaniola
<i>Notaepytus inversus</i> Skelley, n. sp.	Hispaniola
<i>Notaepytus lavegaensis</i> Skelley, n. sp.	Hispaniola
<i>Notaepytus modestus</i> (Olivier)	Hispaniola
<i>Notaepytus neibaensis</i> Skelley, n. sp.	Hispaniola
<i>Notaepytus tarsalis</i> (Lacordaire)	Hispaniola
<i>Notaepytus tarsatus</i> (Lacordaire)	Cuba

In general, species of Erotylinae are characterized by an antennal club of three antennomeres, dilated maxillary palpi (except in Dacnini), closed procoxal cavities (with prosternal-proepimeral suture located at the midpoint posterior to the procoxae), meso-metasternal suture having a broadened dicondylic connection, and pseudotetramerous tarsi (tarsomere IV small and hidden by an expanded tarsomere III). Larvae and adults feed on larger basidiomycete fungi (e.g. mushrooms, polypore or bracket fungi, etc.). The name 'pleasing fungus beetle' is likely derived from the large size and colorful patterns of many species.



Figure 1. West Indian maps. **1a)** Map of West Indian countries mentioned in the text. **1b)** Map indicating species occurring on specific islands with distribution of *Notaeptytus flavitarsis* (Lacordaire) indicated by the white triangles.

History

The first described members of the endemic West Indian fauna were *Galleruca guadeloupensis* Fabricius 1792 and *Erotylus modestus* Olivier 1807 and *Erotylus cyaneus* Duponchel 1825. Lacordaire (1842) subsequently described *Ischyryus flavitarsis*, *Ischyryus fulvitarsis*, *Ischyryus tarsalis*, *Oocyranus tarsatus*, and *Brachysphaenus suturalis*. Much later, Kuhnt (1910) described *Oocyranus brunnipes* and Curran (1944) described *Oocyranus haitensis*. Curran (1944) consolidated all described West Indian Tritomini into *Oocyranus* Hope 1841 (= *Epytus* Dejean 1836). Since then, only three species have been described: *Oocyranus gundlachi* Zayas 1988, *Dacne brodzinskyi* Skelley 1997a, and *Ischyryus sapphirus* Skelley 1998b.

In general, most citations for West Indian Erotylinae are in checklists, catalogs, or brief faunal treatments that mostly contain information derived from earlier literature. Unfortunately, some literature presented or repeated erroneous records.

Erroneous Records

Ramos (1946: 36) and Wolcott (1950: 314) recorded *Mycotretus* Lacordaire 1842 and *Tritoma* Fabricius 1775 from Mona Island, based on specimens collected by Ramos. Representative specimens from the Ramos collection (now at UPRM) were examined and were determined to be *Hyporhagus* Thomson (Zopheridae: Monommatinae), which is a common misidentification. Therefore, this record is removed from further consideration.

Erotylus flavipes Fabricius 1781, described from Jamaica, was determined to be a synonym of *Colaspis occidentalis* (Linnaeus 1758) (Chrysomelidae) by Clavareau (1914: 32), and is removed from further consideration.

Erotylus histrionicus Duponchel 1825 is cited as occurring in Guadeloupe by Dejean (1836: 425; 1837: 449). This error was corrected by Lacordaire (1842: 423) and Fleutiaux and Sallé (1889: 482). This species occurs in Brazil.

Tritoma sellata Kuhnt 1910, ex “Nord-Amerika”, was stated by Leng and Mutchler (1914: 412) to be from “Cuba?” and this was repeated by Peck (2005: 134). *Tritoma sellata* was synonymized with *Tritoma pulchra* Say by Boyle (1956: 126-127). The Cuban record reported by Leng and Mutchler (1914) remains unsubstantiated. No species of *Tritoma* are known from the West Indies. *Tritoma sellata* and the genus *Tritoma* in general are therefore removed from further consideration.

Ischyryus tripunctatus Crotch 1873b was erroneously listed from the West Indies in some catalogs (Leng and Mutchler 1914: 412 cited Haiti; Blackwelder 1945: 465 cited Hispaniola). This species was described from Santo Domingo, Chontales, Nicaragua. These listings from Hispaniola are a misinterpretation of the locality “St. Domingo”, a name once used synonymously for Hispaniola, and a major city in the Dominican Republic. This species record is removed from further consideration.

Ischyryus quadripunctatus (Olivier 1792) is reported from Cuba by Chapuis and Candèze (1853: 282). This is an obvious error because they later stated the described larvae were from New Orleans (USA). This species does not occur in the Greater Antilles.

Ischyryus tarsalis Lacordaire (1842) was described from “Haïty” and listed from Haiti and Cuba by Leng and Mutchler (1914: 412) and Hispaniola by Perez-Gelabert (2008: 108). *Oocyranus tarsatus* Lacordaire (1842) was described from “Colombia” but actually occurs on Cuba. In synonymizing the two, Crotch (1876: 433) stated “The locality ‘Columbia’ assigned to Reiche’s specimen is probably erroneous, as I have seen numerous examples from Cuba”, however he made no mention of Haiti. Since then, all references list these species as synonyms and many list them only from Cuba. Study of the types of *I. tarsalis* (from Haiti) and *O. tarsatus* (from Cuba) proved they were distinct and both are here transferred to *Notaepytus*. Thus, listings for *N. tarsalis* from Hispaniola are correct, and all references of “*tarsalis*” from Cuba refer to *N. tarsatus* (see below).

Aegithus clavicornis (Linnaeus 1758) was reported from Dominica by Leng and Mutchler (1917: 200), and this was repeated by Blackwelder (1945: 457) and Peck (2006: 187). No specimens from Dominica of *A. clavicornis* could be found in NMNH, where Leng and Mutchler reported they were deposited (T. Nuhn, pers. comm.). This record is surely based on a misidentification of *Iphiclus suturalis* (Lacordaire 1842). Thus, *A. clavicornis* is not considered part of the Dominican fauna. This is not to be confused with the fauna of the Dominican Republic (see Medrano-Cabral et al. 2009).

Iphiclus (Neogaster) marginatus (Olivier 1792), here treated as *Iphiclus guadeloupensis* (Fabricius 1792), is listed by Alvarenga (1994: 73) from “Guadeloupe, República Dominicana, Guiana Francesa?”. Alvarenga’s record from the Dominican Republic is based on a misinterpretation of “Dominica”, and French Guiana (= Cayenne) based on an old mislabeling (Lacordaire 1842: 378). *Iphiclus guadeloupensis* (= *I. marginatus*) is restricted to Guadeloupe and records of the species from Dominica (Leng and Mutchler 1917: 200, Blackwelder 1945: 459, Peck 2006: 187) are based on the assumption that *I. guadeloupensis* and *I. suturalis* were synonyms.

Fossil Record

Several books and many articles have been published on amber fossils mined in the Dominican Republic. A few of these simply cite that Erotylidae amber fossils are known: Poinar (1992: 144, 285), Poinar and Poinar (1999: 204). Wu (1996: 181, F-424) presents the image of a fossil beetle labeled as an erotylid. Unfortunately, the specimen illustrated is misidentified, and is actually a tenebrionoid with an obvious large frontal swelling on the head and antenna lacking a distinct club. The only known erotylid from DR amber is *Dacne brodzinskyi* Skelley 1997a, which is treated more fully below.

Materials and Methods

Geographical Coverage. As considered here, the West Indies includes all islands of the Bahamas, as well as the Greater and Lesser Antilles (Fig. 1a) south to and including Grenada. Trinidad and Tobago (Peck et al. 2002) are not considered here because they have considerable mainland faunal components that should be discussed with any compilation of South American or Venezuelan faunas.

Taxonomic Coverage. The family Erotylidae has had many recent taxonomic and systematic changes. Wegrzynowicz (2002) and Leschen (2003) recognized a more encompassing Erotylidae that includes the old Languriidae and many smaller taxa that appear to unite them all. Wegrzynowicz’s work focused on higher-level relationships within Erotylinae, but not generic relationships. Leschen’s study focused on higher-level relationships within the family, but not within Erotylinae. Herein, the pleasing fungus beetles are considered to be the subfamily the Erotylinae within the larger Erotylidae.

Taxonomic arrangement. Wegrzynowicz (2002) formally synonymized the tribes Megalodacnini and Encaustini. More recent phylogenetic work by Leschen (2003), Robertson et al. (2004), and Leschen and Buckley (2007) were either inconclusive or resulted in different tree topologies that indicate more work is needed to better establish relationships of all tribes before making further taxonomic changes.

Herein, tribal placement of included taxa follows a five-tribe system: Dacnini, Megalodacnini, Encaustini, Erotylini, Tritomini (Lawrence and Newton 1995). Genera and species are arranged alphabetically under the appropriate tribe.

Type Specimens. Type specimens were located in various collections and these locations are stated if known. Searches by several colleagues in various European museums reported to have types of early workers (e.g. Lacordaire, Duponchel, etc.) had limited success. Alvarenga (1994) listed many erotylid type repositories (some incorrect) and Skelley (1998a) documented the Crotch Erotylidae Collection (CUMZ). Repositories for many early types remain unknown.

However, Duponchel (1825) and Lacordaire (1842) stated that many erotylid specimens they studied and described came from the Dejean collection. Lacordaire (1842, footnote in preface) stated, “(1) Ils apartiennent maintenant à M. le marquis de Brême, qui est également possesseur d’une grande partie de la collection de M. le comte Dejean. Je dis ceci pour que les personnes, qui désireront voir les exemplaires typiques des espèces que j’ai décrites, sachent où les trouver.” Roughly translated, this footnote states that Dejean’s erotylid collection will be kept intact and in the care of Brême so the types can be made available for future research. Thus, missing erotylid types originating from the Dejean collection are probably in the collection of Brême (as reported Horn and Kahle 1935-1937, Horn et al. 1990), which is now housed in Museo Regionale di Scienze Naturali, Torino, Italy. Michael Ivie (pers. comm.) recently visited that museum, confirmed the Brême collection is intact, and that it contains some of the Dejean

collection. Subsequently, three erotylid specimens were borrowed from the Brême collection that proved to be Lacordaire types.

For species where type material was not available, the resources (specimens or literature) on which the species concept was based are provided. Types for newly described species were appropriately labeled using colored paper: holotype [red paper], allotype [blue paper], and paratype [yellow paper].

Literature. Some old, rare references were recently viewed and citations corrected with the aid of the AnimalBase website (www.animalbase.uni-goettingen.de/zooweb/servlet/AnimalBase/search).

Diagnoses and Descriptions. All taxa are diagnosed and described. Larvae were available for most genera but very few species. Thus, larvae are diagnosed only under the appropriate generic account. McHugh (2001) presented a checklist and bibliography of described Erotylinae larvae for the world that is a useful guide to that literature. For adults, some genera and species will need further study as more material becomes available. Comments on some of the remaining problems are made in the text.

Label Data and Distribution Maps. Label data for primary types (where known) and allotypes are presented verbatim. Other specimen data presented may be abbreviated or supplemented with province names or other notes. These additions are placed in square brackets. Extensive label data from some previously described species are presented in table form in the appendix.

Detailed distribution maps are provided for most species on Hispaniola because of the high number of species with recent accurate collection data, as well as the apparent isolation of most species to specific mountain ranges. These data show zoogeographic patterns and visual representation was determined to be informative.

Cuba, like Hispaniola, has several mountain ranges and is expected to have zoogeographic patterns. However, usable data are limited for the island because the information is old, often vague, and Cuba has recently reorganized its provincial names and boundaries. In addition, many named sites are unidentifiable because the names are used multiple times for different localities across the country (e.g., La Palma). Therefore, distribution maps for Cuban species are not presented.

For taxa restricted to smaller islands (i.e. Puerto Rico, Jamaica, Dominica, Guadeloupe, etc.) species distribution data may be accurate, but little can be gained by visual representation. Therefore, species from the smaller islands are only represented on the overall West Indian distribution map (Fig. 1b).

Figures. The Hispaniola color map was obtained from Wikimedia Commons (<http://commons.wikimedia.org>). Habitus images and detailed morphological photographs were taken using a Syncroscopy Auto-Montage system. Line drawings were originally made using CorelDraw 2 (Corel Corporation, Ottawa, Canada). All images were later transferred, modified, and organized into plates using PaintShop Pro 7 (Corel Corporation, Ottawa, Canada).

Materials Examined. A total of 1022 specimens were studied, representing 9 genera and 33 species. Specimens studied are deposited in the following institutions and private collections, with associated codens used throughout the text. Institutional contacts that assisted with specimen acquisition are listed in brackets.

AMNH American Museum of Natural History, New York, NY-USA [L. Herman].

ANSP Academy of Natural Sciences, Philadelphia, PA-USA [D. Azuma].

BMUC Bohart Museum, University of California, Davis, CA-USA [L. Harris].

CASC California Academy of Science, San Francisco, CA-USA [D. Kavanaugh].

CMNC Canadian Museum of Nature, Ottawa, Ontario, Canada [F. Genier, R. Anderson].

CMNH Carnegie Museum of Natural History, Pittsburgh, PA-USA [R. Davidson].

CNCI Canadian National Insect Collection, Ottawa, Ontario, Canada [P. Bouchard].

CUIC Cornell University, Ithaca, NY-USA [J. Liebherr, J. McHugh].

CUMZ Crotch Collection, Cambridge University, Museum of Zoology, Cambridge, United Kingdom [W. Foster, R. Stebbings].

EIUC Eastern Illinois University, Charleston, IL-USA [M. Goodrich].



Figure 2-11. Key characters. 2-3) Anterior view of head and pronotum. 2) *Iphiclus suturalis*. 3) *Notaepytus flavitarsis*. 4-5) Lateral habitus. 4) *Aegithus clavicornis*. 5) *Iphiclus suturalis*. 6-11) Dorsal habitus. 6) *Aegithus clavicornis*. 7) *Aegithus lebasii*. 8) *Iphiclus guadeloupensis*. 9) *Iphiclus suturalis*. 10) *Cubyrus sapphirus*. 11) *Ischyryus quadripunctatus*.

- FAMU Florida A&M University, Tallahassee, FL-USA [B. Peters (late)].
 FMNH Field Museum of Natural History, Chicago, IL-USA [J. Boone].
 FREY Frey Collection, Natural History Museum, Basel, Switzerland [E. Sprecher].
 FSCA Florida State Collection of Arthropods, Gainesville, FL-USA.
 FWSC F. W. Skillman, Jr., Pearce, AZ-USA.
 HNHM Hungarian Natural History Museum, Budapest, Hungary [O. Merkl].
 INHS Illinois Natural History Survey, Urbana, IL-USA [W. LaBerge].
 IZAC Instituto de Zoologia, Academia de Ciencias de Cuba, Habana, Cuba.
 JEWC J.E. Wappes collection, Bulverde, TX-USA.
 MCZC Museum of Comparative Zoology, Cambridge, MA-USA [P. Perkins].
 MNHC Museo Nacional de Historia Natural, Habana, Cuba [J. Genaro].
 MHND Museo Nacional de Historia Natural, Santo Domingo, Dominican Republic.
 MRSN Museo Regionale di Scienze Naturali, Torino, Italy [G. Pagliano].
 NHMB Natural History Museum, Basel, Switzerland [M. Brancuzzi].
 NHML Natural History Museum, London, United Kingdom [M. Barclay, R. Booth].
 NMNH Smithsonian Institution, Washington, DC-USA [N. Vandenberg].
 PASC Polish Academy of Sciences, Museum and Institute of Zoology, Warsaw, Poland [A. Slipinski, P. Wegrzynowicz].
 PESK P. E. Skelley, Gainesville, FL-USA.
 REWC R. E. Woodruff, Gainesville, FL, USA.
 RHTC R. H. Turnbow, Jr., Ft. Rucker, AL, USA.
 RISB Institute Royale des Sciences Naturelles de Belgique, Brussels, Belgium [K. Desender].
 TKPC T. K. Phillips, Western Kentucky University, Bowling Green, KY-USA.
 UPRM University of Puerto Rico, Mayagüez, Puerto Rico [N. Franz].
 VGIC V. Golia collection, Lake Worth, FL-USA.
 WIBF West Indian Beetle Fauna Project, Montana State University, Bozeman [M. Ivie].
 ZMHB Museum für Naturkunde, Humboldt-Universität zu Berlin, Germany [M. Uhlig].
 ZMUC Natural History Museum of Denmark, University of Copenhagen, Denmark [A. Solodovnikov].

FAMILY EROTYLIDAE

SUBFAMILY EROTYLINAE

Key to West Indian Erotylinae Genera

1. Anterior edge of pronotum with complete marginal bead (Fig. 2); frontoclypeal suture broad and straight medially (Fig. 2); pronotal and elytral lateral margin with multiple pores along edge; body broadly oval (Fig. 6-9); body bicolored, black with elytra mostly pale yellow to orange (Fig. 4-9) (*Erotylini*) **2**
- Anterior edge of pronotum lacking marginal bead medially (Fig. 3); when visible, frontoclypeal suture V- or U-shaped medially, not straight; pronotal lateral margin with pores visible only at anterior and posterior angles, elytral lateral margin lacking apparent pores; body elongate, more or less parallel-sided; body color unicolorous to strongly patterned, elytra mostly dark, never appearing entirely pale yellow to orange (Fig. 10-11) **3**
- 2(1). Body strongly convex, globose in lateral view (Fig. 4); metasternum with coxal lines present *Aegithus Fabricius* [2 spp.]
- Body convex, but somewhat flattened in lateral view (Fig. 5); metasternum with coxal lines absent *Iphiclus Chevrolat* [2 spp.]
- 3(1). Terminal maxillary palpomere acuminate (as in Fig. 12, 26); mentum transverse, wider than long; body length < 2.5 mm (Dacnini, known only from amber fossils) *Dacne Latreille* [1 sp.; *D. brodzinskyi* Skelley]

- Terminal maxillary palpomere broadly dilated (Fig. 13-15); mentum variable; body length > 3.0 mm 4
- 4(3). Mentum broadly transverse (Fig. 13); genal lobes projecting ventrally, with mandibles form a shallow cavity in which palpi rest; terminal labial palpomere narrowed, width = 0.2 x terminal maxillary palpomere width (Megalodacnini) **Antillengis Skelley, n. gen.** [2 spp.]
- Mentum triangular (Fig. 14-15); genal lobes projecting laterally or reduced, not forming a cavity in which the palpi rest; terminal labial palpomeres dilated, width = 0.8-1.2 x width of terminal maxillary palpomere (Tritomini) 5
- 5(4). Antennomere II elongate, nearly equal in length to antennomere III (Fig. 16); ocular striae lacking; body small, length less than 5 mm **Altisessor Skelley, n. gen.** [6 spp.]
- Antennomere II globose, half the length of antennomere III or less (Fig. 3, 14); ocular striae present (Fig. 17); body usually larger, length more than 5 mm 6
- 6(5). Meso- and metafemora with marginal bead (Fig. 18-19) along posterior edge; antennomere IX broad and rounded at base, usually wider than long (Fig. 22-23) 7
- Meso- and metafemora lacking sharp marginal bead (Fig. 20-21) along posterior edge; antennomere IX narrowed and straight or angled toward base, usually longer than wide (Fig. 24-25) 8
- 7(6). Body ovoid, lacking color pattern, dark black with blue sheen; most elytral striae restricted to base, disc smooth (Fig. 10); Cuba **Cubyrus Skelley, n. gen.** [1 sp., *C. sapphirus* (Skelley)]
- Body elongate, with strong color pattern of pale yellow and black (Fig. 11); all elytral striae complete, nearly as long as elytra, disc distinctly punctate; southern Lesser Antilles (St. Lucia, St. Vincent) **Ischyryus Olivier** [1 sp., *I. quadripunctatus* (Olivier)]
- 8(6). Body ovate, flattened, strongly dulled, entirely blue, lacking color pattern (Fig. 74), tibiae and antennae entirely pale yellow; antennomere IX narrowly trapezoidal (Fig. 24) **Epytus Dejean** [1 sp., *E. cyaneus* (Duponchel)]
- Body elongate, flattened to robust, usually not strongly dulled, color dark brown to black with variable orange markings, never blue (Fig. 89-104, 121-137); tibiae and antennae mostly dark never pale yellow, some club antennomeres pale; antennomere IX elongate, triangular (Fig. 25) **Notaepytus Skelley, n. gen.** [17 spp.]

TRIBE DACNINI

Genus *DACNE* Latreille 1796

Dacne Latreille 1796: 12. Type species: *Dermestes bipustulatus* Thunberg 1781: 6, subsequent designation Latreille 1810: 427.

Diagnosis. This genus is generally recognized by its small size (usually less than 2.5 mm), acuminate maxillary and labial palpi, broad mentum, distinctly clubbed antenna, anterior medial pronotal disc somewhat swollen forward, and distinctively pentamerous tarsi.

Remarks. Two Asian species, *Dacne (Dacne) picta* Crotch (1873c) and *D. (D.) japonica* Crotch (1873c), are occasionally pests in dried mushrooms (Boyle 1956, Savary 1995) and have been intercepted in international shipments of these products. In the past, researchers and agricultural officials from countries worldwide have asked for assistance identifying *Dacne* specimens intercepted in dried mushrooms. While these species do not seem to be established in countries where they have been intercepted, it is always a possibility, and it is likely these species may eventually be intercepted in the West Indies. *Dacne picta* and

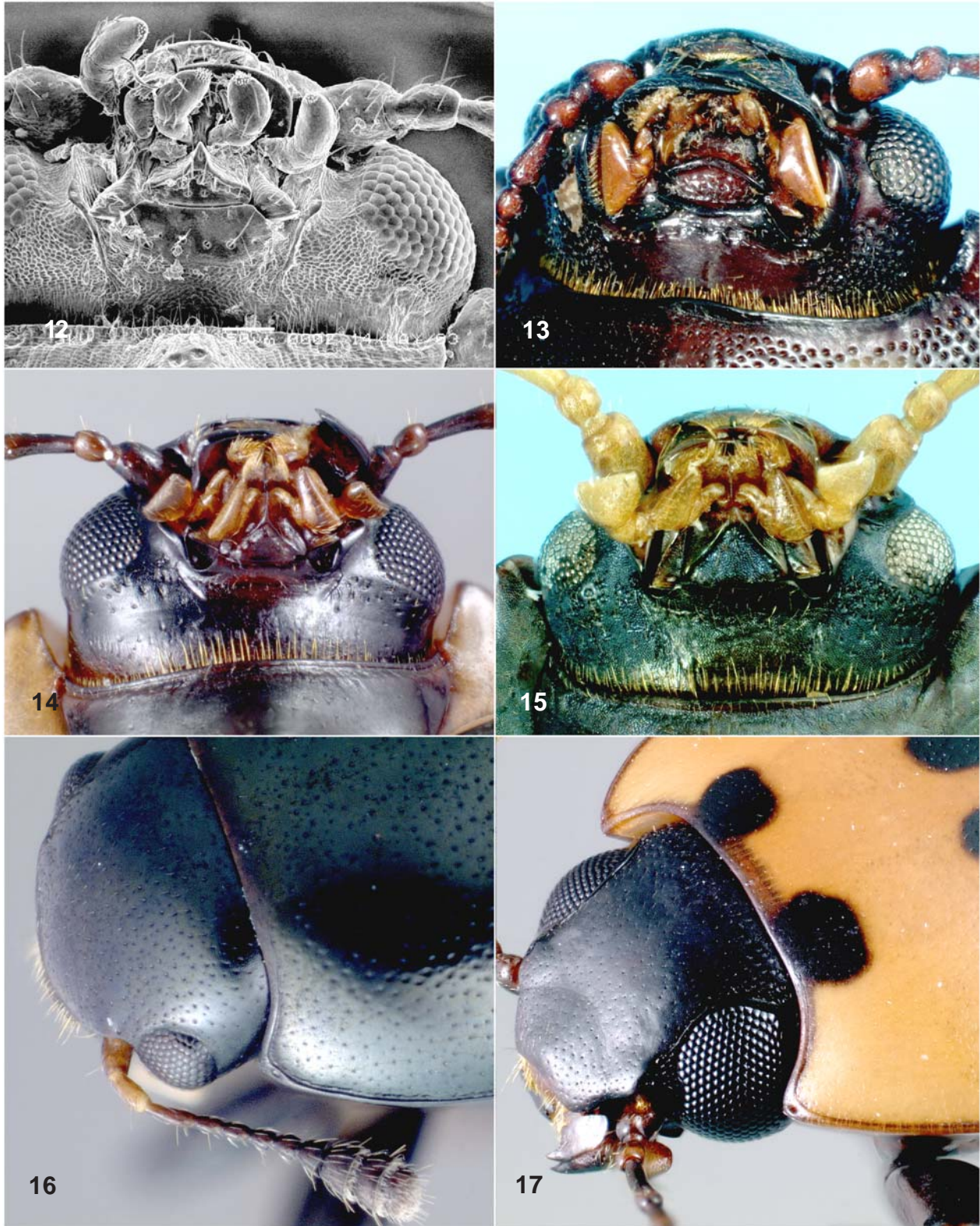


Figure 12-17. Key characters. 12-15) Ventral view head and mouthparts. 12) *Dacne ducke*. 13) *Antillengis epochthidius*. 14) *Notaepytus flavitarsis*. 15) *Epytus cyaneus*. 16-17) Anterior diagonal view of head. 16) *Altisessor ater*. 17) *Notaepytus flavitarsis*.



Figure 18-25. Key characters. 18-21) Mesofemur. 22-25) Antenna. 18, 22) *Cubyrus sapphirus*. 19, 23) *Ischyrus quadripunctatus*. 20, 24) *Epytus cyaneus*. 21, 25) *Notaepytus flavitarsis*. [White arrow points at posterior marginal bead, or note its absence, on mesofemur.]

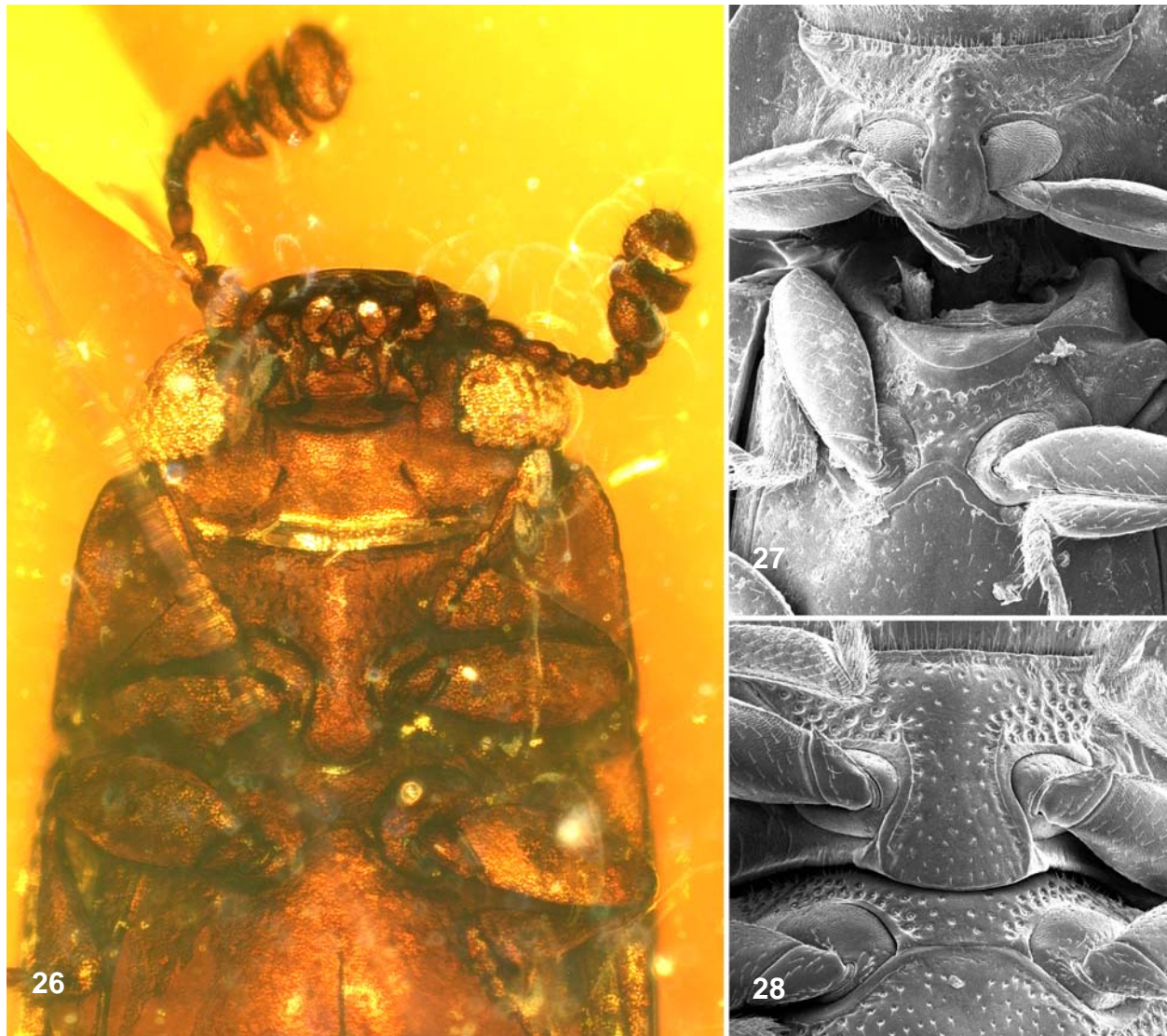


Figure 26-28. *Dacne* spp., ventral view. **26)** *D. brodzinskyi*, amber fossil. **27)** *D. ducke*. **28)** *Dacne quadripunctatus* (Say).

D. japonica can be distinguished from most members of *Dacne* by their distinctly banded color pattern. Skelley (2004) presented a key to *Dacne* species of the world.

Within the genus, *D. brodzinskyi* in amber from the Dominican Republic and *Dacne ducke* Skelley (2004) from Brazil share characters which indicate they belong to a unique New World clade separate from other members of the genus as discussed in Skelley (2004). Therefore, a new subgenus is here erected for these two species, giving *Dacne* four subgenera.

Subgenus *AMERIDACNE* Skelley, new subgenus

Type species: *Dacne brodzinskyi* Skelley 1997a, here designated.

Diagnosis. The primary differences that distinguish *Ameridacne* from other Dacnini are the shortened meso-metasternal suture and its Neotropical distribution.

Description. Length 1.8-2.2 mm; width 0.8-1.0 mm. Body elongate, subcylindrical. Head with eyes prominent; ocular striae long and distinct, attaining anterior edge of epistome; terminal maxillary and labial palpomeres acuminate; mentum broad, width = 2.0-2.5 x length, triangular. Antenna with large 3-segmented club, antennomeres IX-XI transverse.

Pronotal punctures uniform in size, evenly distributed; lateral margin thin along entire length; pronotum tumid, swollen anteriorly, projecting forward medially beyond anterior pronotal angles, anterior margin distinctly concave laterally for reception of eyes. Elytra with basal marginal bead.

Prosternum coarsely punctate, puncture size = 0.75-1.00 x ocular facet diameter. Meso-metasternal suture short, anteriorly arched (Fig. 26-27); mesocoxae separated by less than their diameter. Metasternum lacking coxal lines. Abdomen with distinct coxal lines. Tarsi distinctly pentamerous.

Distribution. This subgenus is only known from the Neotropics.

Etymology. As a uniquely American group within *Dacne*, it is appropriate to call the subgenus “American *Dacne*”, and to abbreviate and combine the roots into a single word. The gender is masculine.

Remarks. *Dacne* previously had three subgenera: the nominal *Dacne* (Holarctic distribution), *Xenodacne* Boyle (western US and Japan), and *Afrodacne* Delkeskamp (Africa). All of these subgenera of *Dacne* (indeed all other Erotylinae) possess a broad meso-metasternal suture (Fig. 28) that has an internal dicondylic connection (Leschen 2003). A shortened meso-metasternal suture with a monocondylic condition is found in other (putatively more primitive) subfamilies of Erotylidae. The scant or fossilized materials prohibit total disarticulation to determine if *Ameridacne* possesses the monocondylic condition. If monocondylic, then placement of *Ameridacne* within Erotylinae is questionable. For now, this taxon is kept within Dacnini, as a subgenus of *Dacne*, until further material and analyses are available.

Two species of *Dacne* (*Dacne*) are transferred to the new subgenus *Ameridacne*, representing **new subgeneric combinations**: the amber fossil *D. (Ameridacne) brodzinskyi* from the Dominican Republic, and the extant *D. (Ameridacne) ducke* from Brazil.

***Dacne (Ameridacne) brodzinskyi* Skelley, new subgenus combination**

Figure 1b, 26

Dacne (Dacne) brodzinskyi Skelley 1997a: 51 ~ Skelley 2004: 111.

Dacne brodzinskyi [sic] ~ Skelley 2004: 111; Perez-Gelabert 2008: 108.

Diagnosis. *Dacne brodzinskyi* is easily distinguished from extant members of the genus by its short meso-metasternal suture and dilated tibiae (Fig. 26).

antennomere III longer than antennomere IV; antennomeres IV-VIII short, rounded; club broad and oval; antennomere IX-XI each 3 x wider and 2 x longer than antennomere VIII; antennomere XI transverse, 1.5 x longer than antennomere X.

Description. [The following is a partial description modified from Skelley 1997a, 2004.] Length 1.9-2.2 mm; width 0.8-1.0 mm. Body elongate; color entirely black, lacking color pattern (possibly an artifact of preservation-fossilization). Head interocular width = 3 x ocular width; punctation apparently coarse; epistome rounded, apparently with complete marginal bead. Antennae attaining middle of pronotum; Scutellum transverse, width = 2 x length. Elytra with basal bead, punctures scattered with some vague rows. Prosternum with anterior edge straight, narrow between coxae, intercoxal width less than coxal width, base rounded; lines continuous around coxal cavity; prosternum coarsely punctate, puncture size = 0.75 x ocular facet diameter. Tibiae triangularly dilated, most notably on pro- and mesotibiae.

Distribution. The species is known only from Dominican Republic amber.

Type Material. The holotype (FSCA) and one paratype (AMNH) were studied for the original description.

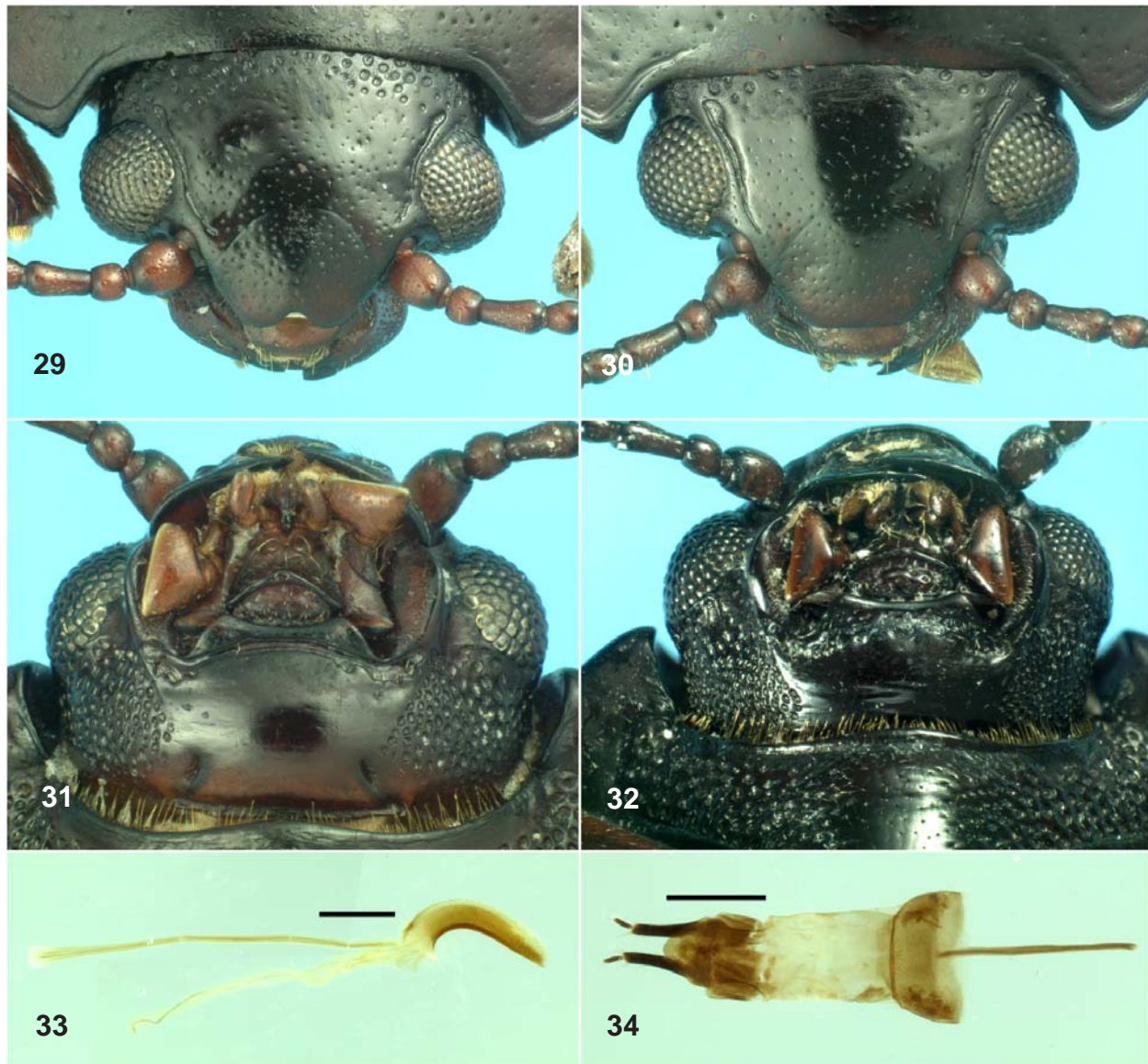


Figure 29-34. *Antillengis* spp. **29-30)** Anterior view of head. **29)** *A. brunnipes*, male. **30)** *A. brunnipes*, female. **31-32)** Ventral view of head. **31)** *A. brunnipes*. **32)** *A. epochthidius*. **33-34)** *A. epochthidius* genitalia. **33)** Male. **34)** Female. Genitalic scale line = 1mm.

Specimens Examined. Two additional amber specimens were obtained after the original description, both from the Dominican Republic (PESC).

Remarks. No extant member of *Dacne* is presently known in the West Indies. Being a small and easily overlooked beetle, hopefully a living representative of the subgenus may yet be discovered.

TRIBE MEGALODACNINI

Genus *ANTILLENIGIS* Skelley, new genus

Type species: *Oocyanus brunnipes* Kuhn 1910, here designated.

Diagnosis. *Antillengis* is recognized by the sexually dimorphic epistome (apically notched in males, entire in females, Fig. 29-30), transverse mentum, and broad palpi that rest in a shallow cavity between the mandibles and genal lobes (Fig. 13, 31-32).

Description. Length 7.5-9.8 mm, width 3.7-4.6 mm. Body robust, elongate, parallel-sided, glossy; dark reddish-brown to nearly black with red-brown appendages and elytral apex.

Head with prominent eyes, facets coarse; ocular striae attaining base of antenna; epistome with apex medially notched in male, entire in female (Fig. 29-30); stridulatory files absent. Antennae relatively stout, attaining basal quarter of pronotum; antennomere II subglobose, length = width; antennomere III length = 2.5 x width, as long as antennomeres IV+V combined; antennomeres IV-VIII moniliform, length = width; antennomeres IX-XI form distinct club; antennomere IX triangular, length = 2.0-2.5 x antennomere VIII, width = 2.0-2.5 x antennomere VIII width; antennomere X transverse, width = 2.5 x width, nearly crescent shape, as wide as antennomere IX; antennomere XI asymmetrical, transversely oblong, width = 2 x length. Mentum broad, plate width = 2.0-2.2 x length, plate triangular or pentagonal with short sides, anterior margin angled or broadly rounded. Gular-submental groove distinct. Mandibles somewhat cup-shaped, densely punctate and setose laterally. Genal lobes weakly projecting ventrally, with a patch of setae medially and laterally; large pore present on lateral margin. Genal lobes and mandibles form shallow cavities in which palpi rest. Terminal maxillary palpomere large, triangular, width = 2.0-2.5 x length. Terminal labial palpomere oval, weakly truncate apically, length = 1.5 x width, width = 0.25 x width of maxillary palp. Ventrally, base of head behind eyes coarsely, deeply punctate, puncture size = an ocular facet diameter, separated by less than 0.5 x their diameter; gula glossy, lacking punctures.

Pronotal surface smooth, punctures of two sizes: widely scattered and irregularly placed coarse punctures, puncture size = 0.5-1.0 x ocular facet diameter, interspersed with scattered fine punctures; apical and basal edges with marginal bead only laterally; lateral marginal bead present; pores of anterior and posterior lateral angles on ventral surface, indistinct. Scutellum pentagonal, length = width. Elytron smooth, with scattered coarse strial punctures; strial punctures absent on apical third of elytron. Wings present, fully developed.

Prosternum length = 2 x intercoxal width; base concave; procoxal lines not present at base, convergent anteriorly, continuous or not around coxal cavity, if not continuous, then not extending onto sternal surface; anterior edge with distinct marginal bead, weakly projecting medially; lateral prosternum coarsely, deeply punctate, puncture size and density similar to those on base of head behind eye. Mesosternum transverse; coxal lines short and inwardly arched at apex, coxal line anterior of mesocoxa present only laterally; mesosternum basally truncate, shallowly concave. Metasternum long, distance between meso- and metacoxae = 1.5-1.7 x intermesocoxal width, surface smooth, finely punctate throughout, line continuous around mesocoxal cavity, not extending medially. Meso- and metafemur with posterior margin sharply rounded in cross-section, fine marginal bead present only at apex. Tarsi pseudotetramerous. Abdomen finely punctate medially, becoming coarser laterally and basally; first ventrite with line around metacoxa fine to absent, or evident with row of coarse punctures. Male genitalia with long hair-like flagellum, length = 2 x median lobe length (Fig. 33); flagellum abruptly angled just posterior of swollen base. Female genitalia with prominent, setose styli (Fig. 34).

Distribution. *Antillengis* is known only from the mountains of Cuba and the Dominican Republic.

Larvae. Only small, first instar specimens of *A. epochthidius* were available for study (Fig. 37). Head broadly, evenly pigmented brown; all nota of T1-3 and terga of A1-9 sclerotized brown; dorsally T1-3 and A1-8 with 2 transverse rows of microspinules; terga of A5-8 becoming heavily granulate, granules obscuring rows of microspinules; dorsum of A9 long, concave, heavily granulate, with strong apical horn-like urogomphi. Spiracles of A1-8 not raised on tubercles. These larvae were collected with adults on a bracket fungus identified as *Ganoderma* sp.

Etymology. The generic name is derived from *Engis*, an old generic name used for various Erotylinae, and Antilles, due to the fact that this is the first megalodacnine recognized from the Greater Antilles. Thus, this is an “Antilles-*Engis*”. The gender is masculine.



Figure 35-37. *Antillengis* spp., habitus. **35)** *A. brunnipes*. **36)** *A. epochthidius*, paratype. **37)** *A. epochthidius*, first instar larva.

Remarks. Megalodacnini is primarily distributed in the Old World, having the greatest diversity in Asia and Indonesia. Until now, only the widespread genus *Megalodacne* Crotch (6 spp.; Alvarenga 1994, Delkeskamp 1952) was known to occur in the continental areas of the New World. A closely related tribe, Encaustini, is also primarily found in the Old World tropics and only the flightless genus *Scaphengis* Gorham (9 spp.; Skelley 1997b) occurs in the New World, i.e. Mexico and northern Central America.

Mouthpart characters are the primary diagnostic characters separating Megalodacnini and Encaustini. The Megalodacnini have a large, transversely rectangular mentum and more ventrally flattened mandibles and genal lobes so the terminal palpomeres are more or less exposed at rest. In comparison, the Encaustini have a narrower, distinctly triangular mentum and a buccal cavity formed by ventrally expanded mandibles and genal lobes in which the entire palpi rest. *Antillengis* is intermediate in these characters, having a broad mentum and shallow buccal cavity. Further analyses of tribal relationships are needed to better understand the placement of this genus and the relationships of these tribes. For now, *Antillengis* is placed in Megalodacnini because of the broad mentum, which is unlike that of any member of Encaustini (*sensu stricto*).

Another striking character of *Antillengis* is the sexually dimorphic epistomal notch (Fig. 29-30). This character appears in some Asian megalodacnines, e.g. *Episcaphula australis* (Boisduval). In the New World, an epistomal notch is diagnostic of *Pselaphacus* Percheron (presently Tritomini), however the notch is more developed and present in both sexes.

Key to *Antillengis* species

1. Mentum triangular, angled and narrowly rounded anteriorly; gular-submental groove narrow and sharply defined (Fig. 31); Cuba ***A. brunnipes* (Kuhnt)**
- Mentum weakly pentagonal with sort sides, obtusely angled and broadly rounded anteriorly; gular-submental groove broad and poorly defined (Fig. 13, 32); Dominican Republic ***A. epochthidius* Skelley, n. sp.**

***Antillengis brunnipes* (Kuhnt 1910), new combination**

Figure 1b, 29-31, 35, 141-143

Oocyaneus brunnipes Kuhnt 1910: 231 ~ Kuhnt 1911: 44; Leng and Mutchler 1914: 412; Curran 1944: 3 [as synonym of *O. fulvitaris*]; Blackwelder 1945: 465; Alvarenga 1994: 18 [as synonym of *E. fulvitaris*].
Eptyus [sic] brunnipes (Kuhnt) ~ Peck 2005: 134.

Diagnosis. *Antillengis brunnipes* is recognized by its smaller body size (less than 9 mm long), triangular mental plate, and narrow, well-defined gular-submental groove.

Description. Length = 7.5-8.4 mm; width 3.7-4.3 mm. Body dark reddish-brown nearly black; antennae, palpi, legs, and apical 4 abdominal ventrites reddish-brown; elytral apex with red-brown mark which extends laterally and anteriorly nearly to middle (Fig. 35).

Head with base coarsely punctate, puncture size = an ocular facet diameter, separated by 0.5-1.0 x their diameter; vertex and epistomal punctures = 0.3 x ocular facet diameter, separated by 2-4 x their diameter on vertex, becoming denser on epistome. Mentum transverse, plate width = 2.0 x length, plate triangular with anterior margin angled, narrowly rounded medially. Gular-submental groove narrow, well defined; except for few punctures laterally, gula lacking sculpture posterior of groove.

Pronotal lateral margin straight at base, evenly arched toward eyes anteriorly. Elytra striae punctures large, distinctly impressed, slightly larger than coarse punctures at base of pronotum; intervals finely punctate, puncture size = fine pronotal puncture.

Prosternum with marginal bead broad and well defined medially, becoming narrow and weakly defined laterally; anteriorly coarse lateral punctures not attaining midline. Genitalia similar to *A. epochthidius* (as in Fig. 33-34).

Distribution. *Antillengis brunnipes* occurs in Cuba in the Sierra Maestra.

Type Material. Male holotype *Oocyranus brunnipes* Kuhnt (Fig. 141-142) possesses the following labels: “/ [green paper, hand written] Cuba / [green paper, hand written] Cuba Reihe / [orange paper] Type / Kuhnt det. / 21270 / [white paper black lined box, vertical on left side] det. P. Kuhnt [horizontal, hand written] *Oocyranus brunnipes* Kuhnt / [red paper] HOLOTYPE *Oocyranus brunnipes* Kuhnt, det. P. Skelley-08 / *Antillengis brunnipes* (Kuhnt), det. P. Skelley 2008” (Fig. 143, ZMHB).

Specimens Examined. Three additional specimens have been studied, all with the same label data: CUBA: Santiago Prov., Gran Piedra, Ind Chorrito, 9.XII.1995, 600m, km8, leaf & stick litter, S. Peck, 95-88 (2-CMNC, 1-PESC).

Variation. Available specimens exhibit little variation.

Remarks. *Antillengis brunnipes* has been a puzzle from the moment it was first studied. Kuhnt (1910) described this species in *Oocyranus* (Tritomini) and Curran (1944) erroneously synonymized it based on the description alone. Thanks to observations by P. Wegrzynowicz (pers. comm.), Kuhnt’s type was located in “box # 2 with the *Pselaphacus*”. Someone previously recognized the similarity of the epistomal notch with that of *Pselaphacus* and placed the type of *O. brunnipes* with that genus. Closer study of various characters led to its present placement in Megalodacnini.

***Antillengis epochthidius* Skelley, new species**

Figure 1b, 32-34, 36-37

Diagnosis. *Antillengis epochthidius* is recognized by: large body size (greater than 9 mm long), pentagonal mental plate, and a broad poorly defined gular-submental groove.

Description. Length 9.2-9.8 mm; width 4.5-4.6 mm. Body dark red-brown nearly black; antennae, palpi, legs, and apical 4 abdominal ventrites reddish-brown; elytral apex with red-brown mark which extends laterally to middle (Fig. 36).

Head with base coarsely punctate, puncture size = an ocular facet diameter, separated by 0.5-1.0 x their diameter; vertex and epistomal punctures = 0.3 x ocular facet diameter, separated by 2-4 x their diameter on vertex, becoming denser on epistome. Mentum transverse, plate width = 2.2 x length, plate pentagonal, sides short, anterior margin obtusely angled and broadly rounded medially. Gular-submental groove broad, poorly defined; in addition to few punctures laterally, gula with sculpture or punctures posterior of groove (Fig. 32).

Pronotal lateral margin straight at base, evenly arched toward eyes anteriorly. Elytral striae punctures large, indistinctly impressed, same size or smaller than coarse punctures at base of pronotum; intervals finely punctate, puncture size = fine pronotal punctures.

Prosternum with anterior marginal bead broad and well defined medially, becoming narrow and weakly defined laterally; coarse punctures continue narrowly connected across midline anterior of coxae. Genitalia similar to *A. brunnipes* (Fig. 33-34).

Distribution. *Antillengis epochthidius* is found on Hispaniola in the Cordillera Central.

Type Material. Male holotype and female allotype (WIBF, to be deposited in NMNH) and 4 male paratypes (WIBF, PESC) of *Antillengis epochthidius* all possess the following label: “/ DOMIN. REP: Prov. La Vega, La Cienega, Parque Nac. HQ, 19°04’N, 70°52’W. 1100m, 09APR1992, bracket fungi, M. A. Ivie, D. Sikes, W. Lanier”. The bracket fungus was later identified as *Ganoderma* sp. (M. Ivie, pers. comm.), which is a large hard polypore that also hosts other megalodacnines.

Variation. The sculpture of the broad gular-submental groove varies tremendously. One specimen has the entire posterior margin obscured, others have only the lateral thirds obscured. The distinctiveness of

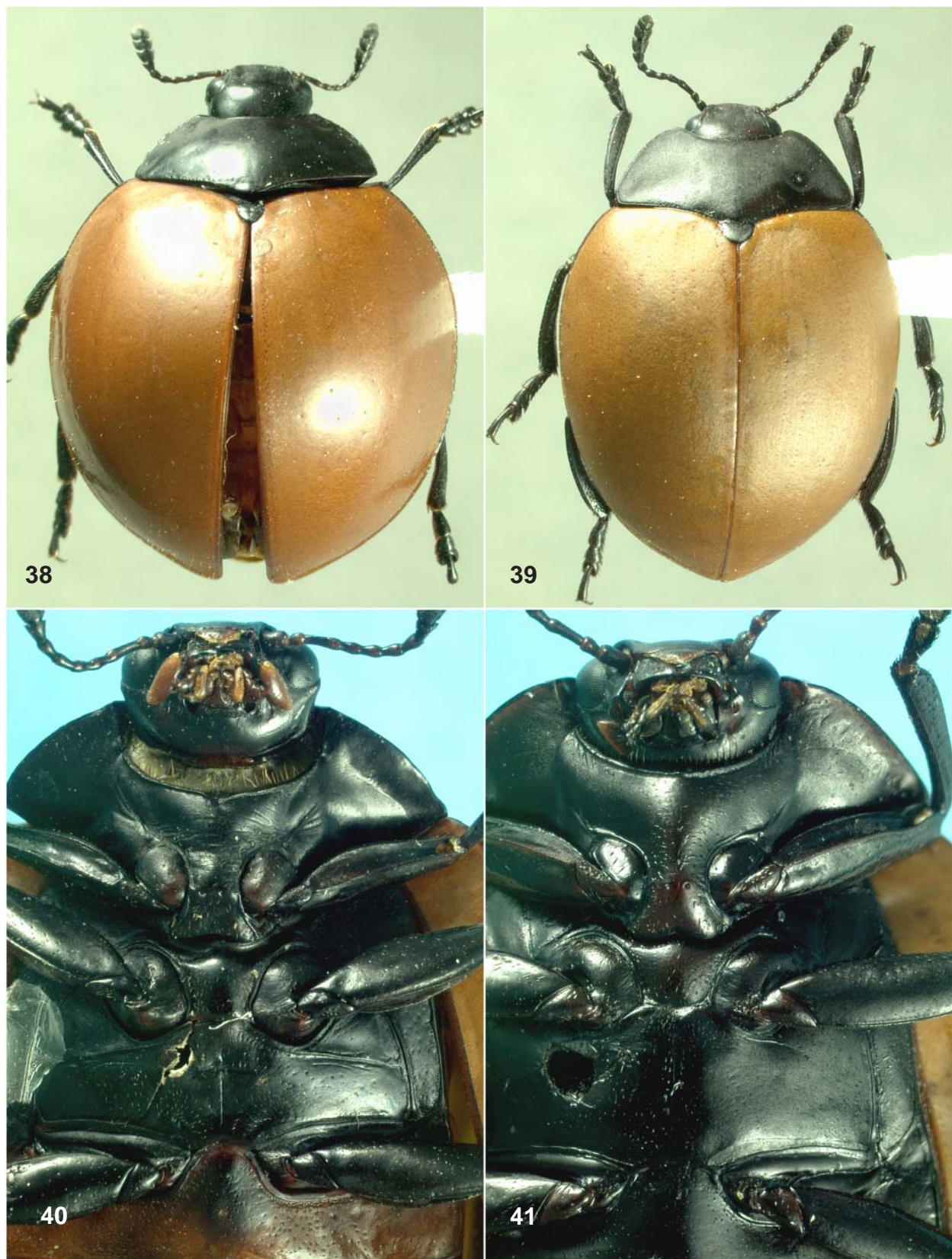


Figure 38-41. *Aegithus* spp., dorsal and ventral habitus. 38, 40) *A. clavicornis*. 39, 41) *A. lebasii*.

the medial anterior angle of the mentum varies from broadly rounded to weakly angulate, sides always short.

Etymology. The specific epithet is a Latinized form of *epochthidios*, which is Greek for “something from the mountains.”

TRIBE EROTYLINI

Genus *AEGITHUS* Fabricius 1801

Aegithus Fabricius 1801: 9. Type species: *Chrysomela clavicornis* Linnaeus 1758, by original designation according to Blackwelder 1947: 53, also by subsequent designation of Hope 1841: 114; after synonymy of *Coccinella surinamensis* Linnaeus under *Chrysomela clavicornis* Linnaeus. ~ Hope 1841: 114; Lacordaire 1842: 32, 276-295; Crotch 1873b: 145-147; Crotch 1876: 489-496; Chapuis 1876: 49, 55-56; Gorham 1888: 85-92; Kuhnt 1909: 9, 17; Kuhnt 1911: 8-11; Deelder 1942: 51, 57-59; Blackwelder 1945: 456-457; Alvarenga 1965: 81; Alvarenga 1994: 51-57; Dode 2000: 275.

Aegithomimus Mader 1942: 177. Type species: *Aegithus (Aegithomimus) multistriatus* Mader 1942, by monotypy. ~ Alvarenga 1965: 81 [subgenus of *Aegithus*]; Alvarenga 1977: 105 (synonymy).

Diagnosis. Defining characters for *Aegithus* are: clypeal sides not narrowed at base (wedge-shaped), and a globose, hemispherical body form (Fig. 4, 6-7, 38-39). Secondary diagnostic characters that are moderately variable among species include: coxal lines on metasternal surface (Fig. 40-41, lacking on many mainland species); meso- and metafemur with posterior marginal bead; antennomere IX length = antennomere XI (Fig. 38-39); males with minute tomentose patch on first abdominal ventrite (Fig. 40); coarse punctures at base of pronotum along nearly entire margin.

Description. Length 6.1-16.8 mm; width 4.6-14.5 mm. Body oval, rounded on sides and weakly to strongly hemispherical dorsally; body black to reddish-brown, some with elytral color patterns.

Head surface glossy to dull by microreticulation, punctures fine; clypeus width = 1.7-2.0 x length, divergent toward base or not, anterior edge truncate, surface punctures moderate in size; ocular striae attaining base of antenna or base of epistome. Antenna entirely black, antennomeres generally elongate; antennomere II subglobose; antennomere III length = 3 x width, as long as antennomeres IV+V combined; antennomeres IV-VII rounded apically, all equal in width; antennomere VIII somewhat triangular, angular apically, could be considered part of club; antennomere IX length = antennomere III, triangular or trapezoidal, sides divergent basally; antennomere X transverse; antennomere XI subcircular. Terminal maxillary palpomere triangular, weakly to strongly widened. Terminal labial palpomere triangularly dilated medially, not as wide as terminal maxillary palpomere. Mentum with raised triangular plate with distinct marginal bead, anterior angle acute to 90°.

Pronotum glossy or dulled, punctation as on head, surface variably convex; strongly narrowed anteriorly, anterior edge medially straight, curving forward laterally, with fine entire marginal bead; anterior angles acute or broadly rounded, posterior angles approximately 90°, angular or rounded; base sinuate or shallowly V-shaped, with weak medial lobe; base with marginal bead laterally or entirely lacking, often with row of coarse punctures along margin. Scutellum weakly triangular to weakly pentagonal, edges rounded, length = 1.0-1.2 x width. Elytra glossy or dull; lacking basal marginal bead; strial punctures visible or not, in rows or not, gemellate (paired) or not. Wings present, fully developed or not.

Prosternum variably convex, not keeled, but usually with medial projection on anterior margin, pinched or not; anterior edge with fine, entire marginal bead; surface relatively smooth, finely punctate; lines fine, continuous around coxal cavity; base distinctly concave. Mesosternum with lines continuous around coxal cavity. Metasternum with lines not continuous around mesocoxal cavity, extending onto surface of metasternum, variable in length; surface smooth, glossy or dull, finely punctate. Abdomen with lines continuous around metacoxal cavity, scattered fine punctures on terminal ventrites. Femur with marginal bead, angular in cross section; shortened, apex of meso- and metafemur often not visible from above. Tibia distinctly carinate on lateral edge. Tarsi with well-developed ventral pads on tarsomeres

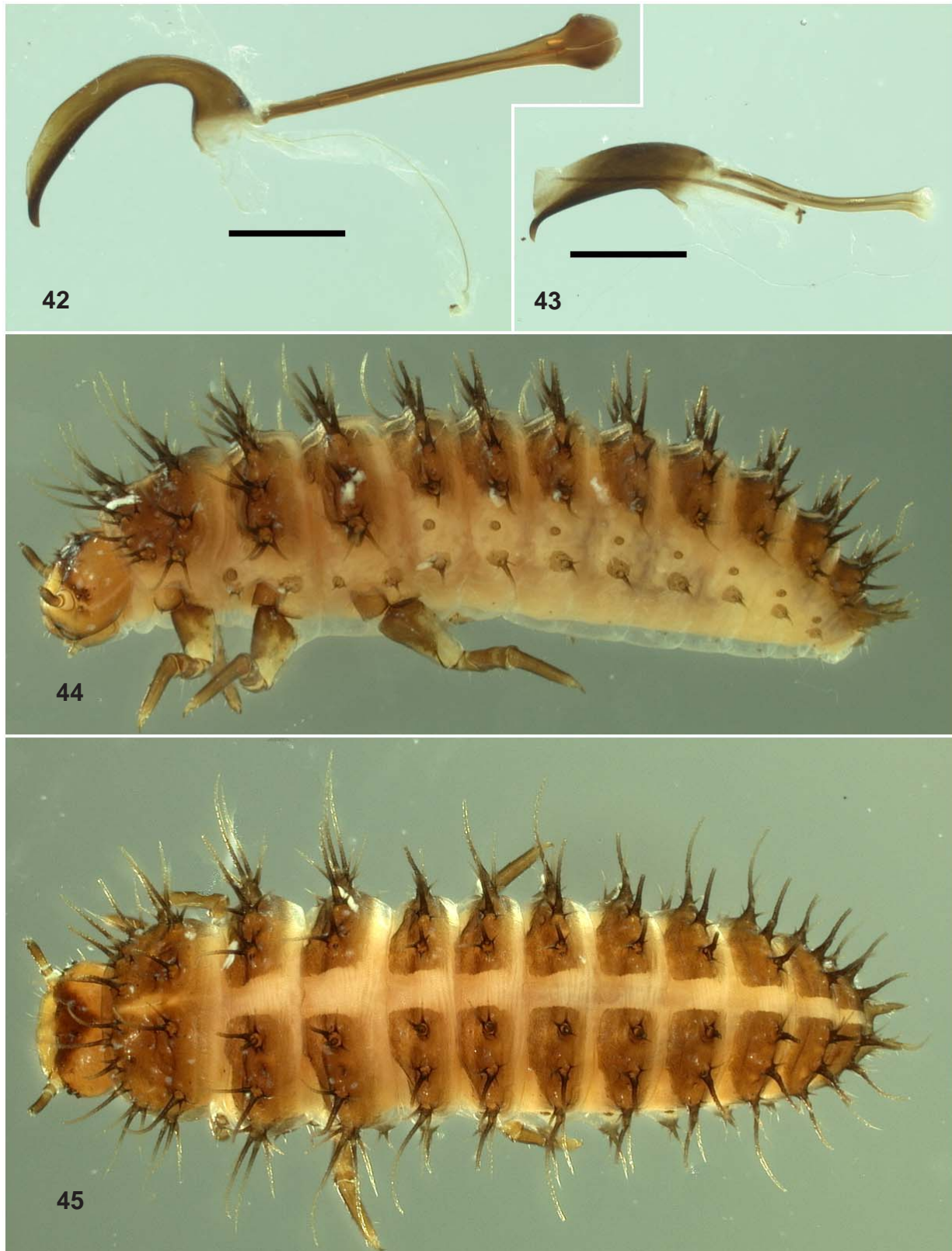


Figure 42-45. *Aegithus* spp., male genitalia and larva. 42) *A. clavicornis*. 43) *A. lebasii*. 44-45) *A. lebasii* larva, lateral and dorsal view. Genitalic scale line = 1 mm.

I-III; metatarsomere I length = metatarsomere II+III combined. Male of some species with pilose spot on first abdominal ventrite (e.g., *A. clavicornis*, *A. lebasii*). Male genitalia with median lobe elongate and weakly hooked at apex.

Distribution. *Aegithus* is widespread in the Neotropics, with species native to Grenada and recently established on Hispaniola and Jamaica.

Larvae. *Aegithus* larvae were first diagnosed by Lacordaire (1832: 364; 1833: 89-90) for "*Erotylus surinamensis*". Roberts (1958: 281) briefly diagnosed larvae of *Aegithus meridionalis* Crotch and *Aegithus quadrinotatus* Chevrolat. The following diagnosis is based on the full description of *A. clavicornis* larvae by Teixeira and Casari (1998), and direct study of *A. lebasii* larvae from Jamaica (Fig. 44-45).

Body elongate, with dark tergites, covered with spicules, scoli, and aristate or simple setae. Head setose, with short setiferous slender spines or tubercles. Antennal length about half head width. Tergites of T2-A8 dorsally with 3 long, branched scoli on each side. Abdominal epipleurites with single, large, branched scoli; urogomphi short, about as long as an abdominal segment. Spiracles annular.

Remarks. Generic limits, relationships, and placement of some taxa remain problematic within Erotylini. Likewise, the historical practice of identifying taxa based solely on written descriptions has led to many species being placed in incorrect genera or to the production of incorrect synonyms. Previously cited characters used to define genera and subgenera often vary among species presently assigned to these taxa and lead to descriptions like the one above. Considering these daunting problems, some species are difficult to confidently place in some genera (e.g., *Aegithus* and *Iphiclus*) and generic limits remain vague. A larger revisionary study with deep taxon sampling is needed to assess additional generic characters and resolve these tenuous generic limits.

Aegithus and *Iphiclus* are diverse mainland genera with few representatives naturally occurring in the West Indian fauna. Addressing mainland species to resolve generic limits is outside the scope of this work. Thus, traditional concepts of these genera and species placements were maintained.

Key to West Indian *Aegithus* species

1. Body hemispherically rounded in both dorsal and lateral view (Fig. 4, 6); abdomen red; Grenada (native) and Dominican Republic (introduced) ***Aegithus clavicornis* (Linnaeus)**
- Body broadly rounded in dorsal and lateral view (Fig. 7); abdomen black; Jamaica (introduced) ***Aegithus lebasii* (Lacordaire)**

***Aegithus clavicornis* (Linnaeus 1758)**

Figure 1b, 4, 6, 38, 40, 42

Chrysomela clavicornis Linnaeus 1758: 370 ~ Linnaeus 1767: 590, #29; Linnaeus in Gmelin 1790: 1678, #29; Degeer 1775: 351-352, #4, t. 16; Lacordaire 1842: 285.

Erotylus clavicornis (Linnaeus) ~ Olivier 1792: 435, #21 f.11; Olivier 1807: 479, pl. 2, fig. 28; Dejean 1821: 128; Duponchel 1825: 42, #14; Sturm 1826: 139.

Aegithus clavicornis (Linnaeus) ~ Fabricius 1801: 9, #1; Chevrolat 1834 (fascicle 4): [pages unnumbered]; Crotch 1873b: 147; Crotch 1876: (117) 493; Gemminger and Harold 1876: 3705; Gorham 1888: 87-88; Gorham 1898: 336; Kuhnt 1909: 18; Kuhnt 1911: 8-9; Leng and Mutchler 1914: 412; Leng and Mutchler 1917: 200 [ex Dominica, misidentification]; Deelder 1942: 57-58; Blackwelder 1945: 457; Woodruff et al. 1998: 25; Teixeira and Casari 1998: 459-463.

Coccinella surinamensis Linnaeus 1763a: 393, #12 ~ Linnaeus 1763b: 10, #12; Linnaeus 1767: 579, #2; Linnaeus in Gmelin 1790: 1645, #2; Fabricius 1775: 79, #2; Fabricius 1781: 93, #2; Fabricius 1787: 53, #4; Fabricius 1792 [1(1)]: 266-267, #4; Crotch 1876: (117)493 [synonymy with *A. clavicornis*]; Gemminger and Harold 1876: 3705; Kuhnt 1911: 8-9.

Erotylus surinamensis (Linnaeus) ~ Fabricius 1792 [1(2)]: 39, #18; Olivier 1792: 435, #19; Herbst 1799: 373, #15, pl.137 f.12; Olivier 1807: 480, pl. I., fig. 9; Schönherr 1808: 328, #30; Duponchel 1825: 156, #59, t. 3, f. 59; Sturm 1826: 139.

Aegithus surinamensis (Linnaeus) ~ Fabricius 1801: 9-10; Illiger 1804: 160; Illiger 1806: 232; Lacordaire 1842: 285-287; Kirsch 1876: 102.

“*Aegithus surinamensis* Fab.” [erroneous attribution] ~ Dejean 1836: 427, Dejean 1837: 451; Sturm 1843: 305.

Diagnosis. *Aegithus clavicornis* is readily distinguished from other members of *Aegithus* by its hemispherical black body (Fig. 4, 6, 38) with red-orange elytra and abdomen.

Description. Length: 10.5-13.0 mm; width: 8.0-9.5 mm. Body globose, dorsally hemispherical (Fig. 4), laterally rounded; weakly microreticulate, weakly glossy. Body and appendages black except as noted: palpi brown; abdomen and elytra red-orange.

Head interocular width = 3.5 x ocular width; ocular striae attaining base of epistome; vertex finely punctate, puncture size = an ocular facet diameter, separated by 2-4 x their diameter; epistome with dulling microreticulations; puncture size = an ocular facet diameter, separated by 1-2 x their diameter. Eyes finely faceted. Antenna attaining basal quarter of pronotum; antennomere II length = width; antennomere III length = 3 x width, length = length of antennomeres IV+V combined; antennomeres IV-VIII equal in length; IV-VII length = 1.5 x width; VIII triangular, part of club, length = width at apex; antennomere IX roughly trapezoidal, length = width at apex; antennomere X crescent shape; antennomere XI subcircular, length = IX length. Terminal maxillary palpomere securiform, width = 3 x length. Terminal labial palpomere triangular, width = 3 x length, expanded medially, width = 0.5 x width of terminal maxillary palpomere. Mentum with triangular plate, length = width at base. Genal lobes present, short, blunt.

Pronotum transverse, width = 2.5 x length, anterior width = 0.5 x posterior width; discal puncture size and distribution as those on vertex, evenly distributed; base with row of large punctures, puncture size = 2 x ocular facet diameter; base weakly V-shaped, marginal bead absent. Scutellum pentagonally rounded, length = width. Elytra with scattered punctures, puncture size = 2 x ocular facet diameter; striae not evident; base lacking marginal bead.

Prosternum length = 3 x intercoxal width; anterior edge with marginal bead, weakly pinched anteriorly; prosternum convex, depressed anterior and posterior coxa, not punctate; sternal lines continuous around coxal cavity; base concave. Mesosternum truncate, sternal lines divergent anteriorly, continuous around coxal cavity; with minute punctures. Metasternum with lines not meeting medially at mesosternal junction, not continuous around mesocoxal cavity, sternal lines long, extending onto sternal surface, often attaining lateral margin (Fig. 40); with a few scattered fine punctures. Abdomen with coxal lines not meeting medially; continuous around metacoxal cavity; punctures scattered. Male with a very small group of setose punctures at center of first abdominal ventrite. Male genitalia with median lobe narrowed, strongly curved at base, apex acutely curved; flagellum long and thin (Fig. 42).

Distribution. *Aegithus clavicornis* is widespread in tropical America from Mexico to Argentina. In the West Indies it is known only from the Dominican Republic (Medrano-Cabral 2009) where it has been recently established, and Grenada where it is apparently native (Fig. 1b).

Type Material. Type material of *Chrysomela clavicornis* Linnaeus was stated as “Habitat in America. Rolander”, present repository unknown. Type material of *Coccinella surinamensis* Linnaeus was stated as “Habitat Surinami” with no comment whose collection it was in, present repository unknown.

The concept of this species is based on literature descriptions and comparison with a multitude of identified specimens present in various historic collections. Any potential designations of lecto- or neotypes should be done in the context of a revision of *Aegithus*. Therefore, none is proposed here.

Specimens Examined. Thousands of specimens have been studied over the years, from Mexico to Argentina, but only five from the West Indies: Dominican Republic: Santo Domingo (Medrano-Cabral et al. 2009). Grenada: St. Andrews, Chantilly, 6-APR-1990, J. Telesford (1-PESC); Morne Delice, 9-JUN-1990,

M. C. Thomas, fungus on old logs (1-FSCA). Gorham (1898) reported material from "Grenada: Mount Gay Estate and Mount Maitland on the leeward side."

Remarks. Naturally occurring West Indian populations of *A. clavicornis* appear to be restricted to Grenada (Gorham 1898, Leng and Mutchler 1914, Woodruff et al. 1998). Leng and Mutchler (1917) cited *A. clavicornis* from Dominica, which was repeated by Blackwelder (1945) and Peck (2006). No specimens have been seen from Dominica, and this record is likely based on a misidentification of *Iphiclus suturalis*. However, *A. clavicornis* has been found on Hispaniola, and this is considered to be a new establishment (Medrano-Cabral et al. 2009; see Erroneous Records in the Materials and Methods).

***Aegithus lebasii* Lacordaire 1842**

Figure 1b, 7, 39, 41, 43-45

Aegithus lebasii Dejean in Dejean 1836: 427 ~ Dejean 1837: 451 [both listings are *nomina nuda*].

Aegithus lebasii Lacordaire 1842: 285 ~ Crotch 1876: 494(118).

Aegithus lebasii [sic] (Lacordaire) ~ Kuhnt 1909: 18; Kuhnt 1911: 9; Deelder 1942: 59; Blackwelder 1945: 457.

Aegithus cassideus Lacordaire 1842: 295 ~ Crotch 1876: 494(118) [synonymy with *A. lebasii*]; Gemminger and Harold 1876: 3705.

Diagnosis. In the West Indies, *A. lebasii* is recognized by the body shape, short coxal lines on the metasternum, black body and abdomen with red-orange elytra. However, differentiation from some mainland *Aegithus* is more difficult, and characters used to recognize it include: minute differences in body shape and coxal line lengths.

Description. Length: 7.5-9.5 mm; width: 5.5-7.0 mm. Body dorsally convex, somewhat hemispherical (not globose), laterally rounded (Fig. 7); strongly microreticulate, dull. Body and appendages black with red-orange elytra.

Head interocular width = 3.5 x ocular width; ocular striae attaining base of epistome; vertex finely punctate, puncture size = an ocular facet diameter, obscured by microreticulations, separated by 2-3 x their diameter; epistome puncture size = an ocular facet diameter, separated by 1-2 x their diameter, impressed. Eyes finely faceted. Antenna attaining basal quarter of pronotum; antennomere II length = width; antennomere III length = 3 x width, length = length of antennomeres IV+V combined; antennomeres IV-VIII equal in length; IV-VII length = 1.5 x width; VIII triangular, part of club, length = width; antennomere IX trapezoidal, length = width; antennomere X crescent shape; antennomere XI subcircular, length = antennomere IX length. Terminal maxillary palpomere securiform, width = 2.5 x length. Terminal labial palpomere triangular, width = 2 x length, expanded medially, width = 0.66 x terminal maxillary palpomere. Mentum with triangular plate, length = width. Genal lobes present, short, blunt.

Pronotum transverse, width = 2.5 x length, anterior width = 0.5 x posterior width; punctation as on vertex, obscured in microreticulation; base with row of large punctures, puncture size = 2-3 x ocular facet diameter; base weakly V-shaped; basal marginal bead present at sides, absent medially. Scutellum pentagonally rounded, length = width. Elytra with striae punctures small and obscured in microreticulations, same size as scattered interval punctures; striae weak, paired; base lacking marginal bead.

Prosternum length = 3 x intercoxal width; anterior edge lacking marginal bead, not pinched; prosternum convex, depressed anterior and posterior of coxa, not punctate; sternal lines continuous around coxal cavity; base concave. Mesosternum truncate, lines divergent anteriorly, continuous around coxal cavity; minutely punctate. Metasternum with sternal lines almost meeting medially at mesosternal junction; not continuous around mesocoxal cavity; sternal lines extending onto sternal surface, short, at most, attaining half way to lateral margin (Fig. 41); with few scattered fine punctures obscured in microreticulations. Abdomen with coxal lines not meeting medially; continuous around metacoxal cavity; punctures fine, indistinct. Male with a small group of setose punctures at center of first abdominal ventrite. Male genitalia with median lobe normal thickness, weakly curved at base, apex curved and acute; flagellum moderate in length, moderately thickened along entire length (Fig. 43).

Distribution. *Aegithus lebasii* is found on the mainland from Costa Rica to Venezuela. In the West Indies, it is known only from Jamaica where it was recently established (Fig. 1b).

Type Material. Lacordaire (1842) stated the types of *A. lebasii* as “Il a été découvert aux environs de Carthagene, en Colombie, par M. Lebas, à qui M. Dejean l’a dédié.” Dejean’s collection is in MRSN. Specimens of this species were not requested for this study and may or may not be present in the MRSN. Present repository unknown.

For *Aegithus cassideus*, Lacordaire (1842) stated “De la Colombie, Collection de M. Dupont”, present repository unknown.

The identity of the Jamaican *Aegithus* is based on comparison with *A. lebasii* specimens in the NHML and CUMZ (Crotch Collection). On the mainland, there are many species similar to *A. lebasii*, all differing subtly in body shape and other characters. Any potential designations of lectotypes or neotypes and confirmation of the Jamaican *Aegithus* identification should be done in the context of a revision of *Aegithus*. Therefore, none is designated here.

Specimens Examined. Several specimens from the mainland were studied, distributed from Costa Rica to Venezuela. Only 19 specimens were studied from Jamaica: Middlesex, Mt. Diablo, 4mi. S. Moneague, 28-MAR-1991, K. Philips & L. Gerofsky (1-PESC); St. Anne, 7-14-JAN-1990, C. Springer (1-EIUC); St. Anne, Ocho Rios, 27-MAR-1991, K. Phillips (16-HNHM, PESC, TKPC, WIBF); St. Mary, Dunnes River Falls, 18-JUL-1990, V. Golia (1-VGIC).

Remarks. In the early 1990s, numerous specimens were collected at multiple localities, some at lower elevations in Jamaica, and some even at a beach resort. Being a large and colorful beetle, if this species had been present in Jamaica throughout the last 200 years, it should have been collected previously. The lack of earlier records supports the conclusion that *A. lebasii* has only recently become established on Jamaica.

The original spelling of the species by Lacordaire (1842) is “*lebasii*”, which was emended to “*lebasii*” and followed by several workers. However, following ICZN rules (1999, Articles 31.1.3, 32.3, 33.4), the original spelling is correct, and is therefore followed here.

Genus *IPHICLUS* Chevrolat 1836

Iphiclus Chevrolat in Dejean 1836: 426. Type species: *Erotylus flavovittatus* Duponchel 1825, subsequent designation Alvarenga 1965: 85 [genus valid by indication] ~ Dejean 1837: 450; Alvarenga 1994: 58-86.

Brachysphaenus Lacordaire 1842: 32, 296 ~ various authors.

Brachysphoenus Lacordaire ~ various authors [misinterpretation of the ligature between a-e].

Brachysphenus Lacordaire [misspelling] ~ Agassiz 1846: 52; Erichson 1847: 178; Gorham 1888: 92.

Diagnosis. Members of *Iphiclus* are diverse in morphology and biology. The genus is characterized as a member of the Erotylini, but further defined by the following: body elongate to oval, not globose (i.e., not as in *Aegithus*), eyes finely faceted, clypeus relatively short with sides not narrowing basally (wedge-shaped), mentum with plate triangular, terminal maxillary palpomere triangularly dilated, pronotal base weakly to distinctly lobed medially, elytra never greatly convex dorsally, and legs usually moderately long.

Description. Given the diversity and taxonomic disorganization of continental *Iphiclus*, any attempt at a lengthy and detailed description of the genus would be incomplete or filled with variable characters that would render the description useless for the current study. Thus, descriptive efforts were focused on the endemic West Indian subgenus. Lengthy published descriptions of *Iphiclus* can be found in Kuhnt (1909) and Lacordaire (1842), both present under the name *Brachysphaenus*.

Distribution. Members of *Iphiclus* are widespread in the Neotropics.

Remarks. In various publications, this genus was known as *Brachysphaenus* Lacordaire (1842). Alvarenga (1965) placed *Brachysphaenus* Lacordaire in synonymy with *Iphiclus* Chevrolat based on current nomenclatural rules, and this placement is used here.

Iphiclus includes 10 subgenera and over 280 species. These subgenera need further definition as many species appear poorly placed, subgeneric limits are poorly understood, and newer material shows intermediate character states requiring refinement of existing definitions. The space needed to present a complete genus-level synonymy and discuss problems with the continental forms is outside the scope of this regional study. Thus, no additional discussion or lengthy synonymy is presented. Refer to Alvarenga (1965, 1994) for present subgeneric synonymies and citations therein to pertinent literature. Only the subgenus *Neogaster* Alvarenga occurs in the West Indies.

Subgenus *NEOGASTER* Alvarenga 1965

Iphiclus (*Neogaster*) Alvarenga 1965: 87. Type species: *Galleruca guadeloupensis* Fabricius 1792 (= *Erotylus marginatus* Olivier 1792), original designation Alvarenga 1965: 87. Replacement name for *Oogaster* Lacordaire 1842: 377, not *Oogaster* Faldermann 1837: 30 (Coleoptera: Tenebrionidae) ~ Alvarenga 1994: 73.

Brachysphaenus (*Oogaster*) Lacordaire 1842: 377. Type species: no type designated [considered monotypic because of subsequent synonymy of all included species]. ~ Germar 1843: 137; Chapuis 1876: 61; Crotch 1876: (137) 513; Kuhnt 1909: 22, 27; Alvarenga 1965: 88.

Diagnosis. *Neogaster* resembles *Aegithus* in color pattern, but is distinguished from *Aegithus* and other members of *Iphiclus* by: the oval body attenuated anteriorly and posteriorly (Fig. 8-9, 46-47), black body with yellowish-brown elytra and abdomen, enlarged antennal club, and simple prosternum lacking a median keel (Fig. 48-49).

Description. Length 7.0-10.0 mm; width 4.5-6.5 mm. Body oval, attenuated toward ends, moderately convex dorsally; body black with yellowish-brown elytra and abdomen (Fig. 48-49).

Head surface glossy, punctures minute, faintly impressed; clypeus width = 1.25 x length, parallel to weakly divergent toward base, anterior edge weakly concave, surface with few fine punctures; ocular striae attaining antennal base anteriorly. Eyes finely faceted. Antenna entirely black, antennomeres generally elongate; antennomere II subglobose; antennomere III length = 3.5-4.0 x width, length = length of antennomeres IV+V combined; antennomeres IV-VIII gradually shortening, IV notably longer than VII; antennomeres IV-VII rounded apically, all equal in width; antennomere VIII somewhat triangular, angular apically, width = 1.5 x antennomere VII width, appearing as part of club; antennomere IX enlarged length = antennomere III, width = 2.5 x antennomere VII, rectangular, sides parallel (Fig. 46-47); antennomere X-XI equal in length, length = 0.75 x antennomere IX; antennomere XI subcircular. Terminal maxillary palpomere dilated, triangular, width = 1.5 x length. Terminal labial palpomere dilated medially, triangular, width = 0.75 x terminal maxillary palpomere width. Mentum with raised triangular plate poorly defined, groove and bead that usually define mentum obscured or lacking.

Pronotum glossy and faintly punctate, surface relatively flattened; narrowed anteriorly, anterior edge straight medially, curving forward laterally, with fine entire marginal bead; anterior angles acute, posterior angles approximately 90°; base sinuate, edge straight near lateral angles, moderately lobed medially; base lacking marginal bead and basal punctures. Scutellum weakly triangular to weakly pentagonal, edges rounded, length = 1.0-1.2 x width. Elytra dull; lacking basal marginal bead; visible striae 2-7 paired (gemellate) (Fig. 46-47). Wings present, fully developed.

Prosternum moderately convex, somewhat flattened, not keeled medially, not constricted at anterior margin; anterior edge with fine, entire marginal bead; surface relatively smooth, faintly punctate; lines fine, continuous around coxal cavity; base distinctly concave. Meso- and metasternum with lines fine, continuous around mesocoxal cavity, line absent from metasternal surface (Fig. 48-49); meso- and metasternal surface smooth, glossy, faintly punctate. Abdomen with lines continuous around metacoxal cavity, scattered fine punctures on terminal ventrites. Femora lacking marginal bead, rounded in cross



Figure 46-47. *Iphiclus* (*Neogaster*) spp., dorsal habitus. **46)** *I. suturalis*. **47)** *I. guadeloupensis*.

section; short, only apex of meso- and metafemora visible from above. Tibiae weakly carinate on lateral edge. Tarsi with well-developed ventral pads on tarsomeres I-III; metatarsomere I length = length of metatarsomere II+III combined. Male and female lacking notable sexual dimorphism (compared with some *Aegithus* males which have a pilose spot on first abdominal ventrite). Male genitalia with median lobe slightly elongate and weakly hooked at apex; sclerite at base of flagellum small; flagellum hair-like (Fig. 50-51).

Distribution. *Neogaster* is restricted to Guadeloupe and Dominica, and are the only known Erotylinae from the northern Lesser Antilles.

Larvae. Roberts (1958: 281) briefly diagnosed the larvae of a *I. guadeloupensis*, and stated it "... is to some extent intermediate between this genus [*Iphiclus*] and *Aegithus* ..." Considering the diversity of these genera, it is ill advised to make any conclusions regarding relationships between these taxa based on the few known larvae. Unfortunately, Roberts reported the species he studied only as "*Aegithus guadeloupensis* F." and did not state where the specimens were collected. Thus, the true identity of his *Neogaster* materials cannot be confirmed. Two dried larvae were available for study of *I. suturalis*, from which the following diagnosis is based.



Figure 48-51. *Iphiclus (Neogaster)* spp., ventral habitus and male genitalia. 48, 50) *I. suturalis*. 49, 51) *I. guadeloupsensis*. Genitalic scale line =

Body elongate, tergites dark, dorsally covered with spicules, scoli, and aristate or simple setae. Antennal length subequal to half head width. Head with setae present, but spines and tubercles absent. Tergites of T2-A8 dorsally with 3 long, branched scoli on each side. Abdominal epipleurites with single, moderately sized, unbranched scoli. General habitus similar to *Aegithus*.

Remarks. A study of numerous adult specimens has demonstrated the existence of two valid species, each endemic to a different island; e.g. *I. guadeloupensis* from Guadeloupe and *I. suturalis* from Dominica.

Key to *Iphiclus* (*Neogaster*) species

1. Elytra entirely yellow-brown, border often paler (Fig. 8, 47); elytra with paired striae (gemellate), punctures visible; Guadeloupe ***Iphiclus* (*Neogaster*) *guadeloupensis* (Fabricius)**
- Elytra yellow-brown with dark sutural margin (Fig. 9, 46); elytra with striae punctures obscure or lacking; Dominica ***Iphiclus* (*Neogaster*) *suturalis* (Lacordaire)**

Iphiclus (*Neogaster*) *guadeloupensis* (Fabricius)

Figure 1b, 8, 47, 49, 51, 144

Galleruca guadeloupensis [sic] Fabricius 1792: 16, #17.

Aegithus guadeloupensis (Fabricius) 1801: 10, #5 ~ Illiger 1806: 232; Dejean 1836: 427; Dejean 1837: 451.

Erotylus guadeloupensis (Fabricius) ~ Schönherr 1808: 328, #33 [with *E. marginatus* as a synonym]; Duponchel 1825: 162, #76, t.3, f.76.

Brachysphaenus (*Oogaster*) *guadeloupensis* (Fabricius) ~ Lacordaire 1842: 377; Crotch 1876: (137)513; Kuhnt 1909: 29.

Aegithus guadeloupensis (Fabricius) ~ Germar 1843: 137 [as *Oogaster*].

[*Morphoides*] *guadeloupensis* [sic] (Fabricius) ~ Gemminger and Harold 1876: 3710 [as synonym of *M. marginatus*].

[*Brachysphaenus*] *guadeloupensis* [sic] (Fabricius) ~ Fleutiaux and Sallé 1889: 482 [as synonym of *B. marginatus*].

Aegithus guadeloupensis [sic] (Fabricius) ~ Roberts 1958: 281 [larva].

Brachysphaenus [sic] *guadeloupensis* (Fab.) ~ Skelley 1998a: 27.

Erotylus marginatus Olivier 1792: 437, # 31 ~ Olivier 1807: 482, #29, t. 1, f. 8; Schönherr 1808: 328 [synonymy with *E. guadeloupensis*]; Duponchel 1825: 162 [as synonym of *E. guadeloupensis*]; Lacordaire 1842: 377 [as synonym of *B. guadeloupensis*].

Aegithus marginatus (Olivier) ~ Dejean 1836: 427; Dejean 1837: 451 [in bracket with *A. guadeloupensis*].

Morphoides marginatus (Olivier) ~ Gemminger and Harold 1876: 3710.

Brachysphaenus marginatus (Olivier) ~ Fleutiaux and A. Sallé 1889: 482.

Brachysphaenus (*Oogaster*) *marginatus* (Olivier) ~ Kuhnt 1911: 16-17.

Brachysphaenus marginatus (Olivier) ~ Leng and Mutchler 1914: 412; Leng and Mutchler 1917: 200; Deelder 1942: 62; Blackwelder 1945: 459; Roberts 1958: 281 [larval]; Peck 2006: 187.

Iphiclus (*Neogaster*) *marginatus* (Olivier) ~ Alvarenga 1965: 87; Alvarenga 1994: 73.

Diagnosis. *Iphiclus guadeloupensis* is recognized by its elongate-oval body shape, black body with dark yellow-brown elytra having paler margins (sutural margin not black) (Fig. 8, 47), and distinct gemellate striae punctures.

Description. Length: 8.0-10.0 mm; width: 5.0-6.5 mm. Body elongate-oval, dorsally convex (not globose), acuminate posteriorly; cuticular surface weakly microreticulate, shining. Body and appendages black except noted: elytra yellow-brown often with pale edges; abdomen yellow-brown.

Head interocular width = 3.5 x ocular width; ocular striae attaining base of epistome; vertex punctures faint to absent; epistome puncture size = 1.5 x ocular facet diameter, separated by 2 x their diameter, impressed and readily visible. Antenna attaining pronotal base; antennomere II length = width, length = 0.5 x antennomere III; antennomere III length = 3 x width, length = length of antennomeres IV+V combined; antennomeres IV-VIII equal in length; antennomeres IV-VII each with length = 1.5 x width; VIII triangular, part of club, length = width; antennomere IX trapezoidal, nearly parallel-sided (Fig. 47), length = 1.3 x width; antennomere X crescent shape, length = 0.66 x IX length; antennomere XI subcircular, length = 0.75 x IX length. Terminal maxillary palpomere securiform, length = 0.8 x width. Terminal labial palpomere triangular, width = length, expanded medially, width = 0.8 x width of termi-

nal maxillary palpomere. Mentum with triangular plate weakly defined, length = 1.2 x width. Genal lobes present, short, blunt.

Pronotum transverse, width = 2 x length, anterior width = 0.75 x posterior width; punctures fine, weak to absent, obscured by microreticulation; sides not depressed, in lateral view margin straight; base lacking large punctures; anterior edge with fine, complete marginal bead; base sinuate, marginal bead lacking. Scutellum triangularly rounded, length = width. Elytra with paired striae, punctures large, puncture size = 2 x ocular facet diameter, separated by 1-2 x their diameter; interval punctures lacking; base lacking marginal bead.

Prosternum length = 3 x intercoxal width; anterior edge with marginal bead, not pinched; prosternum convex, depressed anterior and posterior of coxa, not punctate; sternal lines continuous around coxal cavity; base weakly concave (Fig. 49). Mesosternum truncate, lines divergent anteriorly, continuous around coxal cavity; punctures absent. Metasternum with lines not meeting medially; continuous around mesocoxal cavity; punctures absent. Abdomen with coxal lines not meeting medially; continuous around metacoxal cavity; punctures fine, indistinct; few punctures present at posterior margin of last abdominal ventrite. Male and female lacking small group of setose punctures at center of first abdominal ventrite. Male genitalia (Fig. 51) similar to *I. suturalis*.

Distribution. *Iphiclus guadeloupensis* is the only known member of Erotylinae on Guadeloupe (Fig. 1b).

Type Material. For *Galleruca guadeloupensis*, Fabricius (1792) stated “Habitat in Insula Guadeloupe de Badier.” In Fabricius’ collection (ZMUC, see Zimsen 1964) is one specimen labeled as this species that fits the description and traditional concept of the species. Since Fabricius made no indication how many were studied and to stabilize the nomenclature, this specimen (Fig. 144) is here designated as the **lectotype** of *G. guadeloupensis* Fabricius, its label data: “/ [hand written] *G. guadeloupensis* Guadeloupe Badier / [red paper] LECTOTYPE *Galleruca guadeloupensis* Fabricius, des. P. Skelley-08”. The specimen was studied from a photograph sent by A. Solodovnikov, who wrote stating the specimen label “[...] is not an original Fabricius label (his labels look differently) [...] Most of the Fabricius types do not have any labels with the localities, etc. They are just small handwritten species names, even without genera names [...] many of his types do not have any labels at all.”

For *Erotylus marginatus*, Olivier (1792) stated “il fe trouve à Cayenne, & m’a été envoyé par M. Tugni.” The present location of type material for this name is unknown. Olivier (1807) provided an illustration of *E. marginatus* that clearly shows the distinctive elytral color pattern he described earlier. This color pattern is known to occur in several mainland members of the genus *Aegithus*. However, Olivier described *I. marginatus* as having a yellow abdomen. All mainland *Aegithus* species with a similar dorsal color pattern have a black abdomen. Thus, the identity of Olivier’s species is confirmed and in agreement with Lacordaire’s (1842: 378) statement that *I. marginatus* was described from the wrong type locality (it is not from French Guiana). Further, Schönherr’s (1808) synonymy of *E. marginatus* under *G. guadeloupensis* is confirmed. Based on all available information, the historical confusion around the “*marginatus-guadeloupensis-suturalis*” synonymies, and the fact Olivier’s type could not be located, a neotype is necessary to stabilize the identity and type locality of this species. The **neotype** for *Erotylus marginatus* Olivier, here designated, is the lectotype of *G. guadeloupensis* designated above, to which was added the label “/ [red paper] NEOTYPE *Erotylus marginatus* Olivier, des. P. Skelley-08”.

Specimens Examined. In addition to the type materials, 14 specimens have been studied from Guadeloupe including: “Insel Guadeloupe” (1-FREY); “Guadeloupe” (2-HMNH); “Guadeloupe”, Coll. Reiche (2-CUMZ); “Antilles Guad.”, Fry Coll. 1905-100 (3-NHML, PESC); Guadeloupe, CNHM 1955, Karl Brancsik coll., ex. Eduard Knirsch (1-FMNH); Basse-Terre Rd. to Soufriere, 748', 16°01.833'N, 16°40.854'W, 23-AUG-2005, M. A. Ivie, under dead log (1-WIBF); Foret D’Fefe, 27-MAY-1983, E. Giesbert (2-FSCA); Route les Mamelles, 4-FEB-1969, L. & C.W. O’Brien, at night (2-PESC).

Remarks. The history of the three names applied to this species is long and complex, and includes erroneous type localities, a misspelling in the original description, disagreement of which name has priority, and multiple generic combinations for each name. To avoid further confusion, below are the proposed actions to resolve these issues.

A) *Galleruca guadeloupensis* Fabricius and *Erotylus marginatus* Olivier from Guadeloupe are synonyms, based on the original descriptions, illustrations, and various comments by researchers in the early 1800s. Schönherr (1808) appears to be the first to recognize that *G. guadeloupensis* and *E. marginatus* were synonyms, which was subsequently followed by most workers.

B) Differing opinions remain as to which name, *G. guadeloupensis* or *E. marginatus*, has priority and is therefore the valid name. *Galleruca guadeloupensis* Fabricius (1792) was chosen over the questionably earlier name *Erotylus marginatus* Olivier (1792), because all early major revisions (Duponchel 1825, Lacordaire 1842, Crotch 1876) used Fabricius' name and listed Olivier's name in synonymy, thereby implying priority. More recently, Blackwelder (1949, 1957) documented that Olivier's Erotylidae work actually came out in 1792, not 1791 as is often cited. Thus, Fabricius' work may truly have priority. Therefore, the name *I. guadeloupensis* was implemented following usage by the first revisers (ICZN 1999, Article 24.2): Schönherr (1808), Duponchel (1825), Lacordaire (1842), and Crotch (1876). The last three being the earliest major taxonomic treatises for the group.

C) There has been confusion regarding the spelling of *I. guadeloupensis*. In Fabricius' original 1792 description the epithet was spelled "guadelupensis", lacking the 'o'. In all subsequent works by Fabricius and others (Schönherr 1808, Duponchel 1825, Lacordaire 1842, Crotch 1876) the name is emended to *I. guadeloupensis* (ICZN 1999, Article 32.5). A few later references presented the name in its original form (see synonymy above).

D) Olivier's type of *E. marginatus* could not be located. To resolve the identity issue of this species, a neotype is designated above. Fabricius' type of *G. guadeloupensis* was selected as the neotype of *E. marginatus* thus making the names objective synonyms. If Olivier's type (described from "Cayenne") is ever located, then that specimen would void this neotype designation. However, if *E. marginatus* is discovered to be a mainland species or if it is indeed conspecific with Fabricius' species, then Fabricius' name *I. guadeloupensis* would remain the valid name for the species on Guadeloupe, thus stabilizing the nomenclature.

E) Crotch (1876) added *Brachysphaenus suturalis* Lacordaire as a synonym of *G. guadeloupensis* and *E. marginatus*, stating "B. suturalis is found on a very immature example." The synonymy of these three names was followed by all subsequent workers, until now. Study of many recent specimens, type material, and original descriptions led to the conclusion that *B. suturalis* is a valid species, and is here removed from synonymy and reinstated with full species status. In addition, Lacordaire's stated type locality of "Guadeloupe" is also erroneous, as species only occurs on Dominica.

***Iphiclus (Neogaster) suturalis* (Lacordaire), reinstated species, new combination**

Figure 1b, 9, 46, 48, 50, 145

Aegithus suturalis Dejean 1836: 427 ~ Dejean 1837: 451 [both are *nomina nuda*].

Brachysphaenus (Oogaster) suturalis Lacordaire 1842: 378-379 ~ Crotch 1876: (137)513 [as synonym of *B. (O.) guadeloupensis*]; Gemminger and Harold 1876: 3710 [as synonym of *Morphoides marginatus*]; Kuhnt 1909: 27 [as synonym of *B. (O.) guadeloupensis*].

Brachysphaenus marginatus (Olivier) ~ Leng and Mutchler 1914: 412 [misidentification]; Blackwelder 1945: 459 [catalog].

Iphiclus (Neogaster) marginatus (Olivier) ~ Peck 2006: 187 [catalog].

Diagnosis. *Iphiclus suturalis* is recognized by its posteriorly acuminate body shape and black color with yellow-brown elytra bearing a black sutural margin, reduced and indistinct elytral striae and dull elytral surface.

Description. Length: 7.0-10.0 mm; width: 4.5-6.5 mm. Body elongate-oval, dorsally convex (not globose), acuminate posteriorly; weakly microreticulate, body glossy, elytra dull. Body and appendages black except noted: elytra yellow-brown with black sutural margin; abdomen yellow-brown (Fig. 9, 46, 48).

Head interocular width = 3.5 x ocular width; ocular striae attaining base of epistome; vertex punctures faint to absent, obscured in microreticulations; epistome puncture size = an ocular facet diameter,

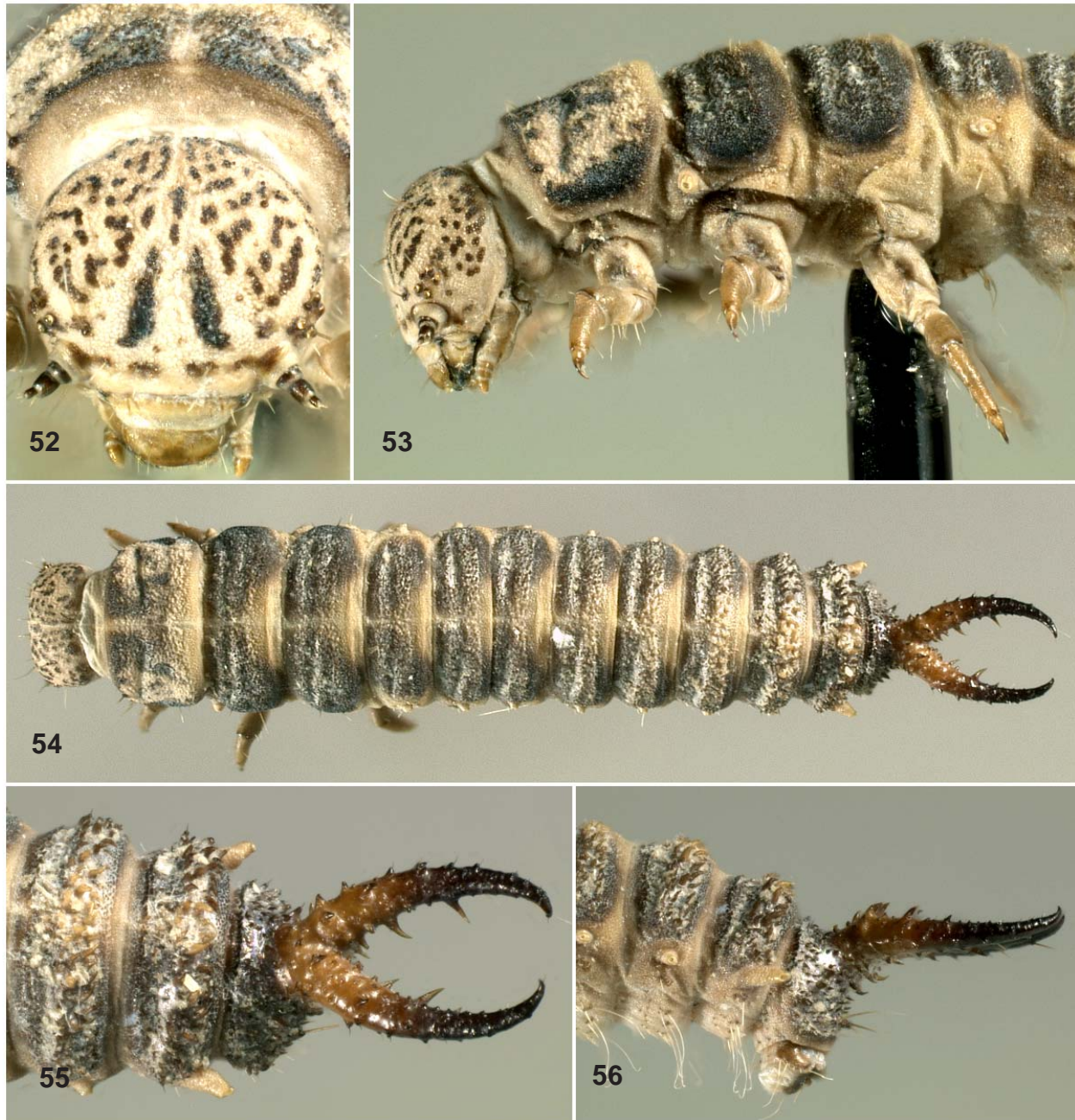


Figure 52-56. *Altisessor ater*, larva. **52)** Head, anterior view. **53)** Head and thorax, lateral view. **54)** Dorsal habitus. **55-56)** Terminal segments of abdomen with prominent urogomphus, dorsal and lateral view.

separated by 2 x their diameter, impressed and readily visible. Antenna attaining pronotal base; antennomere II length = width, length = 0.5 x antennomere III; antennomere III length = 3 x width, length = length of antennomeres IV+V combined; antennomeres IV-VIII equal in length; antennomeres IV-VII each with length = 1.5 x width; VIII triangular, part of club, length = width; antennomere IX trapezoidal, parallel-sided (Fig. 46), length = 1.3 x width; antennomere X length = 0.66 x IX length; antennomere XI circular, length = 0.75 x IX length. Terminal maxillary palpomere securiform, length = 0.8 x width. Terminal labial palpomere triangular, length = 0.8 x width, expanded medially, width = 0.8 x width terminal maxillary palpomere. Mentum with triangular plate, not defined by marginal bead, length = 1.2 x width. Genal lobes present, short, blunt.

Pronotum transverse, width = 2 x length, anterior width = 0.75 x posterior width; punctures fine, weak to absent, obscured by microreticulation; sides depressed, dorsally concave in lateral view; base lacking large punctures; anterior edge with fine, complete marginal bead; base sinuate, marginal bead lacking. Scutellum triangularly rounded, length = width. Elytra with strial and interval punctures lacking or obscured in surface microreticulations, punctures gemellate when visible; base lacking marginal bead.

Prosternum length = 3 x intercoxal width; anterior edge with marginal bead, not pinched; prosternum convex, depressed anterior and posterior of coxa, not punctate; sternal lines continuous around coxal cavity; base weakly concave (Fig. 48). Mesosternum truncate, lines divergent anteriorly, continuous around coxal cavity; lacking punctures. Metasternum with lines not meeting medially; continuous around mesocoxal cavity; punctures lacking. Abdomen with coxal lines not meeting medially; continuous around metacoxal cavity; punctures fine, indistinct; with a few punctures at posterior margin of last abdominal ventrite. Male and female lacking small group of setose punctures at center of first abdominal ventrite. Male genitalia (Fig. 50) similar to *I. guadeloupensis*.

Distribution. *Iphiclus suturalis* is the only known member of Erotylinae on Dominica (Fig. 1b).

Type Material. For *Brachysphaenus suturalis*, Lacordaire (1842) stated “De la Guadeloupe” and preserved the species name “*suturalis*” proposed in the Dejean catalog (1836) under *Aegithus*. This again showed Lacordaire studied specimens from Dejean’s collection. A single specimen was located in Dejean material over a label “S. G. Oogaster, *Brachysphaenus suturalis* Guadeloupe, Dej., Lacord.” This specimen matched Lacordaire’s description and is considered type material. Lacordaire made no indication how many specimens were studied. To resolve nomenclatural confusion and fix the name to a single specimen, the male specimen of *B. suturalis* in the Dejean material (Fig. 145) is here designated as the **lectotype**. The label data is as follows: “/ [green paper] D. Latreille / [red paper] LECTOTYPE *Brachysphaenus suturalis* Lacordaire, des. P. E. Skelley 2008 /” (MRSN).

Lacordaire’s type locality “Guadeloupe” is in error. All specimens studied that are conspecific with the lectotype are from Dominica.

Specimens Examined. In addition to the lectotype, 65 specimens were studied from Dominica: Portsmouth, Coconut Beach Motel, 6-29-2004, C.W. O’Brien (1-FSCA); Pont Cassé, 1380', 6-19-2004, C.W. & L.B. O’Brien (2-PESC); Pont Cassé, 1380', 6-24-2004, C.W. & L.B. O’Brien (6-PESC); Roseau R. Valley, 22-JUN-2004, C.W. & L.B. O’Brien (1-PESC); 2.5 to 3.5 km W. Freshwater Lake, Morn Tres Piston [Morne Trois Pitons] N.P., 23-JUN-2004, C.W. & L. O’Brien (1-PESC); town above Canefield, 19-JUN-2004, C.W. O’Brien, on soft white fungus (7-PESC); 6 mi. E. Dublanc, 1250 ft., 16-AUG-1986, C.W. & L.B. O’Brien (4-PESC); Clark Hall, 9-FEB-1966, D. E. Johnson, polypore on log (1-WIBF); Clark Hall, 5-FEB-1966, D.E. Johnson (4-WIBF); Trafalgar Village, 850 ft., 29-DEC-1978, M.A. & L.L. Ivie (5-WIBF); Layou, 1-7-[18]88, G.A. Ramage, fungi on fallen trees (5-NHML, PESC); Salibia, 30-JAN-1968, B. Malkin (2-FMNH); Bataka, 30-JAN-1968, B. Malkin (2-FMNH); Roseau Botanical Garden, 2-FEB-1968, B. Malkin, FM(ND) # 68-3, on fungus (preserved) (3-FMNH); Trafalgar Village, 850 ft., 29-DEC-1978, M.A. & L.L. Ivie (6-BMUC, PESC); Loyou, 30-3-[18]88, G.A. Ramage, 97-67 (3-NHML); Layou, G.A. Ramage, 97-67 (8-NHML); St. David, 3 mi. W. of Pontcasse [sic], 7-10-JUL-1970, J. H. Frank, under bark of fallen hardwood tree (2-NHML); Corlet [?], OCT-1901, in decaying timber, (2-NHML).

Remarks. See remarks under *I. guadeloupensis* for nomenclatural concerns. Leng and Mutchler (1914) first recorded this species from Dominica as *Brachysphaenus marginatus*, which was based on the previous synonymy of the names. This record is repeated in subsequent faunal lists (Blackwelder 1945, Peck 2006).

TRIBE TRITOMINI

Genus *ALTISESSOR* Skelley, new genus

Type species: *Altisessor ater* Skelley, n. sp., here designated.

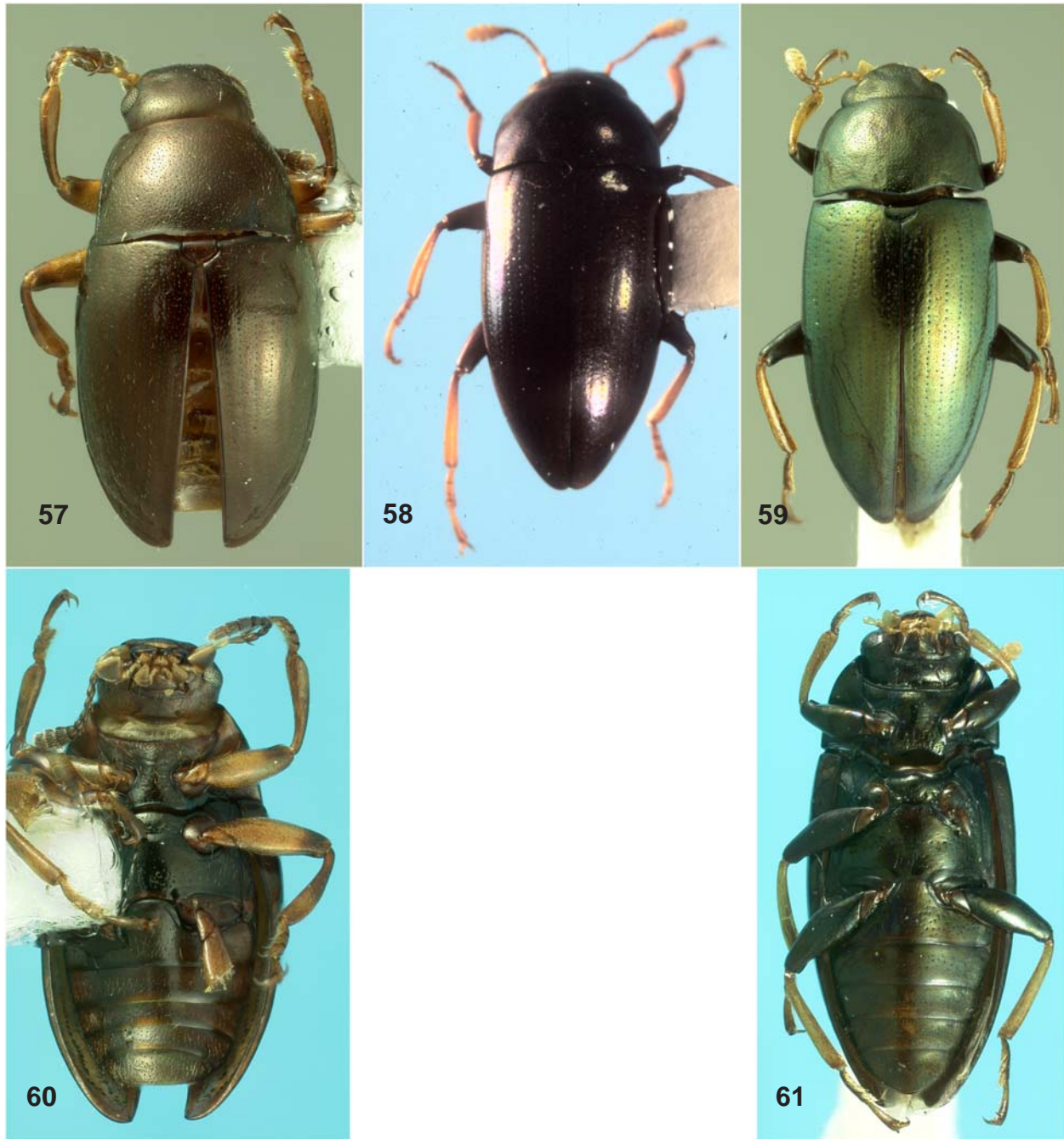


Figure 57-61 . *Altisessor* spp., dorsal and ventral habitus. **57, 60**) *A. hottensis*, holotype. **58**) *A. gundlachi*, holotype. **59, 61**) *A. viridis*, holotype.

Diagnosis. Distinguished from other Tritomini by small body size, elongate-cylindrical body shape, unpatterned body with metallic shine, femora lacking posterior marginal bead, antennomere II longer than wide (length = 2 x width = length of antennomere III, Fig. 16), antennomere IX transverse, and lack of ocular striae.

Description. Body small, 3.1-5.0 mm long, elongate, cylindrical, humped back or egg-shaped; surface with microreticulations, often weak; color dark brown to black, without color pattern, somewhat glossy



Figure 62-67. *Altisessor* spp., dorsal and ventral habitus. **62, 65)** *A. ater*, paratype. **63, 66)** *A. centralis*, holotype male. **64, 67)** *A. oriens*, paratype.

usually with metallic luster of various colors. Eye facets moderate in size, eyes not protruding from side of head.

Head short, rounded and broad, ocular striae absent. Terminal maxillary and labial palpomeres equal in width, width less or equal to width of mentum. Antenna attaining basal quarter of pronotum; antennomeres I-III equal in length; antennomere II elongate, length = 2 x width; antennomere IV-VIII equal in length; antennomere VIII wider than VII, apically angled, appearing as part of club; antennomere IX width = length, trapezoidal with basal sides angulate; antennomere IX = 2.0 x antennomere VII in width and length, antennomere IX-XI same width and length; antennomere X semicircular, antennomere XI subcircular. Maxillary palp terminal palpomere triangular, mostly symmetrical with rounded base.

Labial palp terminal palpomere asymmetrical, medially expanded. Mentum with plate triangular, transverse, wider than long.

Pronotum transverse, convex above; anterior angles weakly projecting; lateral margins gently curve toward eyes; anterior edge with marginal bead distinct behind eyes, sometimes weakly present medially; base weakly bisinuate, lacking marginal bead even laterally. Elytra elongate, convex; elytral base lacking marginal bead; striae evident with distinct rows of punctures. Wings present, fully developed or reduced to membranous strip.

Prosternum with anterior marginal bead strong, not pinched; prosternal lines continuous around coxal cavity. Mesosternum transverse, wider than long; lines divergent anteriorly, continuous around coxal cavity; posterior edge truncate or slightly concave; with a transverse row of large punctures (often reduced). Metasternal lines weak or absent medially behind mesosternum. Mesocoxal lines on the metasternum absent. Femur lacking marginal bead. Tibia slender, with rounded edges. Tarsi pseudotetramerous, terminal tarsomere length = length of tarsomeres I-III combined. Male genitalia of typical tritomine form, unmodified and similar to that of *Notaepytus* spp. (as in Fig. 87-88), flagellum modified and species specific (Fig. 68-71).

Distribution. *Altisessor* is restricted to the mountainous regions of the Greater Antilles (Cuba, Hispaniola, Puerto Rico).

Larvae. Diagnosis based on larvae collected with adults of *A. ater* (Fig. 52-56). Head pale with dark speckled pattern; T1 notum with mottled markings, no distinct eyespot; T2-A9 dorsally pigmented. T1-A8 terga lacking prominent marginal tubercles; surface of T1 to middle of abdomen lacking spine-like prominences; terga from middle of abdomen to A8 with increasingly prominent dorsal and lateral spine-like tubercles; A9 tergum with fork-shaped urogomphal prominence possessing single base. A1-7 spiracles on small prominences; A8 spiracle on peg-like prominence. Larvae were collected in a cloud forest on small, living and dead tree branches. All branches were covered with moss and lichens.

Etymology. *Altisessor* is derived from the Latin *altus* for “high”, and *essor* for “inhabitant” or “one who sits”. All species were collected at higher elevations and appear to be restricted to specific mountain ranges. The gender is masculine.

Remarks. The elongate shape of antennomere II (Fig. 16) is unique among American Erotylinae. The elongate, cylindrical, humpbacked body and small size, uniform coloration, and lack of ocular striae distinguish this genus from other West Indian genera. As with *Notaepytus*, at least one member of *Altisessor* has reduced hind wings and is functionally flightless.

Biology. *Altisessor ater* was collected in cloud forests near 3000 ft. elevation. The mountainside site possessed few flat, horizontal areas, and was near larimar mines. The locality was an old coffee growing area purportedly near virgin wilderness. Woody plants in the area were covered with mosses, lichens, and other epiphytes.

The majority of adult specimens were beaten from small woody branches (alive or dead), day and night. However, collections from dead branches were mainly at night. Visual searches by day were unsuccessful, however several adults were observed on small dead branches at night. One adult was collected at black light and another in a flight intercept trap, suggesting the potential for flight. Most were collected at night, and it is possible those collected on epiphytic rich living branches were beaten from their daytime hiding place. However, one larva was beaten from an epiphyte-covered, living citrus branch that had no visible fungus.

Key to *Altisessor* species

1. Femora banded, pale with dark apex (Fig. 60); flightless, wings reduced to strips; southwestern Haiti *Altisessor hottensis* Skelley, n. sp.
- Femora uniformly dark in color, not banded; wings fully-developed 2

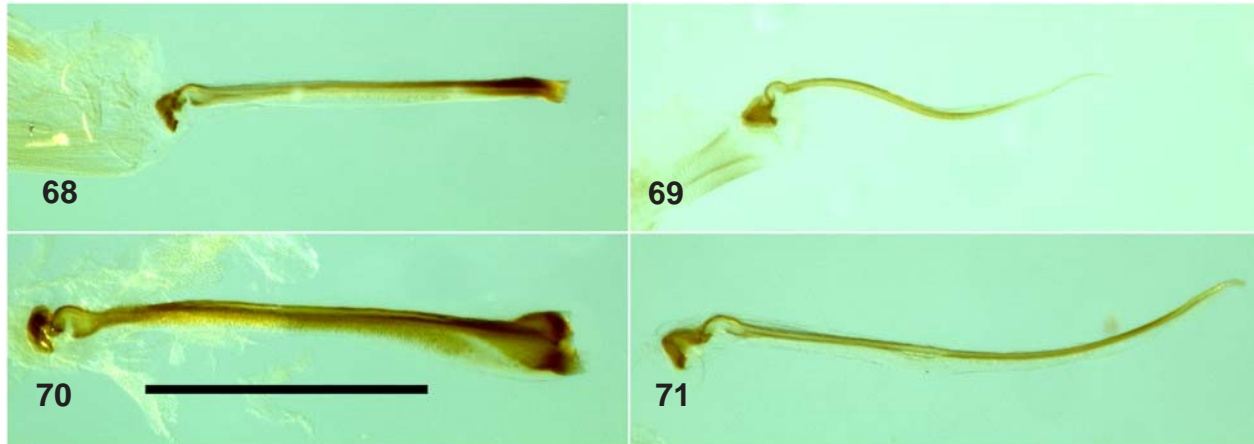


Figure 68-71. *Altisessor* spp., male genital flagellum. **68)** *A. ater*. **69)** *A. centralis*. **70)** *A. hottensis*. **71)** *A. oriens*. All reproduced to same scale, scale line = 1 mm.

- 2(1). Tibiae mostly pale, contrasting in color with femora (Fig. 58-59, 61); Cuba **3**
 — Tibiae mostly dark, same color as femora, apex of tibiae often pale (Fig. 62-67); Hispaniola and Puerto Rico **4**
 3(2). Tarsi same color as tibial apex, tibiae pale with dark base (Fig. 58); blue-green to purplish metallic sheen *Altisessor gundlachi* (Zayas)
 — Tarsi dark, same color as femora, tibiae entirely pale (Fig. 59, 61); green metallic sheen *Altisessor viridis* Skelley, n. sp.
 4(2). Antennomere XI dark (Fig. 62, 65); southern Hispaniola *Altisessor ater* Skelley, n. sp.
 — Antennomere XI pale **5**
 5(4). Antennomeres IX-X dark, XI pale (Fig. 63, 66); central Hispaniola *Altisessor centralis* Skelley, n. sp.
 — Antennomeres IX-XI pale (Fig. 64, 67); Puerto Rico *Altisessor oriens* Skelley, n. sp.

***Altisessor ater* Skelley, new species**

Figure 1b, 17, 52-56, 62, 65, 68, 72

Diagnosis. Readily recognized by antennomeres I-II pale brown with remainder of body and appendages black, surface often with dark green sheen.

Description. Length: 3.2-3.8 mm; width: 1.5-1.8 mm. Body elongate, parallel-sided, posteriorly narrowed, somewhat cylindrical; surface weakly microreticulate, glossy. Color black (including antennal club), often with dark metallic green sheen, except as noted: palpi and tarsi dark brown; antennomeres I to II pale brown (Fig. 60, 65).

Head interocular width = 5 x ocular width; vertex and epistomal punctures both fine and coarse; coarse puncture size = 0.8 x ocular facet diameter, separated by 2-3 x their diameter; epistome anterior margin truncate. Eye facets moderate in size. Terminal maxillary palpomere triangular with curved base, slightly asymmetrical, length = 0.8 x width. Terminal labial palpomere triangular, asymmetrical, width = 1.3 x length, expanded medially, width = 0.8 x terminal maxillary palpomere. Mentum with broad weakly defined triangular plate, width = 2 x length. Genal lobes reduced to smooth, faint ridge.

Pronotum transverse, width = 1.8 x length; punctures of 2 sizes, coarse puncture size = 0.9 x ocular facet diameter, evenly distributed, separated by 2-3 x their diameter; fine punctures interspersed between coarse punctures; base with slight indentation at each side of base, lacking large punctures; anterior edge with marginal bead only behind eyes; base sinuate, lacking marginal bead. Scutellum pentagonal, width

= 1.5 x length. Elytral striae faintly impressed, puncture size = an ocular facet diameter, separated by 1-2 x their diameter; intervals with fine, scattered punctures; punctures with fine short setae; base lacking marginal bead. Wings present, fully developed.

Prosternum length = 1.5 x intercoxal width; sternal plate weakly convex; sternal lines continuous around coxal cavity; base concave. Mesosternum broad, width = 2.5 x length, with broken transverse row of foveate punctures, base shallowly concave, line continuous around coxal cavity. Metasternum weakly connecting medially; continuous around mesocoxal cavity; coarsely punctate, except finely punctate anterior third; coarse punctures same size as mesosternal punctures, puncture size = 1.2 x ocular facet diameter. Abdomen with coxal lines not connecting medially; continuous around metacoxal cavity; punctures of first ventrite size and distribution as those on metasternum, remaining sterna with fine punctures. Male genitalia with flagellum thickened, same thickness throughout, apex truncate (Fig. 68).

Distribution. Found in the Sierra de Baoruco, Dominican Republic, and the adjacent Massif de la Selle, Haiti (Fig. 72).

Type Material. The male holotype and female allotype of *Altisessor ater* Skelley label data: “/ DOMINICAN REP.: Prov. Barahona, nr. Filipinas, Larimar Mine, 26-VI-7-VII-1992, Woodruff & Skelley, day beating /” (FSCA). Paratypes examined (327): DOMINICAN REPUBLIC: same data as holotype, some with additional collector F. W. Skillman, Jr., or various hand collection data: daytime, day beating, night beating, at night (168-FSCA, FWSC, PESC, WIBF); same data except “window trap” (1-FSCA); same data except “20-26-VI-1992,” with various collectors: Landolt, Skelley, and Woodruff, and various hand collection data as above (93-FSCA, PESC); same data except “at light” (1-FSCA); Barahona Province, Baoruco Mts. Rd. at Filipinas Larimar Mine, 12-XII-1991, F. W. Skillman, Jr., beaten/fresh slash (2-PESC); Barahona Province, nr. Filipinas, Mt. Tutu, 26-VI-7-VII-1992, P. E. Skelley, day catch, beating (56-FSCA, PESC); Pedernales Province, 26 km N. Cobo Rojo, 730m, 18-06N, 71-38W, 13-25-JUL-1990, L. Masner et al., wet deciduous forest, sweep sample (1-CMNH). HAITI: Dept. Sud-Oueste, Parc National La Visite, Morne La Visite, SE. slope, 17-V-1984, M.C. Thomas (4-FSCA); L'Ouest, 2 km S Kenscoff, near top of highest mountain, 1790m, 18-26N, 72-17W, 10-SEP-1995, J. Rawlins et al. (1-CMNH). Paratypes from the larger series listed above will be deposited in AMNH, CASC, CMNC, CMNH, CNCI, MCZC, NMHL, REWC, UPRM, WIBF, and others.

The locality “Mt. Tutu” is a phonetic spelling of a locality near the larimar mine (larimar is a blue semiprecious stone). This name does not match any name on available maps. Specimens collected at that locality taken at higher elevations than the larimar mine itself, but not far away.

Variation. The green body sheen is most prominent on the Haitian specimens, with no other differences observed.

Etymology. The specific epithet is derived from the Latin *ater*, which means black, referring to the black appendages. All other *Altisessor* species have variously colored appendages or pale terminal antennomeres.

Remarks. See the biology section in the genus description above.

Altisessor centralis Skelley, new species

Figure 1b, 63, 66, 69, 72

Diagnosis. Recognized by the entirely dark legs, antennomere IX-X dark with antennomere XI pale, and fine dorsal punctation.

Description. Length: 3.5-4.0 mm; width: 1.8-2.2 mm. Body elongate, posteriorly narrowed, somewhat cylindrical; dorsal surface weakly microreticulate, glossy; ventral surface strongly microreticulate (Fig. 63, 66). Color black with weak bronze sheen, except as noted: base of antenna light brown; antennomere XI pale white.

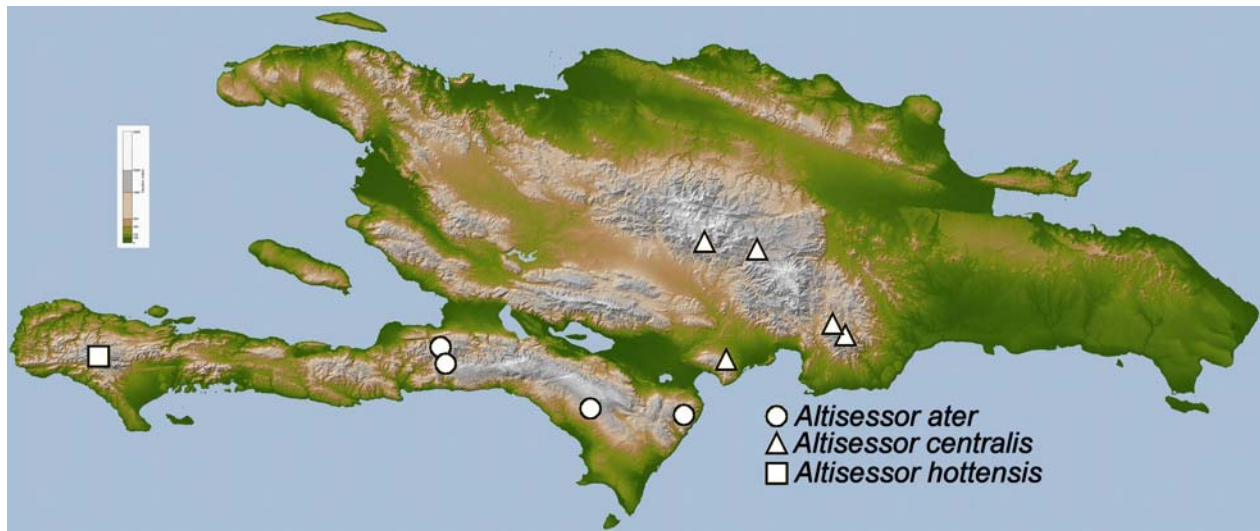


Figure 72. Distribution map of *Altisessor* spp. on Hispaniola: circle = *A. ater*; triangle = *A. centralis*; square = *A. hottensis*.

Head interocular width = 5-6 x ocular width; vertex and epistomal punctures coarse, puncture size = 0.8 x ocular facet diameter, separated by 2-3 x diameter; epistome anterior margin truncate. Eye facets moderate in size. Terminal maxillary palpomere triangular, length = 0.8 x width. Terminal labial palpomere triangular, asymmetrical, width = length, expanded medially, width = 0.8 x terminal maxillary palpomere. Mentum with broad triangular plate, width = 2 x length. Genal lobes reduced to smooth, faint ridge.

Pronotum transverse, width = 1.8 x length; puncture size = 0.9 x ocular facet diameter, evenly distributed, separated by 2-3 x their diameter; punctures bearing short setae, some visible in profile; base lacking large punctures; anterior edge with marginal bead only behind eyes; base slightly sinuate, lacking marginal bead. Scutellum pentagonal, width = 1.5 x length. Elytral striae present, puncture size = an ocular facet diameter, separated by 3-4 x their diameter; strial punctures with fine setae, occasionally visible in profile; interval punctures fine; base lacking marginal bead. Wings present, fully developed.

Prosternum length = intercoxal width; sternal plate flat, coarsely punctate at base; sternal lines continuous around coxal cavity; base concave. Mesosternum broad, width = 2 x length, with transverse scattered row of coarse punctures, base concave, line continuous around coxal cavity. Metasternum with lines faintly connected medially; continuous around mesocoxal cavity; coarse punctures evenly distributed across metasternum, finer near mesosternum. Abdomen with coxal lines not connecting medially; continuous around metacoxal cavity; punctures of first ventrite size and distribution as those on metasternum, finer on following sterna. Male genitalia with flagellum short, gradually narrowing to fine, hair-like apex (Fig. 69); sclerite at base enlarged, triangular, in dorsal view V-shaped.

Distribution. Found in central Dominican Republic, primarily in the Cordillera Central (Fig. 72).

Type Material. The male holotype of *Altisessor centralis* Skelley (Fig. 63) label data: “/ DOMINIC.REP.: Prov. La Vega, ca.10 km E. Constanza, 1295m, 31AUG1988, beating pine, guava forest, M. A. Ivie, T. K. Philips & K. A. Johnson / [pale yellow paper] Specimen imaged 2008-West Indies Erotylinae, P. Skelley / [red paper] HOLOTYPE *Altisessor centralis* P.E. Skelley /” (WIBF). The female allotype label data: “/ DOM.REP., Peravia, 16 km. E. San Jose de Ocoa, August 8, 1979, C.W. O’Brien (WIBF). Paratypes examined (6): same data as allotype except “L.B. O’Brien” (1-WIBF); San Juan, 7 km N. Arroyo Cano, 1 km S. Los Frios (1-CMNH); [San Cristobal Prov.], Colonia, 6.6.1972, 1000m, J. & S. Klapperich (1-NHMB); same data except “10.2.1973”(3-NHMB, PESC).

Regarding the locality “Colonia” (M. A. Ivie, pers. comm.), in an unpublished dissertation on Leptolycinae (Lycidae) (Miller 1991), there are “Colonia” records for one species collected by Klapperich at six various dates between 1970-1972. These beetles are rarely collected, have larviform females, and the species tend to be localized. Additional members of the same species were collected by Maldonado-Capriles

in 1955 from “Colonia Ramfis”, which appears on the 1953 Esso map. These localities are likely the same. It is listed in the USBGN Gazetteer, now La Cabirma de la Loma, San Cristobal Province, 18°29'N, 70°14'W.

Additional material. Two additional females from disjunct localities were examined, which are tentatively considered *A. centralis*. Because of some uncertainty, they are not designated as paratypes. One has label data: “Haiti, Mf. La Hotte, 5-7800 ft., Oct 16-17-1934, Darlington” (MCZC). This locality is far from the expected range of *A. centralis*, and is also the location of another *Altisessor* species. Presently, only one *Altisessor* species occurs on any given mountain range. Therefore, a labeling error may have occurred with this specimen, and subsequently is not plotted on the distribution map.

Another female has label data: “Dominican Republic: Azua, East side of crest, Sierra Martin Garcia, 7 km WNW Barrero, 18-21N, 70-58W, 860 m, 25-26-July 1992, C. Young, R. Davidson, S. Thompson, J Rawlins, cloud forest adjacent to disturbed forest” (CMNH). This locality is on a mountain range near but distinctly separate from the Cordillera Central and may represent a different species. A male specimen is needed to confirm the identity of this population.

Variation. Some are dark brown, not black, and are possibly teneral.

Etymology. The specific epithet denotes the species distribution in the center of Hispaniola, primarily in the Cordillera Central.

***Altisessor gundlachi* (Zayas 1988), new combination**

Figure 1b, 58

Oocyanus gundlachi Zayas 1988: 81-82, fig. 71.

Eptyus [sic] gundlachi (Zayas) ~ Peck 2005: 134

Diagnosis. Distinguished by: pale antennomeres IX-XI; dark femora and tibial bases, tibial apices and tarsi pale (Fig. 58); body with metallic purple sheen; and large size (largest member of *Altisessor*).

Description. Length: 5.0 mm; width: 2.3 mm. Body elongate, somewhat cylindrical; surface microreticulate, yet shining. Color black with metallic purple sheen (occasional hints of blue-green, depending on lighting), except as noted: palpi, antennal bases, tarsi, and apical 0.9 of tibiae pale yellow; antennal club pale-white.

Head interocular width = 5 x ocular width; vertex and epistome puncture size = 0.9 x ocular facet diameter, separated by 2-3 x their diameter, weakly impressed, obscured in microreticulation; epistome anterior margin truncate. Eye facets moderate in size. Terminal maxillary palpomere triangular, asymmetrical, length = width. Terminal labial palpomere triangular, asymmetrical, width = 1.5 x length, expanded medially, width = terminal maxillary palpomere. Mentum with triangular plate broad, short, width = 2 x length. Genal lobes reduced to smooth ridge.

Pronotum transverse, width = 1.6 x length; puncture size and distribution as those on vertex; base with slight indentation at each side of base, lacking large punctures; anterior edge with marginal bead only behind eyes; base sinuate, lacking marginal bead. Scutellum transverse, length = 0.5 x width. Elytral striae present, puncture size = an ocular facet diameter, separated by 2-3 x diameter; interval punctures fine, obscured in microreticulation; base lacking marginal bead. Wings present, fully developed.

Prosternum length = 1.6 x intercoxal width; sternal plate flat, coarsely punctate; sternal lines continuous around coxal cavity; base shallowly concave. Mesosternum broad, width = 2 x length, with transverse row of coarse punctures, base slightly concave, lines continuous around coxal cavity. Metasternum with lines meeting medially; continuous around mesocoxal cavity; coarsely punctate at anterolateral angles, fine scattered punctures medially and posteriorly. Abdomen with coxal lines not connecting medially; continuous around metacoxal cavity; coarse punctures on first ventrite scattered, punctures fine and obscure on remaining ventrites. Genitalia not examined (unique holotype not dissected).

Distribution. Found in Cuba, exact locality unknown.

Type Material. The holotype of *Oocyanus gundlachi* Zayas (Fig. 58) with label, "1514", is glued onto a larger label with a black outline. The type is deposited in the Gundlach Collection at the Instituto de Ecología y Systemática, Academia de Ciencias de Cuba, Habana. This specimen was studied and photographed in 1995 (hence the lower photograph quality), at which time a red label was added stating "HOLOTYPE *Oocyanus gundlachi* Zayas 1988".

Remarks. The two known species of *Altisessor* in Cuba are easily separated from other members by their pale tibiae. *Altisessor gundlachi* is distinguished from *A. viridis* by a wider body, weaker cuticular microreticulation (hexagonal indentations not visible), purple sheen, pale tarsi (contrasting against dark femora), and tibiae with dark base.

***Altisessor hottensis* Skelley, new species**

Figure 1b, 57, 60, 70, 72

Diagnosis. Antennal club entirely dark, light colored femora with dark apices (Fig. 60), and hind wing reduced to membranous strip.

Description. Length: 3.8 mm; width: 1.8 mm. Body elongate, parallel-sided, posteriorly narrowed, somewhat cylindrical; surface microreticulate, glossy; dorsally with moderately sized, dense punctation bearing long fine setae (Fig. 57). Color brown with a weak bronze sheen, except as noted: antennomeres I-II pale brown; antennomeres IX-XI dark brown; femur pale brown with dark brown apex (Fig. 60).

Head interocular width = 5 x ocular width; vertex and epistomal punctures both fine and coarse; coarse puncture size = 0.8 x ocular facet diameter, separated by 1-2 x their diameter; epistome anterior margin truncate. Eye facets moderate in size. Terminal maxillary palpomere triangular with rounded base, length = 0.8 x width. Terminal labial palpomere triangular, asymmetrical, width = length, expanded medially, width = 0.66 x terminal maxillary palpomere. Mentum with weakly defined triangular plate, width = 1.5 x length. Genal lobes reduced to smooth, faint ridge.

Pronotum transverse, width = 1.8 x width; punctures of 2 sizes, coarser puncture size = 0.9 x ocular facet diameter, evenly distributed, separated by 1-2 x their diameter, coarse punctures absent at base and anterior margin; fine punctures interspersed between coarse punctures; coarse punctures bearing long fine setae; anterior edge with faint marginal bead medially, stronger behind eyes; base nearly truncate, lacking marginal bead. Scutellum semicircular, width = 2 x length. Elytral striae present, punctures slightly larger than interval punctures, puncture size = 0.9 x ocular facet diameter, separated by their diameter; strial punctures with fine setae; base lacking marginal bead, slightly indented near humeri for reception of pronotal hind angles. Wings reduced to a narrow, membranous strip.

Prosternum length = 1.5 x basal width; sternal plate flat; sternal lines continuous around coxal cavity; base concave. Mesosternum broad, width = 2.5 x length, with scattered coarse punctures, base concave, line continuous around coxal cavity. Metasternum with lines faint medially; continuous around mesocoxal cavity; band of coarse punctures from lateral margins along posterior half, few scattered fine punctures. Abdomen with coxal lines not connecting medially; continuous around metacoxal cavity; punctures of first ventrite smaller than metasternal punctures. Male genitalia with flagellum greatly thickened, laterally flattened; gradually widening to broad obliquely truncate apex (Fig. 70). Female unknown.

Distribution. Known from Hispaniola, specifically the southwestern peninsula of Haiti, Massif de La Hotte (Fig. 72).

Type Material. The male holotype of *Altisessor hottensis* Skelley (Fig. 57, 60) possesses the following label data: "Desbarriette, Mf. La Hotte, nr. 4000ft, Oct.12-14/ Haiti, 1934, Darlington/ [red paper] HOLOTYPE *Altisessor hottensis* P.E. Skelley" (MCZC). The specific locality is possibly a misspelling of Desbarriere, a peak in the La Hotte range.

Etymology. The specific epithet is derived from the mountain range on which the species occurs.

Remarks. This is the only known flightless member of *Altisessor*.

***Altisessor oriens* Skelley, new species**

Figure 1b, 64, 67, 71

Diagnosis. Recognized by the meso- and metasternal junction with strong metasternal punctures, coarse striae punctures, entirely pale antennal club (Fig. 64, 67), solid-colored femora, and faint microreticulations.

Description. Length: 3.1-3.5 mm; width: 2.7-2.9 mm. Body elongate, posteriorly narrowed, somewhat cylindrical; surface weakly microreticulate, glossy. Color dark brown with weak bronze sheen, except as noted: tibiae becomes paler apically; antenna light brown; antennomeres IX-XI pale white (Fig. 64, 67).

Head interocular width = 5 x ocular width; vertex and epistomal punctures coarse, puncture size = 0.9 x ocular facet diameter, separated by 2-3 x their diameter; epistome anterior margin truncate. Eye facets moderate in size. Terminal maxillary palpomere triangular, slightly asymmetrical, length = 0.8 x width. Terminal labial palpomere triangular, asymmetrical, width = 2 x length, expanded medially, width = terminal maxillary palpomere. Mentum with faint triangular plate, width = 2 x length. Genal lobes reduced to smooth ridge.

Pronotum transverse, width = 2 x length; punctures coarse, puncture size = an ocular facet diameter, evenly, separated by 2-3 x their diameter; punctures bearing short setae; base with slight indentation at each side of base, large punctures apparently lacking; anterior edge with marginal bead only behind eyes; base slightly sinuate, lacking marginal bead. Scutellum pentagonal, rounded, length = 0.5 x width. Elytral striae present, puncture size = 1.5-2.0 x ocular facet diameter, separated by 1-2 x diameter; striae punctures with fine setae, often visible only in profile; interval punctures fine; base lacking marginal bead. Wings present, fully developed.

Prosternum length = 1.3 x intercoxal width; sternal plate convex, with coarse punctures; sternal lines continuous around coxal cavity; base concave. Mesosternum broad, width = 2.0-2.5 x length, with transverse row of foveate punctures, base slightly sinuate, continuous around coxal cavity. Metasternum with lines connected medially with a series of coarse punctures; continuous around mesocoxal cavity; finely punctate at anterolateral angles, coarse punctures medially and posteriorly. Abdomen with coxal lines not connecting medially; continuous around metacoxal cavity; punctures indistinct on first ventrite, apparently lacking on rest of sterna. Male genitalia with flagellum long, nearly same thickness to apex (Fig. 71); sclerite at base of flagellum somewhat V-shaped in both lateral and dorsal views.

Distribution. Found on Puerto Rico.

Type Material. The male holotype and female allotype of *Altisessor oriens* possess the following label data: "/ P. RICO: Adjuntas, Guilliarte (sic) For. Res. trail to Mt. Guilliarte (sic) summit, 5.VIII.1999, P. Kovarik, collector /" (FSCA). Paratypes (33) examined have the following label data: same data as holotype (5-PESC); Guilarte St. For., Summit Tr., VIII-5-1999, C.W. O'Brien, P.W. Kovarik (1-PESC); Guilarte St. For., VIII-2-1999, C.W. O'Brien, P. Kovarik (1-PESC); Guilarte For. Res., Hwy. 131 & 158, July 23, 1979, G. B. Marshall (2-WIBF); same data except CW. O'Brien (3-WIBF); Guilarte For. Res., Hwy. 131 & 158, July 24, 1979, G.B. Marshall (1-WIBF); same data except CW. O'Brien (3-WIBF); same data except L.B. O'Brien (1-WIBF); Carib. N.F., El Toro Negro D., Hwy. 143, K16H4, 7-21-1979 L.B. O'Brien (3-WIBF); same data except C. W. O'Brien (6-WIBF); Carib.N.F., El Toro Negro D., Hwy. 143, K16H9, 7-22-1979 L.B. O'Brien (2-WIBF); same data except G.B. Marshall (1-WIBF); Carib. N.F., El Yunque, Hwy (191), K11H2, July 19, 1979, C.W. O'Brien (2-WIBF); El Yunque Sta., Luquillo Forest, 10-16-1969, H.& A. Howden (1-CMNC); Maricao For. Res., Hwy.120, K13H8, July 25, 1979 L.B. O'Brien (1-WIBF); Maricao Forest, 890m, 28-30-VII-2004, G. Nearns, beating (1-FSCA); Maricao For., Carr. 120, km 9-15, 18°08'45"N, 66°58'523"W, 14 June 2002, 850-950m, beating vegetation, Steven W. Lingafelter (1-NMNH). Paratypes will be deposited in NHML and UPRM.

Etymology. The specific epithet is derived from the Latin *oriens* which means “east”. Thus, the full species name means “eastern mountain sitter”.

Remarks. *Altisessor oriens* is the only known Erotylinae on Puerto Rico.

***Altisessor viridis* Skelley, new species**

Figure 1b, 59, 61

Diagnosis. Distinguished from congeners by pale antennomeres IX- XI, dark femora and tarsi, entirely pale tibiae, and body with metallic green sheen (Fig. 58).

Description. Length: 4.5 mm; width: 2.0 mm. Body elongate, parallel-sided, somewhat cylindrical; surface microreticulate, yet appearing glossy. Color black with metallic green sheen, except as noted: palpi, antennal base, and tibia pale yellow; antennal club pale-white (Fig. 58, 61).

Head interocular width = 5 x ocular width; vertex and epistome puncture size = 0.9 x ocular facet diameter, separated by 2-3 x their diameter; epistome anterior margin truncate. Eye facets moderate in size. Terminal maxillary palpomere triangular, asymmetrical, length = 0.8 x width. Terminal labial palpomere triangular, asymmetrical, width = 1.5 x length, expanded medially, width = terminal maxillary palpomere. Mentum with triangular plate broad, short, width = 2 x length. Genal lobe reduced to smooth ridge.

Pronotum transverse, width = 1.75 x length; puncture size and distribution as those on vertex, setae minute, if present; base with slight indentation at each side of base, lacking large punctures; anterior edge with marginal bead only behind eyes; base slightly sinuate, lacking marginal bead. Scutellum transverse, length = 0.5 x width. Elytral striae present, puncture size = 1.2 x pronotal disc punctures, separated by 2-3 x their diameter; interval punctures fine, obscured in microreticulation; base lacking marginal bead. Wings present, fully developed.

Prosternum length = 1.3 x intercoxal width; sternal plate flat, coarsely punctate; sternal lines continuous around coxal cavity; base concave. Mesosternum broad, width = 2 x length, with transverse row of coarse punctures, base slightly concave, lines continuous around coxal cavity. Metasternum with lines meeting medially; continuous around mesocoxal cavity; coarsely punctate at anterolateral angles, fine scattered punctures medially and posteriorly. Abdomen with coxal lines not connecting medially; continuous around metacoxal cavity; punctures scattered, coarse. Male genitalia unknown (unique holotype is female).

Distribution. From Havana Province, Cuba.

Type Material. The female holotype of *Altisessor viridis* Skelley (Fig. 58, 61) has the following label data: “/E.E.A. de Cuba. No. 9274/ [red paper] HOLOTYPE *Altisessor viridis* P.E. Skelley /” (NMNH). According to S. Peck (pers. comm.), the abbreviation “E. E. A.” is short for Estacion Experimental de Agricultura, Havana Province.

Etymology. The specific epithet is derived from the Latin *viridis* for green, owing to the green color of the body.

Remarks. This species and *A. gundlachi* are the only members of *Altisessor* from Cuba (see Remarks under *A. gundlachi* for additional comments).

Genus CUBYRUS Skelley, new genus

Types species: *Ischyryrus sapphirus* Skelley 1998b: 58, here designated.

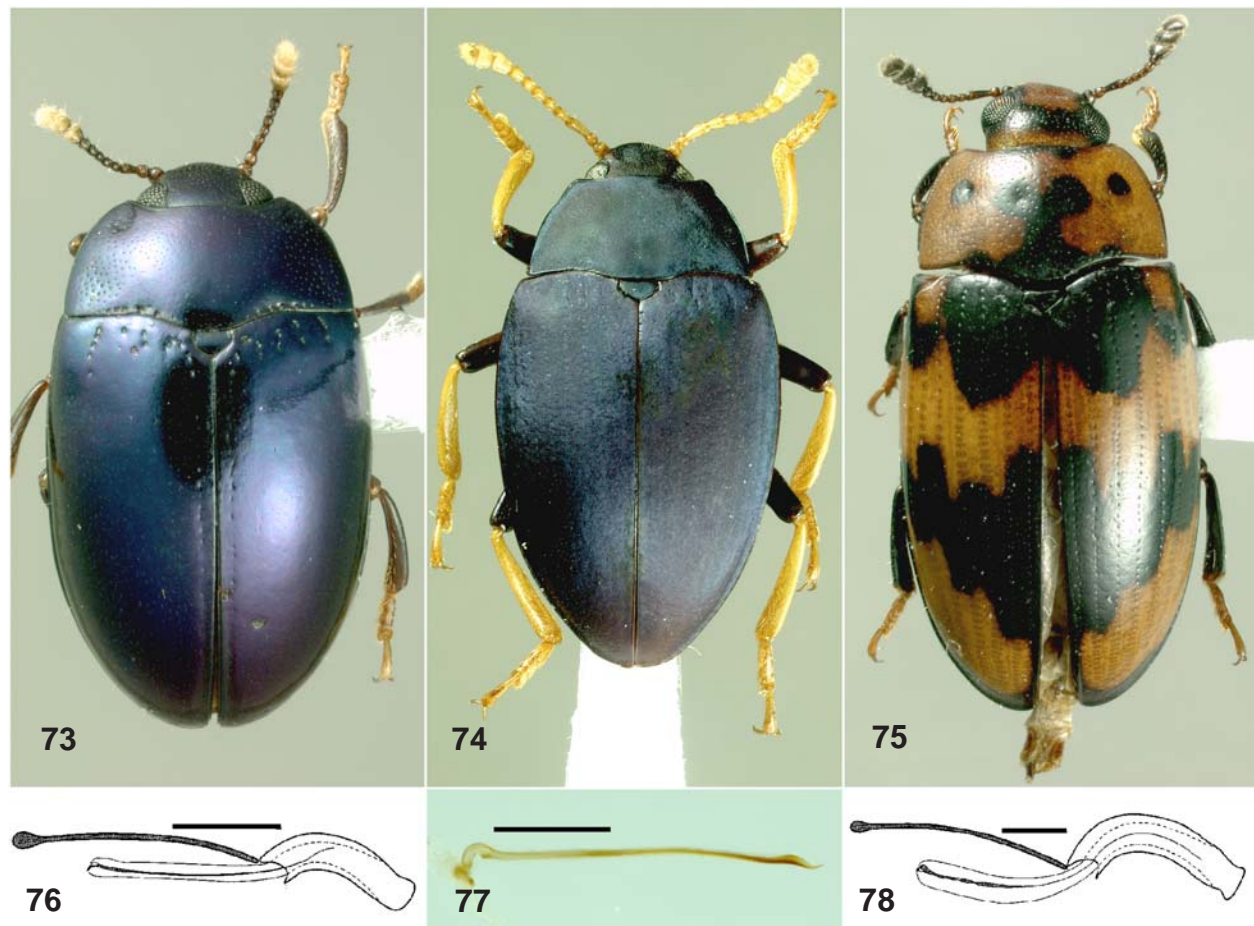


Figure 73-78. Dorsal habitus and genitalia. **73, 76** *Cubyrus sapphirus*, paratype (genitalia from Skelley 1998b). **74, 77** *Epytus cyaneus*. **75, 78** *Ischyryus quadripunctatus* (genitalia from Skelley 1998b). Genitalic scale lines = 0.66 mm.

Diagnosis. *Cubyrus* is distinguished from other Tritomini by: an ovoid body shape, coarsely faceted eyes, femora with marginal bead, triangular mentum, broad antennomere IX, metallic blue body, pale antennal club, and elytral striae coarsely punctate at base, otherwise absent (Fig. 10, 73).

Description. Length: 3.5-4.6 mm; width: 2.0-2.7 mm. Body short, ovoid, flattened; surface glossy; dorsal punctation fine to coarse; unicolorous black with metallic blue sheen; antennal club, palpi, and tarsi light brown, terminal antennomere pale.

Head punctures distinct, anteriorly puncture size = 0.33 x ocular facet diameter, separated by 2-3 x their diameter, punctures becoming smaller and sparser towards base; ocular striae present, not surpassing antennal base anteriorly; stridulatory files absent. Eyes prominent, coarsely faceted. Antennae elongate, attaining the pronotal base; antennomere II globose, length = width; antennomere III length = 2 x width, length = length of antennomeres IV+V combined; antennomeres IV-VIII shortened, length = width; antennomere VIII little wider than VII, apically angled, not appearing as part of club; antennomere IX broad, trapezoidal at base (Fig. 22), width = 1.5 x length. Mentum with triangular plate, length = 0.75 x width. Terminal maxillary palpomere symmetrical, semicircular, width = 1.5 x length. Terminal labial palpomere expanded medially, asymmetrical, length = 0.75 x width, width = 0.6 x width of terminal maxillary palpomere. Genal lobes weakly developed, sharply edged, rounded.

Pronotum with anterior marginal bead only behind eyes; base lacking marginal bead; sides at anterior angle arch toward eyes; base with small group of very coarse punctures in shallow depression on either side of midline. Wings present, fully developed.

Prosternum with anterior marginal bead, weakly pinched medially. Mesosternum posteriorly sinuate, transverse, width = 1.5 x length, punctation fine, indistinct. Mesocoxal lines on metasternum moderate in length, distinct. Metasternum normal length, distance between meso- and metacoxae = approximately 2 x intermesocoxal width, sternal line faint medially. Meso- and metafemora angled in cross-section, with sharp posterior marginal bead (Fig. 18). Male genitalia with flagellum thin and hair-like, not thickened or modified (Fig. 76).

Distribution. Endemic to Cuba.

Etymology. The generic name is an intentional abbreviation and merging of “Cuban *Ischyryrus*”. Gender is masculine.

***Cubyryrus sapphirus* (Skelley), new combination**

Figure 1b, 10, 18, 22, 73, 76

Ischyryrus sapphirus Skelley 1998b: 58 ~ Peck 2005: 134.

Diagnosis. Characters listed in the genus diagnosis serve to distinguish the single species of *Cubyryrus*.

Description. [Modified from Skelley 1998b] Length: 3.5-4.6 mm; width: 2.0-2.7 mm. Head interocular width = 2.2 x ocular width. Pronotal disc medial puncture size = 0.33 x ocular facet diameter, separated by 3-4 x their diameter; lateral puncture size = 0.75 x ocular facet diameter, separated by 1 x their diameter. Scutellum elongate pentagonal, nearly triangular; length = 0.6 x width. Each elytron with sutural striae complete; striae II-V indicated basally by 2-4 foveate punctures, puncture size = 1-2 x ocular facet diameter; disc lacking striae and strial punctures; surface with few fine interval punctures.

Prosternum convex, length = 0.9 x basal width; lacking foveate punctures anterior to procoxa; coxal lines straight, almost parallel, length = 0.5 x sternal length, lines not surpassing coxae anteriorly; prosternal plate flat or slightly convex, apical width = 0.9-1.0 x basal width; base shallowly concave. Mesosternum with coxal lines straight, lines parallel to diverging anteriorly. Metasternum with medial punctures fine; lacking lateral punctures, dulled. Abdomen with metacoxal lines short; broadly rounded between metacoxae, almost truncate; lacking noticeable punctures.

Distribution. Endemic to Cuba.

Type Material. The male holotype of *Ischyryrus sapphirus* Skelley has the following label data: “/Soledad, Cuba, Cienfuegos, June 1929, Darlington/” (MCZC). Including the holotype, 15 specimens were studied for the original description (Skelley 1998b). For the present manuscript, only 4 paratypes in PESC were studied. The type series included specimens from three localities: Soledad (Cienfuegos); [?]Cejanal, P. del Rio; and Camaguey, Baragua [Ciego de Avila].

Remarks. *Cubyryrus sapphirus* is probably the undescribed *Ischyryrus* mentioned by Curran (1944).

Genus *EPYTUS* Dejean 1836

Epytus Dejean 1836: 428. Type Species: *Erotylus cyaneus* Duponchel 1825: 562; subsequent designation by Crotch 1873b: 144 [after the synonymy of *Erotylus violaceus* Sturm 1826 under *E. cyaneus*] ~ Dejean 1837: 452; Crotch 1873b: 144; Crotch 1876: (57)433; Alvarenga 1965: 84, 88; Alvarenga 1994: 17; Skelley 1998b: 9.

Epytus Dejean in Peck 2005: 134 [misspelling].

Oocyranus Hope 1841: 110, 113-114. Type species: *Erotylus violaceus* Sturm 1826, original designation. ~ Lacordaire 1842: 31, 194-195; Germar 1843: 133; Jacquelin du Val 1856: 133-134; Guérin-Méneville 1857: 322; Chapuis 1876: 31, 34-35; Gemminger and Harold 1876: 396; Kuhnt 1909: 56, 64; Kuhnt 1911: 44; Deelder 1942: 52; Curran 1944: 1; Blackwelder 1945: 465; Roberts 1958: 283.

Diagnosis. *Epytus* is recognized by its triangular mental plate, femur lacking marginal bead, antennomere IX as long as wide and angular at base, and anterior pronotal angles projecting forward.

Description. Length: 4.5-7.0 mm; width: 2.5-4.0 mm. Body ovate, flattened, with strong microreticulations, dull, blue color; antennae, labrum, palpi, tibiae and tarsi yellow.

Head with ocular striae present, attaining antennal base anteriorly. Antenna attaining base of pronotum; antennomere II length = width; antennomere VIII wider than VII, appearing a base of club; antennomere IX broad at base, trapezoidal (Fig. 24), length = width, sides angled at base. Mentum with triangular plate, length = width (Fig. 15). Genal lobes present, reduced, short, blunt.

Pronotal disc relatively flattened; anterior angles projecting anteriorly, lateral margin do not curve towards the eyes (Fig. 79); anterior edge with marginal bead only behind eyes; base sinuate, lacking marginal bead. Elytral base lacking marginal bead; epipleural fold with a row of punctures at the lateral edge (occasionally obscure), appearing as a secondary line. Wings present, fully developed.

Prosternal anterior edge with marginal bead, not pinched; base shallowly concave. Mesosternum truncate at base; width = 1.5 x length, lacking coarse punctures; mesosternal line continuous around mesocoxal cavity, divergent anteriorly between coxae; impressed anterior line on the metasternum at suture with mesosternum not covered by mesosternum; mesocoxal line on the metasternum lacking. Meso- and metafemora rounded in cross-section, lacking sharp posterior marginal bead (Fig. 28, 80).

Distribution. *Epytus* is endemic to Cuba.

Remarks. Early literature used *Oocyranus* Hope for this taxon. However, Alvarenga (1965, 1994) followed rules of priority (ICZN 1999, Article 23.1) and considered *Epytus* Dejean as the valid name. Although Dejean (1836) did not provide a description of the genus, inclusion of a validly described species validated the genus name by indication (ICZN 1999, Article 12.2.5). Thus, *Epytus* is the appropriate name.

Epytus was one of the earliest described Erotylidae genera. One character used by past workers to distinguish it from *Ischyryus* is the equal width of the terminal maxillary and labial palpomeres. In *Ischyryus* the terminal labial palpomere is generally not as wide as the terminal maxillary palpomere. This character is open to varying interpretations, depending if one compares ratios of the greatest width of the terminal palpomeres, or widths of the apical sensory areas. Although this character holds for many species, it is variable for mainland species of *Ischyryus* (Skelley 1998b) and should not be used as the primary distinguishing character for either genus.

Most West Indian species that were described by Lacordaire as *Ischyryus* remained there until Curran (1944) transferred them all into *Oocyranus* based primarily on palp ratios. Curran's transfer is justified, but their placement in his *Oocyranus* rendered the genus heterogeneous. Based on several characters, most of the species Curran placed in *Oocyranus* are herein transferred to the new genus *Notaepytus*. Thus, *Epytus* is restricted to a single unique species.

Dejean (1836) first indicated the synonymy of three species names listed under *Epytus* by placing them in alphabetical order within a single bracket. The first of Dejean's names (*E. azureus*) is a *nomen nudum*, and appears only in synonymies. Lacordaire (1842) also considered the names listed by Dejean to be conspecific, but chose to use the earlier *E. violaceus* Sturm (1826) over *E. cyaneus* Duponchel (1825), the latter of which has priority. Furthermore, Lacordaire used the epithet in combination with *Oocyranus* Hope (1841) instead of preserving the Dejean generic name *Epytus*.

Lacordaire's (1842) use of *Oocyranus violaceus* was followed by most subsequent workers until Alvarenga (1965) applied the rule of priority (see ICZN 1999) and used *E. cyaneus* Duponchel, Alvarenga's placement is maintained here.

***Epytus cyaneus* (Duponchel 1825)**

Figure 1b, 15, 20, 24, 74, 77, 79-80

Erotylus cyaneus Duponchel 1825: 60 #56, pl. 2, f. 56.

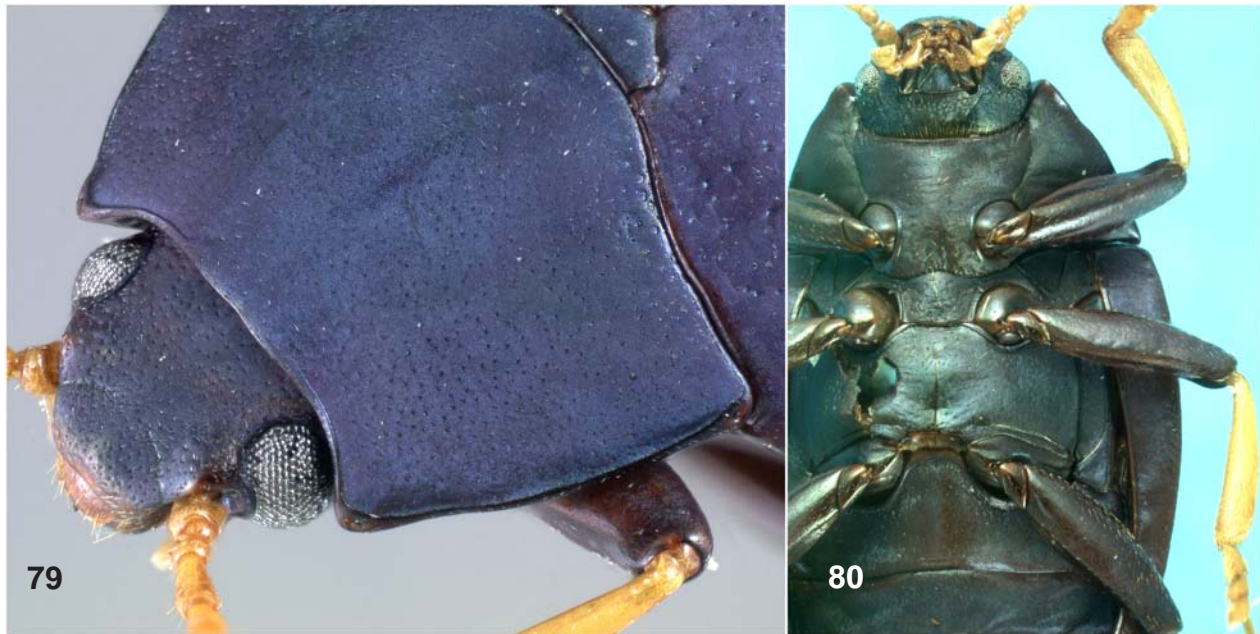


Figure 79-80. *Epytus cyaneus*. **79)** Head and pronotum, lateral-anterior view. **80)** Venter.

Epytus cyaneus (Duponchel) ~ Dejean 1836: 429; Dejean 1837: 452; Alvarenga 1965: 84; Alvarenga 1994: 17.

Epytus [sic] cyaneus (Duponchel) ~ Peck 2005: 134.

Ischyurus [sic] cyaneus Duponchel ~ Curran 1944: 5 [misspelling as synonym. of *O. cyaneus*].

Oocyanus cyaneus (Duponchel) ~ Curran 1944: 5.

Epytus azureus Dejean 1836: 429 [*nomen nudum*, as synonym of *E. cyaneus*] ~ Dejean 1837: 452 [as synonym of *E. cyaneus*]; Sturm 1843: 305.

Epytus [sic] azureus Dejean in Gundlach 1891-1894: 127 [*nomen nudum*, as synonym of *O. violaceus*].

Erotylus violaceus Sturm 1826: 82, 139, pl. IV f. 38 ~ Hope 1841: 113-114.

Epytus violaceus (Sturm) ~ Dejean 1836: 429 [as synonym of *E. cyaneus*]; Crotch 1876: (57) 433; Skelley 1998b: 14.

Ischyurus violaceus (Sturm) ~ Curran 1944: 5 [in synonymy of *O. violacea*].

Oocyanus violaceus (Sturm) ~ Lacordaire 1842: 196; Jacquelin du Val 1856: 133-134; Guérin-Ménéville 1857: 322; Gemminger and Harold 1876: 3696; Gorham 1898: 335; Gundlach 1891-1894: 127; Kuhnt 1909: 64; Kuhnt 1911: 44; Leng and Mutchler 1914: 412; Deelder 1942: 83; Curran 1944: 5; Blackwelder 1945: 465; Roberts 1958: 283 [larva].

Diagnosis. This is the only erotylid with dull blue body and pale yellow antennae, tibiae, and tarsi (Fig. 74).

Description. Length: 4.5-7.0 mm; width: 2.5-4.0 mm. Body broad, ovate, narrowed at the ends; strongly microreticulate, dull; color blue; tibiae, tarsi, antennae, and palpi yellow; antennomeres IX-XI slightly paler.

Head interocular width = 3 x ocular width; vertex puncture size = 0.5 x ocular facet diameter, separated by 2 x their diameter. Eyes coarsely faceted. Antennomere III length = 3 x width, length = length of antennomeres IV+V combined; antennomeres IV-VII equal in length, each with length = 1.5 x width; antennomere VIII wider than VII, apically angular; antennomere XI subcircular, length = antennomere IX (Fig. 24). Terminal maxillary palpomere triangular, symmetrical, length = 0.6 x width. Terminal

labial palpomere triangular, asymmetrical, width = 2 x length, expanded medially, width = terminal maxillary palpomere (Fig. 15).

Pronotum with punctures on disc slightly finer than those on head, evenly distributed, separated by 2 x their diameter; base with small group of large punctures at each side of base, puncture size = 2 x disc puncture diameter. Scutellum pentagonal, length = 0.75 x width. Elytra with striae puncture size = pronotal disc punctures, separated by 2-3 x their diameter; intervals finely punctate, punctures obscured in microreticulation, punctures with fine short setae visible on clean specimens.

Prosternum length = 2.5 x intercoxal width (Fig. 80); prosternum flat, not punctate; sternal lines continuous around coxal cavity. Mesosternal lines divergent anteriorly, continuous around coxal cavity, or just barely broken; length = width; mesosternal surface with scattered punctures. Metasternum with lines meeting medially, impressed; continuous around mesocoxal cavity; punctures fine, scattered, separated by 4 x their diameter, obscured in lateral microreticulations. Abdomen with coxal lines meeting medially; continuous around metacoxal cavity; punctures fine, scattered, obscure; ventrite with coarser punctures at apex. Male genitalia with flagellum slightly swollen near acute apex (Fig. 77).

Distribution. Endemic to Cuba.

Type Material. Duponchel (1825) cited his material of *Erotylus cyaneus* from "collection de M. le Comte Dejean." Dejean (1836) later stated the species was from Cuba. The Dejean collection is reported to be in the MRSN, but no specimen was located with this name, thus the present repository is unknown.

Sturm (1826) cited his material of *Erotylus violaceus* from "... der Insel Cuba in Westindien. Von Herrn Escher-Zollikofer in Zürich mitgetheilt," however the present repository is unknown.

The identity of this unique taxon is based on original and subsequent descriptions, and early illustrations. Lacordaire's comment (1842: 196) that differences in the two named species do not exist and only one valid species is confirmed in this revision.

Specimens Examined. A total of 80 specimens were studied. Their label data are presented in the Appendix.

Remarks. Lacordaire (1842) cited erroneous page numbers for Duponchel's description of *E. cyaneus* as "p. 31. 562." These numbers were repeated by nearly all subsequent workers until Alvarenga (1994) cited them correctly. Also, Duponchel's monograph is frequently cited as 1824, which is also apparently in error. Blackwelder (1957) cited for Duponchel 1824 "See 1825". A copy of Duponchel (1825) was directly examined and the correct year and page numbers are cited in the synonymy above.

Genus *ISCHYRUS* Lacordaire 1842

Ischyryrus Lacordaire 1842: 89-131. Type species: *Erotylus quadripunctatus* Olivier 1792: 431,437; subsequent designation by Crotch 1873a: 353; 1873b: 144. Name conservation proposal by Skelley and Goodrich 1994; conservation ruling and acceptance in ICZN 1996. ~ Skelley 1998b: 1-134 [partial revision].

Micrischyryrus Alvarenga 1965: 86. Type species: *Erotylus quadripunctatus* Olivier 1792: 431,437; original designation. New name for *Ischyryrus* Lacordaire 1842, *sensu* Crotch 1873a,b, not *Ischyryrus* Dejean 1836: 428. ~ Alvarenga 1994: 12-17.

Diagnosis. *Ischyryrus* has historically been characterized by coarsely faceted eyes, triangular mental plate, relatively compact antennal club with antennomere IX transverse and semicircular, terminal antennomeres always black, terminal maxillary palpomere being wider than the terminal labial palpomere, femora with distinct marginal bead; and body unicolorous black to distinctly patterned.

Description. [Modified from Skelley (1998b) to be directly comparable with other tritomine genera treated here. Refer to Skelley (1998b) for additional descriptive details.] Length 3.5-9.9 mm; width 1.9-5.5 mm.

Body shape parallel-sided, to elongate, slightly flattened to convex dorsally; weakly microreticulate, surface dull to shining; dorsal punctation coarse; unicolorous black to variously banded or spotted, yellow-orange with black pattern, never blue; terminal antennomeres and legs always brown to black, never pale.

Head usually coarsely punctate; ocular striae present, not surpassing antennal base anteriorly; stridulatory files present in some. Eyes prominent, coarsely faceted. Antennae elongate, rarely attaining the base of the pronotum, usually only attaining basal quarter; antennomere II globose, length usually slightly greater than width; antennomere III length = 3 x width; antennomeres IV-VIII variously proportioned but always longer than wide; antennomere VIII little wider than VII, apically angled, not appearing as part of club; antennomere IX broad, semicircular to trapezoidal at base, width = 1.0-1.5 x length. Mentum with triangular plate, width = length. Terminal maxillary palpomere symmetrical or asymmetrical, triangular to somewhat hemispherical, width = 1.5-2.0 x length. Terminal labial palpomere expanded medially, asymmetrical, length = 0.5-1.5 x width, width = 0.25-0.80 x width of terminal maxillary palpomere. Genal lobes weakly developed, sharply edged, rounded.

Pronotum with anterior marginal bead only behind eyes; base lacking marginal bead; sides at anterior angle arch toward eyes; base with small group of coarse puncture in shallow depression on either side of midline. Wings present, fully developed.

Prosternum with anterior marginal bead, usually pinched medially. Mesosternum posteriorly slightly sinuate, transverse, width = 1.5 x length, punctation small to moderate, usually indistinct. Mesocoxal lines on metasternum absent to moderate in length, often distinct. Metasternum not shortened, distance between meso- and metacoxae = approximately 2 x intermesocoxal width, sternal line faint medially. Meso- and metafemora angled in cross-section, with sharp posterior marginal bead. Male genitalia with flagellum thin and hair-like, rarely thickened or modified.

Distribution. *Ischyryus* is restricted to the New World (Canada to Argentina), with highest diversity in mainland tropical areas.

Larvae. This diagnosis is based *I. quadripunctatus* from the US (illustrated in Skelley 1998b). Head bicolored, mostly pale with broad dark patches separated by pale bands along frontal suture and gena; T1 notum pigmented, with pale lateral arch creating a fake eye-spot; T2-A9 dorsally pigmented. T1-A8 terga with distinct prominent marginal tubercles and tergal surfaces with prominent tubercles which become larger and more spine-like on posterior segments, tubercles of more posterior segments often bifid; A9 tergum with urogomphi prominent, short, well separated; spiracles of A1-8 weakly raised. Larvae of *I. quadripunctatus* have been collected on resupinate white polypore fungi growing on suspended dead wood (P. Skelley, pers. obs.). Skelley et al. (1991) and Goodrich and Skelley (1993) provide specific host records for this and other Erotylinae. More detailed descriptions for immature *I. quadripunctatus* can be found in Chapuis and Candèze (1853), Chapuis (1876), Weiss (1920), and Skelley (1988, including pupa; 1998b).

Remarks. As presently understood, *Ischyryus* has over 60 species, mostly tropical, but many more await description. The North and Central American members were recently revised (Skelley 1998b), but much work remains before there is a clearer understanding of generic limits for South American members and their relationship with *Megischyryus* Crotch (1873b). *Ischyryus (sensu lato)* is an assemblage of several distinct lineages, and the creation of *Cubyryus* is the first action to recognize and define one of these lineages. Only one member of *Ischyryus* is present in the West Indies, the widespread *I. quadripunctatus* (Olivier).

***Ischyryus quadripunctatus quadripunctatus* (Olivier 1792)**

Figure 1b, 11, 19, 23, 75, 78

Erotylus quadripunctatus Olivier 1792: 431, 437.

Mycotretus quadripunctatus (Olivier) ~ Dejean 1836: 429; Dejean 1837: 453.

Ischyryus quadripunctatus (Olivier) ~ Lacordaire 1842: 127-128.

Ischyryus quadripunctatus Crotch 1873b: 144 ~ Gemminger and Harold 1876: 3690.

- Ischyryus quadripunctatus quadripunctatus* (Olivier) ~ Boyle 1954: 39-41.
Micrischyryus quadripunctatus quadripunctatus (Olivier) 1792 ~ Alvarenga 1994: 16.
Engis variegata Dejean 1821: 45 [*nomen nudum*] ~ Gemminger and Harold 1876: 3691 [catalog].
Mycotretus variegata (Dejean) ~ Dejean 1836: 429; Dejean 1837: 453.
Mycotretus humeralis Chevrolat in Dejean 1836: 429 [*nomen nudum*] ~ Dejean 1837: 453; Sturm 1843: 305.
Ischyryus subcylindricus Lacordaire 1842: 117-118 ~ Skelley 1998b: 51.
Mycotretus subcylindricus Chevrolat in Dejean 1836: 429 [*nomen nudum*] ~ Dejean 1837: 453; Lacordaire 1842: 117-118.
Micrischyryus subcylindricus (Lacordaire) ~ Alvarenga 1994: 16.
Ischyryus graphicus Lacordaire 1842: 125-126 ~ Skelley 1998b: 51.
Ischyryus quadripunctatus graphicus Lacordaire ~ Boyle 1954: 41-43.
Micrischyryus quadripunctatus graphicus (Lacordaire) ~ Alvarenga 1994: 15.
Ischyryus quadripunctatus var. *alabamiae* Schaeffer 1931: 175 ~ Mader 1938: 19.
Ischyryus quadripunctatus var. *antedivisa* Mader 1938: 19 ~ Boyle 1954: 39-41.
Ischyryus quadripunctatus Var. A Lacordaire 1842: 127-128.
Ischyryus puncticollis Gorham 1887: 44-45 ~ Skelley 1998b: 51.
Micrischyryus puncticollis (Gorham) ~ Alvarenga 1994: 15.
Ischyryus quadripunctatus chiasticus Boyle 1954 ~ Skelley 1998b: 51, 56.
Ischyryus chiasticus Boyle 1954: 43-46.
Micrischyryus chiasticus (Boyle) ~ Alvarenga 1994: 13.

Diagnosis. *Ischyryus quadripunctatus* is easily recognized by: a color pattern with 4 central pronotal spots in a transverse arch (Fig. 11, 75), club antennomeres asymmetrical, and terminal maxillary palpomeres narrowed and distinctly asymmetrical (Fig. 19).

Description. Length: 4.8-8.8 mm; width: 2.3-3.7 mm. Body elongate, widest at basal third of elytra; variably microreticulate, dull to glossy; dorsal coloration primarily orange with black marks, ventral coloration primarily black with orange marks on lateral abdomen and prothorax; head black with variably sized anterior orange mark; pronotal pattern based on 4 free discal spots in transverse anteriorly concave arch, base with variable black marking on median half, anterior margin narrowly black between eyes; elytron with orange epipleural fold, variable basal, medial and apical transverse black bands; legs entirely black or banded with orange; tarsi dark brown to black; palpi pale brown to black; antennae brown, club black.

Head interocular width = 2.0-2.5 x ocular width; vertex puncture size = an ocular facet diameter, separated 1-3 x their diameter; epistome puncture size = 0.5-0.75 x ocular facet diameter, separated by 1 x their diameter; stridulatory files present on males. Antenna attaining basal quarter of pronotum; antennomere III as long as antennomeres IV-VI combined; antennomeres X-XI asymmetrical; antennomere X angled at base; antennomere XI transverse. Terminal maxillary palpomere triangular, narrowed, longer than wide, width = 0.8 x length. Terminal labial palpomere triangular, extended on medial side, narrow, width = 0.8 x length. Labial palp width = 0.75 x maxillary palp width. Mentum with plate broadly triangular, length = 0.7 x basal width.

Pronotal disc puncture size = an ocular facet diameter, separated by 1-3 x their diameter. Scutellum pentagonal, length = 0.5 x width. Elytron strial puncture size = pronotal disc puncture; interval puncture size = 0.20-0.25 x strial puncture diameter.

Prosternum weakly keeled and pinched anteriorly, weakly concave to flattened posteriorly; length = 2 x intercoxal width; coxal lines straight, not continuous around coxal cavity; base shallowly concave. Mesosternum coxal lines straight to slightly arched; base sinuate, medially lobed. Metasternum long, distance between meso- and metacoxae = 1.8-2.0 x intermesocoxal width; coxal lines short, attaining less than 0.25 distance to posterior lateral angle; metasternum finely punctate medially, few shallow coarse lateral punctures. Abdomen with metacoxal lines often continuous around coxal cavity, some with coxal line attaining half distance to posterior edge; surface with coarse punctures laterally, fine punctures medially. Male genitalia with median lobe moderately arched, apically truncate, slightly constricted just



Figure 81-84. *Notaeptus* spp. **81-83)** Larva associated with *N. modestus* adults. **85)** *N. flavitarsis* adult on fungus in Cuba (photo by J. Genaro).

before tip; internal sac without noticeable sclerotized structures; flagellum long and narrow, flattened and ribbon-like at basal half (Fig. 78).

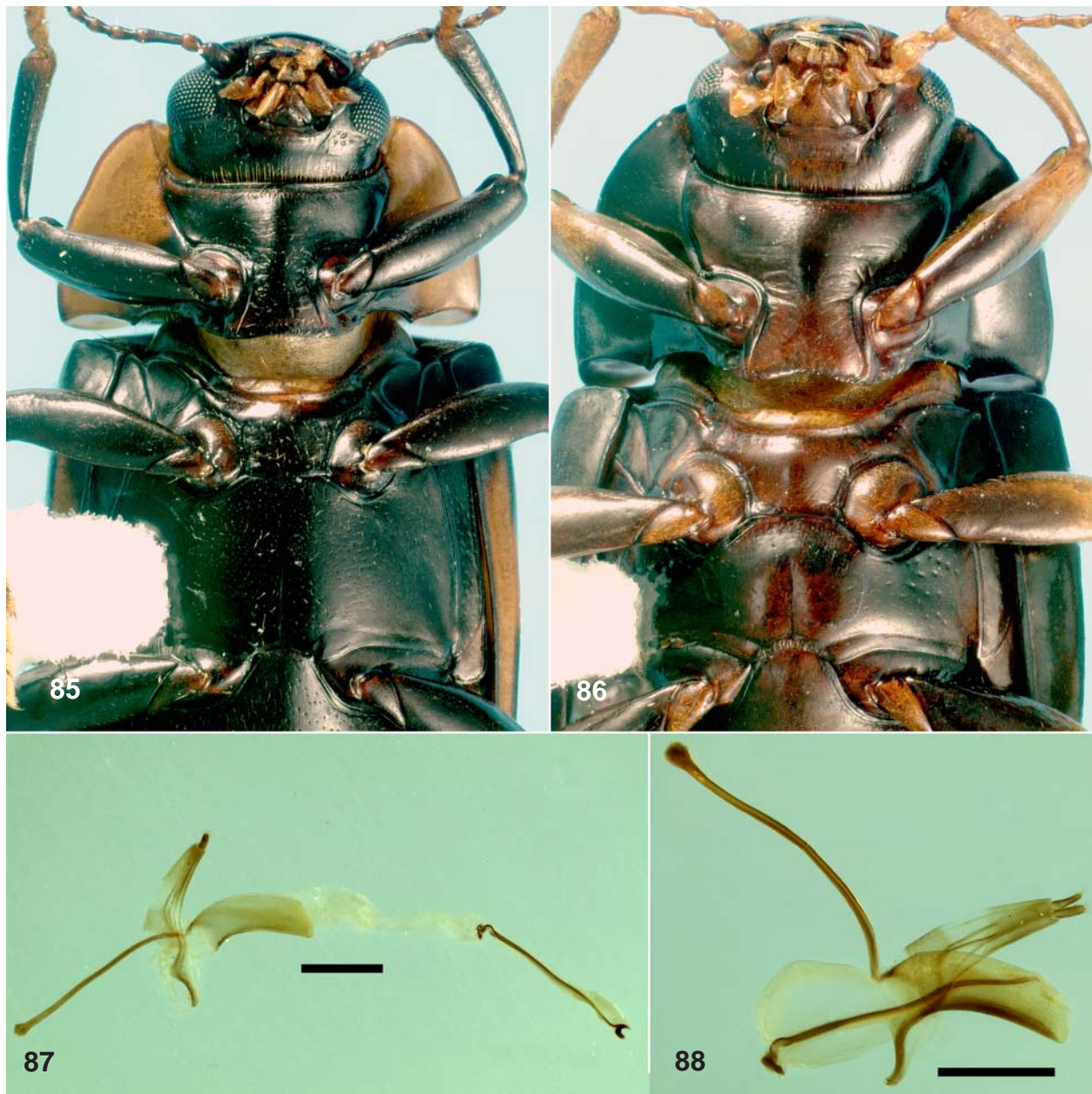


Figure 85-88. *Notaeptyus* spp., key characters. **85)** *N. flavitarsis*, normal long metasternum. **86)** *N. cubanacan*, shortened metasternum of wingless form. **87)** *N. fulvitarsis* (DR: La Vega) male genitalia with flagellum everted. **88)** *N. lavegaensis* male genitalia, with flagellum inverted. Genitalic scale line = 1 mm.

Distribution. Found from Canada, through continental North, Central, and South America to Argentina and Paraguay. In the Caribbean, *I. quadripunctatus* occurs on a few of the lower Lesser Antilles, i.e. St. Lucia (Skelley 1998b) and St. Vincent (Gorham 1898: 335, Leng and Mutchler 1914: 412, both as *I. graphicus*) (Fig. 1b).

Type Material. The repository for the type of *Erotylus quadripunctatus* is unknown. The identity of the species is based on early illustrations and type localities (Skelley 1998b).

Specimens Examined. Many specimens of *I. quadripunctatus* were studied in addition to the 3186 studied for the revision of *Ischyryus* (Skelley 1998b). Only 5 were from the West Indies and have the

following label data: St. Lucia, Union Agric. Sta., 25-V-1987, R. E. Woodruff, blacklight (1-FSCA); St. Vincent, H. H. Smith (4-NHML).

Variation. *Ischyryus q. quadripunctatus* varies clinally in color pattern across its range (Skelley 1998b). The pattern variation that occurs in the Lesser Antilles has the head with an orange central spot, legs entirely black, and base of the pronotum with 3 tooth-like spots. The central tooth-like spot connects with 2 “free” central spots on the pronotal disc (Fig. 11, 75).

Remarks. For a more complete list of references, specimens studied, and comments on biology, see Skelley (1998b).

Genus *NOTAEPYTUS* Skelley, new genus

Type Species: *Ischyryus flavitarsis* Lacordaire 1842, here designated.

Diagnosis. Recognized from other Tritomini genera by the following combination of characters: triangular mental plate, femora lacking posterior marginal bead, antennomere IX usually longer than wide and triangularly narrowed, terminal antennomere(s) distinctly pale, and body brown to black often with a color pattern.

Description. Length 5.3-11.5 mm; width 2.6-5.1 mm. Body elongate, slightly flattened to robust, somewhat parallel-sided; dorsal punctation fine to coarse, microreticulation present on all species, often obscure, rarely strong; variously colored brown to black (never blue or with metallic sheens), often with pale brown to red-brown appendages (never pale yellow), some terminal antennomeres pale brown to cream-colored (never entirely pale); pronotum and elytra often with orangish marks or banding pattern, a few are unicolorous black-brown; legs always brown to black, never pale yellow.

Head finely to coarsely punctate; ocular striae present, not surpassing antennal base anteriorly (Fig. 3, 17); stridulatory files absent. Eye facet size moderate to coarse, eyes in some appear slightly reduced in size. Antennae elongate, often attaining or surpassing pronotal base; antennomere II globose, length usually slightly greater than width; antennomere III length = 3 x width; antennomeres IV-VIII variously proportioned but always longer than wide; antennomere VIII little wider than VII, apically rounded, not appearing as part of club, antennomere IX narrowed at base, triangular, basal sides straight (Fig. 25), length = 1.0-1.5 x width. Mentum with triangular plate (Fig. 14), width = length. Terminal maxillary palpomere symmetrical or slightly asymmetrical, triangular to somewhat hemispherical, width = 1.5-2.0 x length. Terminal labial palpomere expanded medially, asymmetrical, length usually half width, width usually 1.2 x width of terminal maxillary palpomere. Genal lobes weakly developed, bluntly rounded.

Pronotum with anterior marginal bead only behind eyes; base lacking marginal bead; sides at anterior angle arch toward eyes; base often with small group of coarse puncture in shallow depression either side of midline.

Prosternum with anterior marginal bead, not pinched medially. Mesosternum posteriorly truncate to slightly sinuate, transverse, width = 1.5 x length, punctation small to moderate, usually indistinct. Mesocoxal lines on metasternum absent or short and weak. Metasternum shortened in flightless members, distance between meso- and metacoxae = 1.0-2.0 x intermesocoxal width (Fig. 85-86), sternal line faint medially. Meso- and metafemora rounded in cross-section, lacking sharp posterior marginal bead (Fig. 21). Male genitalia with median lobe laterally flattened, sclerotized apical part obliquely truncate; flagellum modified and species specific (Fig. 87-88, 105-120).

Distribution. Members are restricted to the Greater Antilles and nearby islands.

Larvae. Larvae of *N. flavitarsis* have been described and illustrated by Candèze (1861: 70-71, t.6, f.5) and subsequently included in a larval key by Roberts (1958: 283). Larvae available for study were collected in association with adults of *N. modestus* (WIBF, Fig. 81-82, 84) and others collected in association with adults of *N. fulvitarsis* from El Seibo (FSCA) and Barahona Prov. (FSCA). The diagnosis that follows is

based on a survey of characters from these resources. While similar in many characters, they differ slightly in color pattern and more notably in development of dorsal spines.

Head mostly darkly pigmented above; T1 notum yellowish with single distinct spot on each side of disc, appearing as a fake eye-spot, ventral membranous area pale; T2-A8 terga entirely darkly pigmented; A9 with tergal plate and apex of urogomphi dark, base yellowish as notum, ventral membranous areas pale. T1-A8 terga with distinct lateral tubercles; tergal surfaces from T1-A8 with prominent medial tubercles which become slightly larger on more posterior segments, the lateral tubercles often larger than medial tubercles; A9 tergum with single urogomphal prominence apically forked; A1-8 spiracles borne on small prominence.

Etymology. The generic name is based on the Latin “*nota*” meaning “mark” or “spot” in combination with the old name *Epytus*. Thus, members are “spotted-*Epytus*”. This name also has a dual meaning as members are “not - *Epytus*”. Gender is masculine.

Remarks. *Notaepytus* is erected to include the majority of previously described West Indian Tritomini. Historically, species were placed in *Epytus*, *Ischyryus*, or *Oocyranus*. Curran (1944) consolidated them all into *Oocyranus* because the terminal maxillary and labial palpomeres are nearly equal in width. This character was traditionally used to separate *Oocyranus* from *Ischyryus*, which supposedly possesses palpi unequal in width. Skelley (1998b) demonstrated that these proportions varied too greatly to be considered diagnostic. Detailed study of *Ischyryus* and West Indian Tritomini revealed a set of characters that readily separate the *Epytus* (= *Oocyranus*), *Notaepytus*, and *Ischyryus*.

Within *Notaepytus* are many easily distinguishable taxa, however others require careful study. Curran (1944) maintained that *N. fulvitaris* was a highly variable species with typical and dark forms. However, the discovery of flightless members, male genitalic differences, and study of distributions revealed morphological differences and geographical isolation, which represent distinct species within the *N. fulvitaris* phenotype *sensu* Curran, herein termed the ‘fulvitaris species group’.

The fulvitaris species group can be confidently identified by the elytral apex with an apical and often subapical orangish spot, and the pronotum usually with an orangish spot on the anterior lateral angle. Several species have male flagella with exceptional apical modifications, but not all. This group also has a general shortening of the metasternum with a more robust body than other *Notaepytus*; characters most often associated with flightless taxa.

Within the fulvitaris species group, difference in color pattern, wing development, male genitalic flagellum, and distribution distinguish individual species. The fulvitaris species group contains the following species: *N. baorucoensis*, *N. decoregens*, *N. fulvitaris*, *N. haitensis*, *N. ignotensis*, *N. inversus*, *N. lavegaensis*, *N. neibaensis*, and *N. tarsalis* from Hispaniola; along with *N. cubanacan* from Cuba; and *N. cyanoros* from Jamaica. Even with these species recognized, some populations considered *N. fulvitaris* (*sensu stricto*) may eventually be considered valid species.

Key to *Notaepytus* species

1. Metasternum distinctly shortened, distance between meso- and metacoxa nearly equal to intermesocoxal width (Fig. 85); wings reduced to strips **2**
- Metasternum not shortened, distance between meso- and metacoxa greater than 1.5 x intermesocoxal width (Fig. 86); wings fully developed **8**

- 2(1). Elytral striae indistinct, punctures indistinct or absent (Fig. 129-131, 156); Hispaniola [fulvitaris species group, in part] **3**
- Elytral striae with distinct punctures (Fig. 123-125); Cuba, Jamaica **6**

- 3(2). Pronotum appearing trapezoidal, distinctly narrowed anteriorly, with sharp anterior angles (Fig. 158); anterior pronotal margin evenly arched medially; elytra with evidence of striae and weak striae punctures at base (Fig. 156); body black, elytra with single apical mark; Haiti ***N. tarsalis* (Lacordaire)**

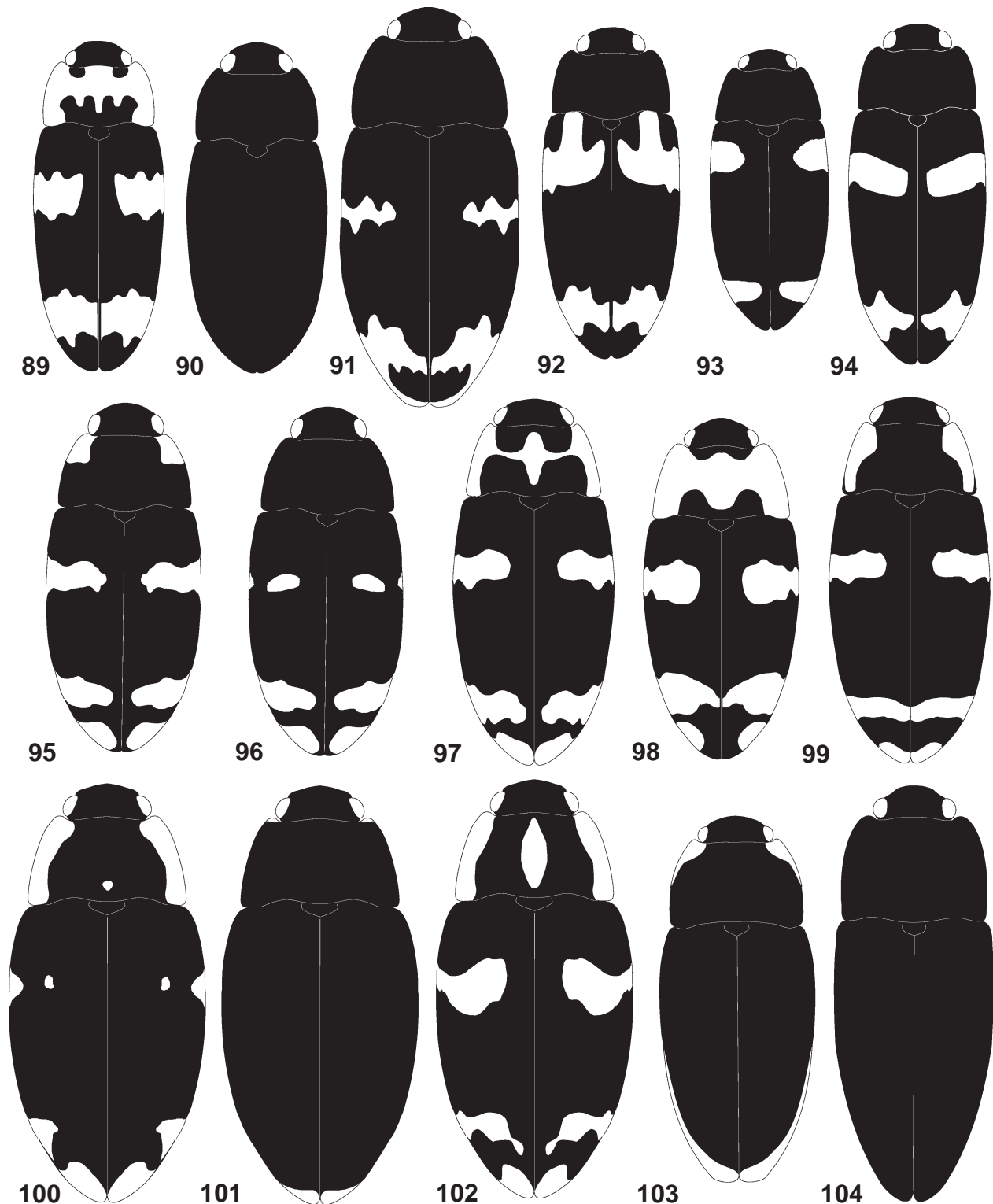


Figure 89-104. *Notaeptytus* spp., habitus drawings. 89) *N. flavitarsis*. 90) *N. tarsatus*. 91) *N. cubanacan*. 92) *N. modestus*. 93) *N. cyclosignatus*. 94) *N. elongatus*. 95) *N. fulvitarsis*. 96) *N. decoregens*. 97) *N. ignotensis*. 98) *N. haitensis*. 99) *N. inversus*. 100) *N. baorucoensis*. 101) *N. neibaensis*. 102) *N. lavegaensis*. 103) *N. cyanoros*. 104) *N. elateroides*.

- Pronotum appearing rectangular, weakly narrowed anteriorly, with bluntly rounded anterior angles; anterior pronotal margin wide, straight medially; elytra lacking striae and punctures at base (Fig. 129-131); body black with variable orange markings; elytra with apical and subapical orange marks (occasionally reduced); Dominican Republic **4**
- 4(3). Color pattern weakly defined on pronotum and elytral disc, surface distinctly dull (Fig. 101, 130); Sierra de Neiba ***N. neibaensis* Skelley, n. sp.**
- Color pattern prominent on pronotum and elytral disc, surface weakly to distinctly glossy (Fig. 100, 102, 129, 131) **5**
- 5(4). Elytra usually with distinct orangish band at basal third (Fig. 102, 129); femora and tibiae usually pale red-brown, occasionally dark brown; flagellum of male genitalia with dorsal cartilaginous thickening at apical third (Fig. 120); Cordillera Central ***N. lavegaensis* Skelley, n. sp.**
- Elytra lacking orangish band at basal third (Fig. 100, 131); femora and tibiae black; flagellum of male genitalia lacking cartilaginous thickening at apical third (Fig. 119); Sierra de Baoruco .
..... ***N. baorucoensis* Skelley, n. sp.**
- 6(2). Body elongate, somewhat parallel-sided; pronotum quadrate (Fig. 104, 125); Jamaica ***N. elateroides* Skelley, n. sp.**
- Body with sides arcuate, not parallel-sided, weakly constricted medially (Fig. 91, 103, 123-124); pronotum transverse, distinctly wider than long **7**
- 7(6). Elytra dark with pale apical spot only (Fig. 103, 124); elytra and pronotum with short setae; Jamaica ***N. cyanoros* Skelley, n. sp.**
- Elytra dark with jagged medial and subapical pale marks, in addition to pale elytral apex (Fig. 91, 123); elytra and pronotum without visible setae; Cuba ***N. cubanacan* Skelley, n. sp.**
- 8(1). Apex of elytra black **9**
- Apex of elytra with pale mark (Fig. 95-99) [fulvitaris species group, in part] **13**
- 9(8). Elytra lacking marks (Fig. 90, 122); Cuba ***N. tarsatus* (Lacordaire)**
- Elytra distinctly patterned or spotted **10**
- 10(9). Pronotum orange with 2 apical and 4 posterior black spots (Fig. 83, 89, 121); Cuba, Bahamas, Hispaniola ***N. flavitaris* (Lacordaire)**
- Pronotum entirely black; Hispaniola **11**
- 11(10). Orange elytral mark extending anterior to base (Fig. 92, 132); epipleural fold of elytra mostly orange ***N. modestus* (Olivier)**
- Orange elytral mark not attaining base (Fig. 93-94, 133-134); epipleural fold of elytra entirely black **12**
- 12(11). Elytra 4.5 x longer than pronotum (Fig. 94, 133); basal orange mark of elytron elongate, medially attaining second stria; femora and tibiae black, not contrasting with venter, tarsi pale brown; only antennomere XI pale ***N. elongatus* Skelley, n. sp.**
- Elytra 3.0-3.5 x longer than pronotum (Fig. 93, 134); basal orange mark of elytron rounded, medially attaining third stria; all leg segments pale brown, contrasting with venter; antennomeres X-XI pale ***N. cyclosignatus* Skelley, n. sp.**
- 13(8). Pronotum entirely black (Fig. 96, 128), at most with small, indistinct pale mark at anterior angle; Dominican Republic (La Altagracia) ***N. decoregens* Skelley, n. sp.**
- Pronotum black with large distinct pale marks on anterior angles (Fig. 95, 97-99); widespread Hispaniola **14**



Figure 105-120. *Notaepyptus* spp., male genital flagella. **105)** *N. flavitarsis*. **106)** *N. tarsatus*. **107)** *N. modestus*. **108)** *N. elateroides*. **109)** *N. cyanoros*. **110)** *N. cyclosignatus*. **111)** *N. inversus*. **112)** *N. neibaensis*. **113)** *N. haitensis*. **114)** *N. ignotensis*. **115)** *N. fulvitaris* (DR: Hato Mayor). **116)** *N. fulvitaris* (DR: La Vega). **117)** *N. fulvitaris* (DR: Barahona). **118)** *N. decoregens*. **119)** *N. baorucoensis*. **120)** *N. lavegaensis*. All reproduced to same scale, scale line = 1 mm.

- 14(13). Pronotum with pale lateral mark covering nearly entire length of disc (Fig. 97-99), frequently connected across center **15**
- Pronotum with pale lateral mark restricted to anterior half of disc (Fig. 95)
 *N. fulvitaris* (Lacordaire)



Figure 121-123. *Notaeptytus* spp. occurring on Cuba. **121)** *N. flavitarsis*. **122)** *N. tarsatus*. **123)** *N. cubanacan*, holotype.

- 15(14). Femora and tibiae rufous, notably paler than black thorax; male flagellum with acute, caudally directed, ventral process at apex (Fig. 114); “La Cavito, St. Domingo” *N. ignotensis* Skelley, n. sp.
- Femora and tibiae black, same color as black thorax; male flagellum lacking caudally directed ventral process at apex (Fig. 11, 113) **16**
- 16(15) Pale pronotal marks broadly connected medially (Fig. 98); male flagellum with anteriorly directed ventral process at apex (Fig. 113); Haiti (Massif La Hotte) *N. haitensis* (Curran)
- Pale pronotal marks narrowly connected medially (Fig. 99); male flagellum lacking apical process (Fig. 111); Dominican Republic (Pedernales) *N. inversus* Skelley, n. sp.

***Notaeptytus baorucoensis* Skelley, new species**

Figure 1b, 100, 119, 131, 140

Diagnosis. The species is distinguished by: apical and subapical orangish marks on elytra, short metasternum, greatly reduced wings, reduced but distinct elytral marks (Fig. 100, 131), and male genitalia with weakly sinuate flagellum lacking a cartilaginous thickening at apical third.

Description. Length: 9.8 mm; width: 4.9 mm. Body elongate, somewhat robust; surface weakly microreticulate, moderately glossy. Color black except as noted: antennal clubs, palpi, and tarsi pale red-brown; lateral pronotal disc, elytral spots, elytral epipleural fold, trochanters, and lateral abdominal ventrites red-brown; elytra with 3 marks restricted to sides at basal third, apical quarter, and apex.



Figure 124-125. *Notaeptytus* spp. occurring on Jamaica. **124)** *N. cyanoros*, holotype. **125)** *N. elateroides*, holotype.

Head interocular width = 3.5 x ocular width; vertex and epistome finely punctate, visible within surface microreticulation; epistome anterior margin truncate. Eye facets moderate in size. Antennomere III length = 3.5 x width, length = length of antennomeres IV+V combined; antennomeres IV-VIII equal in length, each with length = 3 x width; antennomere IX triangular, length = 1.5 x width; antennomere XI elongate, subcircular. Terminal maxillary palpomere triangular, slightly asymmetrical, slightly wider than long. Terminal labial palpomere triangular, asymmetrical, width = 2 x length, expanded medially, width = 1.2 x terminal maxillary palpomere width.

Pronotum transverse; punctures on disc fine within surface microreticulation; small group of large punctures at each side of base, puncture size = an ocular facet diameter. Scutellum pentagonal, length = 0.5 x width. Elytral striae punctures weak, indistinct; intervals with punctures indistinct, surface microreticulation weak, somewhat glossy; base lacking marginal bead. Wings reduced to strips.

Prosternum convex, length = 2.5 x intercoxal width; sternal punctures obscure; sternal lines continuous around coxal cavity; base truncate. Mesosternal lines parallel, not continuous around coxal cavity. Metasternum short, distance between meso- and metacoxae = intermesocoxal width; anterior lines impressed, not meeting medially, continuous around mesocoxal cavity, with short coxal lines; with few scattered coarse punctures medially. Abdomen with coxal lines not meeting medially; not continuous around metacoxal cavity, with short coxal line; punctures fine, mostly indistinct. Male genitalia with weakly sinuate flagellum lacking a cartilaginous thickening at the apical third, apex acute (Fig. 119).

Distribution. Found in the Dominican Republic, on the Sierra de Baoruco (Fig. 140).

Type Material. The male holotype of *Notaepytyus baorucoensis* (Fig. 131) is labeled: “/ DOMINICAN REPUBLIC: Pedernales, La Abeja, 38 km NNW Cabo Rojo, (18-09N, 71-38W). / 1160 m, 14 July 1987, Robert L. Davidson, and John E. Rawlins /” [pale yellow paper] Specimen imaged 2008 - West Indies Erotylinae, P. Skelley / [red paper] HOLOTYPE *Notaepytyus baorucoensis* P. E. Skelley /” (CMNH).

Etymology. The specific epithet is derived from the mountain range on which this species occurs.

***Notaepytyus cubanacan* Skelley, new species**

Figure 1b, 86, 91, 123

Diagnosis. Distinguished from other fulvitaris species group taxa by the following characters: basal, subapical, and apical orangish marks on elytra (although reduced), short metasternum, greatly reduced wings, entirely dark pronotum, distinctly punctate elytral striae, and basal elytral band reduced to zigzag mark.

Description. Length: 9.0 mm; width: 4.2 mm. Body elongate, robust; surface microreticulate, weakly dulled to glossy. Color dark-brown to black except as noted: antennae, palpi, legs beyond middle of femur, apical third of elytral epipleural fold, lateral and apical abdomen red-brown; antennal club becoming paler toward apex; elytra with band at basal third reduced, zigzagged (Fig. 91, 123); elytral subapical mark large and prominent, apical mark reduced.

Head interocular width = 4 x ocular width; vertex and epistome finely punctate, obscured in microreticulation; epistome anterior margin shallowly concave. Eye facets moderate in size. Antennomere III length = 4 x width, length = length of antennomeres IV+V combined; antennomeres IV-VIII equal in length, each with length = 2-3 x width, becoming progressively shorter apically; antennomere IX triangular, length = 1.5 x width; antennomere XI subcircular, slightly elongate. Terminal maxillary palpomere triangular (Fig. 86), slightly asymmetrical, length = width. Terminal labial palpomere triangular, asymmetrical, width = 2 x length, expanded medially, width = 1.2 x terminal maxillary palpomere.

Pronotum transverse; punctures on disc fine; small group of large punctures at each side of base, puncture size = an ocular facet diameter; hind angle produced posteriorly, partially covering elytral humerus. Scutellum pentagonal, length = 0.4 x width. Elytral striae punctures distinct, separated by 2-3 x their diameter; intervals with punctures fine, indistinct; base lacking marginal bead. Wings reduced to strips.

Prosternum weakly convex, length = 2.5 x intercoxal width; sternal punctures indistinct; sternal lines continuous around coxal cavity; base slightly concave. Mesosternal lines divergent anteriorly, continuous around coxal cavity. Metasternum short, distance between meso- and metacoxae = intermesocoxal width; anterior lines not meeting medially, continuous around mesocoxal cavity; with large punctures laterally, puncture size = an ocular facet diameter, punctures fine to lacking medially. Abdomen with coxal lines not meeting medially; not continuous around metacoxal cavity; punctures fine, obscured. Male genitalia unknown.

Distribution. Found in eastern Cuba.

Type Material. The female holotype of *Notaepytyus cubanacan* (Fig. 123) is labeled: “/ Pico Turquino, S. side, June 1936, 3000-5000 ft., / Cuba 1936, Darlington, Collector/ [pale yellow paper] Specimen imaged 2008-West Indies Erotylinae, P. Skelley / [red paper] HOLOTYPE *Notaepytyus cubanacan* P.E. Skelley /” (AMNH).

Etymology. The specific epithet is derived from the word “Cubanacán”, which was the indigenous name for the island of Cuba when Columbus arrived in 1492, here used as a noun in apposition.

***Notaepytyus cyanoros* Skelley, new species**

Figure 1b, 103, 109, 124

Diagnosis. *Notaepytus cyanoros* is distinguished by: orangish mark on the anterior pronotal angles, small apical orangish marks on the elytra, short metasternum, coarse strial punctures, dorsal surface with short blunt setae, quadrate pronotum, and reduced elytral color pattern. Found in Jamaica (Fig. 1b).

Description. Length: 6.5-7.4 mm; width: 3.2-3.5 mm. Body elongate, somewhat flattened; dorsal surface microreticulate, with short blunt setae. Color dark brown except as noted: clypeus, palpi, basal antennomeres, legs, anterior pronotal angles, apical part of prosternum, pronotal hypomeron, scutellum, elytral apex, and elytral epipleural fold light brown; antennomere IX-X dark, antennomere XI pale.

Head interocular width = 4 x ocular width; vertex and epistome finely punctate, puncture size = 0.33 x ocular facet diameter, separated by 5-6 x their diameter; epistome anterior margin weakly concave. Eyes coarsely faceted. Antennomere III length = 3 x width, antennomere III length = length of antennomeres IV+V combined; antennomeres IV-VIII equal in length; antennomere VIII slightly wider than VII, not part of club; antennomere IX triangular, length = 1.2 x width; antennomere XI narrower than X, subcircular. Terminal maxillary palpomere semicircular, length = 0.66 x width. Terminal labial palpomere triangular, asymmetrical, width = 2 x length, expanded medially, width = terminal maxillary palpomere.

Pronotum quadrate, slightly wider than long; puncture size and distribution as those on vertex, each with a short blunt seta; base with few large punctures at each side; hind angle produced back, partially covering elytral humerus. Scutellum transverse, length = 0.5 width. Elytra with bluntly rounded apex, slightly flared; striae weakly impressed, punctures coarse, puncture size = an ocular facet diameter, separated by 1-2 x their diameter, each bearing short faint seta; interval punctures fine, with faint blunt setae; base lacking marginal bead, sinuate for reception of pronotal hind angles. Wings reduced to narrow strips.

Prosternum length = 2.5 x basal width; sternal plate flat; sternal lines continuous around coxal cavity; base concave. Mesosternal lines parallel, continuous around coxal cavity. Metasternum short, distance between meso- and metacoxae = 1.1 x intermesocoxal width; anterior lines connecting medially; continuous around mesocoxal cavity; coarsely punctate at anterolateral angles, fine scattered punctures medially and posteriorly; metasternum shortened, distance between meso- and metacoxae = intermesocoxal width. Abdomen with coxal lines not connecting medially; continuous around metacoxal cavity; punctures coarse behind metacoxa, fine scattered punctures on remaining ventrites. Male genitalia with flagellum distinctly thickened and club-like apically (Fig. 109).

Distribution. Found in Jamaica (Fig. 1b).

Type Material. The male holotype of *Notaepytus cyanoros* (Fig. 124) label data: “/JAM., St. Thomas P., Portland Gap, 17.XII.72-1.II.73, S.& J. Peck / [pale yellow paper] Specimen imaged 2008-West Indies Erotylinae, P. Skelley / [red paper] HOLOTYPE *Notaepytus cyanoros* P.E. Skelley /” (CNCI). The female allotype label data: “/JAMAICA, 7400', Blue Mt. Peak, VII.27-28.1966, Howden & Becker /” (CNCI). Paratypes (2) label data: Jamaica: W. I., St. Andrews Parish, Blue Mts., Morces Gap & vic., 1300-1500m, 6-8-XII-1975, G. E. Ball & J. H. Frank, 1975 Coleop. Soc. Exp. (1 female-PESC); Jamaica: Newcastle, 19-22-VIII-1908, M. Cameron, B.M. 1936-555, M. Cameron journal 1166 (undissected, 1-NHML).

Variation. Three of the four specimens exhibit a variable sized medial pronotal mark.

Etymology. The specific epithet is Greek for “Blue Mountain” (*ciano-* = blue, *oros* = mountain).

***Notaepytus cyclosignatus* Skelley, new species**

Figure 1b, 93, 110, 134, 140

Diagnosis. Distinguished by the following: body black, dull, elytra with nearly circular orangish elytral spots (Fig. 93, 134), body parallel-sided, coarse punctation of head, and moderately coarse eye faceting.

Description. Length: 5.9-6.3 mm; width: 2.8-3.0 mm. Body elongate, parallel-sided, somewhat flattened; surface microreticulate. Color black except as noted: each elytron with two smooth-edged orangish

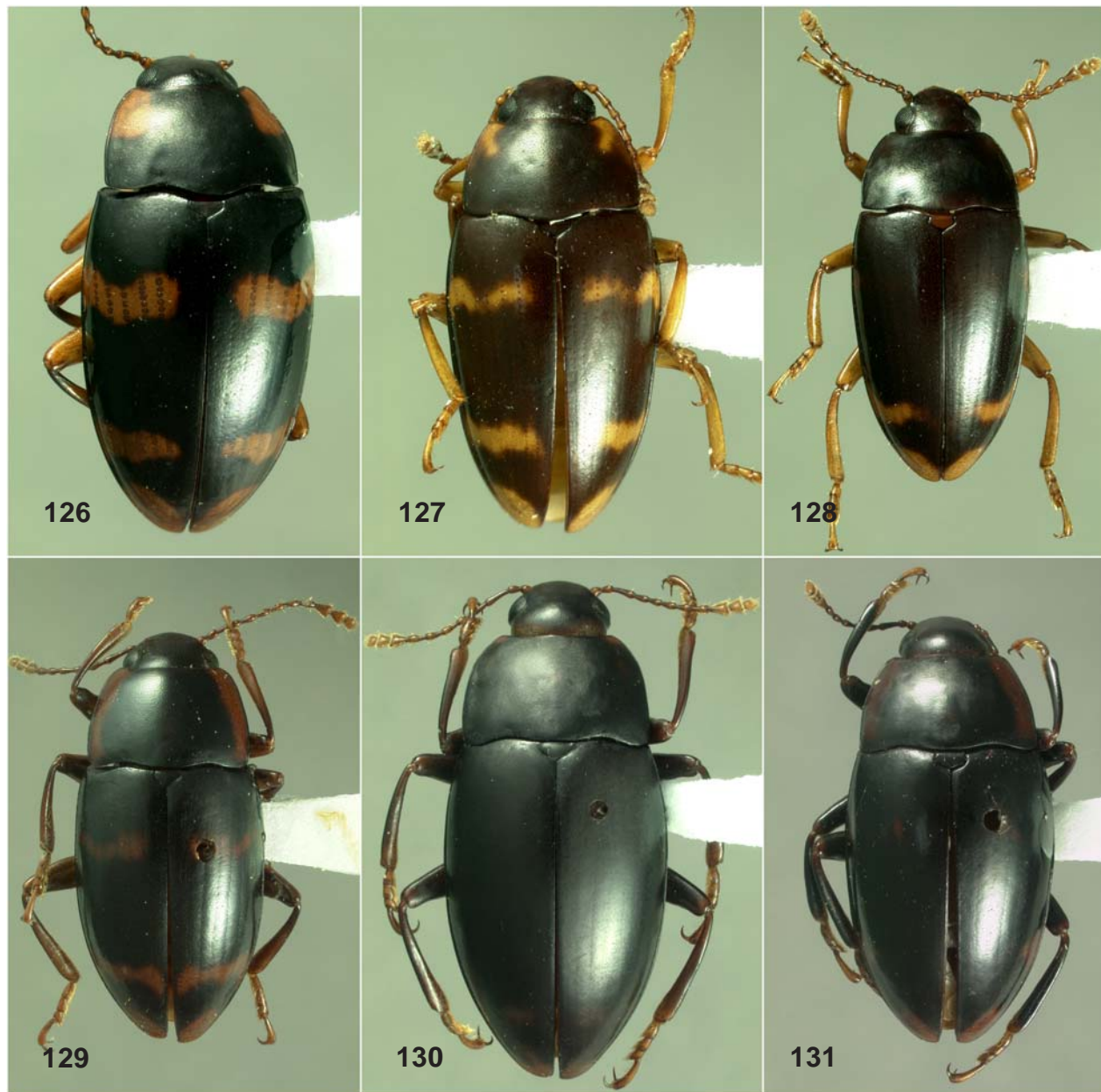


Figure 126-131. *Notaeptytus* spp. occurring on Hispaniola. **126** *N. fulvitaris* (DR: La Vega). **127** *N. fulvitaris* (DR: Hato Mayor). **128** *N. decoregens*, paratype. **129** *N. lavegaensis*, paratype. **130** *N. neibaensis*, holotype. **131** *N. baorucoensis*, holotype.

spots, one nearly circular posterior of humerus which approaches striae III medially and a subapical spot apex near lateral margin; apical third of antennomere IX, and all of antennomeres X-XI pale; legs and antennomeres I-II red-brown.

Head interocular width = 2.5 x ocular width; vertex and epistome coarsely punctate, puncture size = 0.75 x ocular facet diameter; separated by 1-2 x their diameter; epistome anterior margin truncate. Eyes coarsely faceted. Antennomere III length = 3 x width, length = length of antennomeres IV+V combined; antennomeres IV-VIII equal in length, each with length = 1.5 x width; antennomeres III-VIII all same width; antennomere IX triangular, length = width; antennomere XI transversely oval, length = 0.75 x width. Terminal maxillary palpomere triangular, symmetrical, slightly wider than long. Terminal labial palpomere triangular, asymmetrical, width = 2 x length, expanded medially, width = terminal maxillary palpomere.

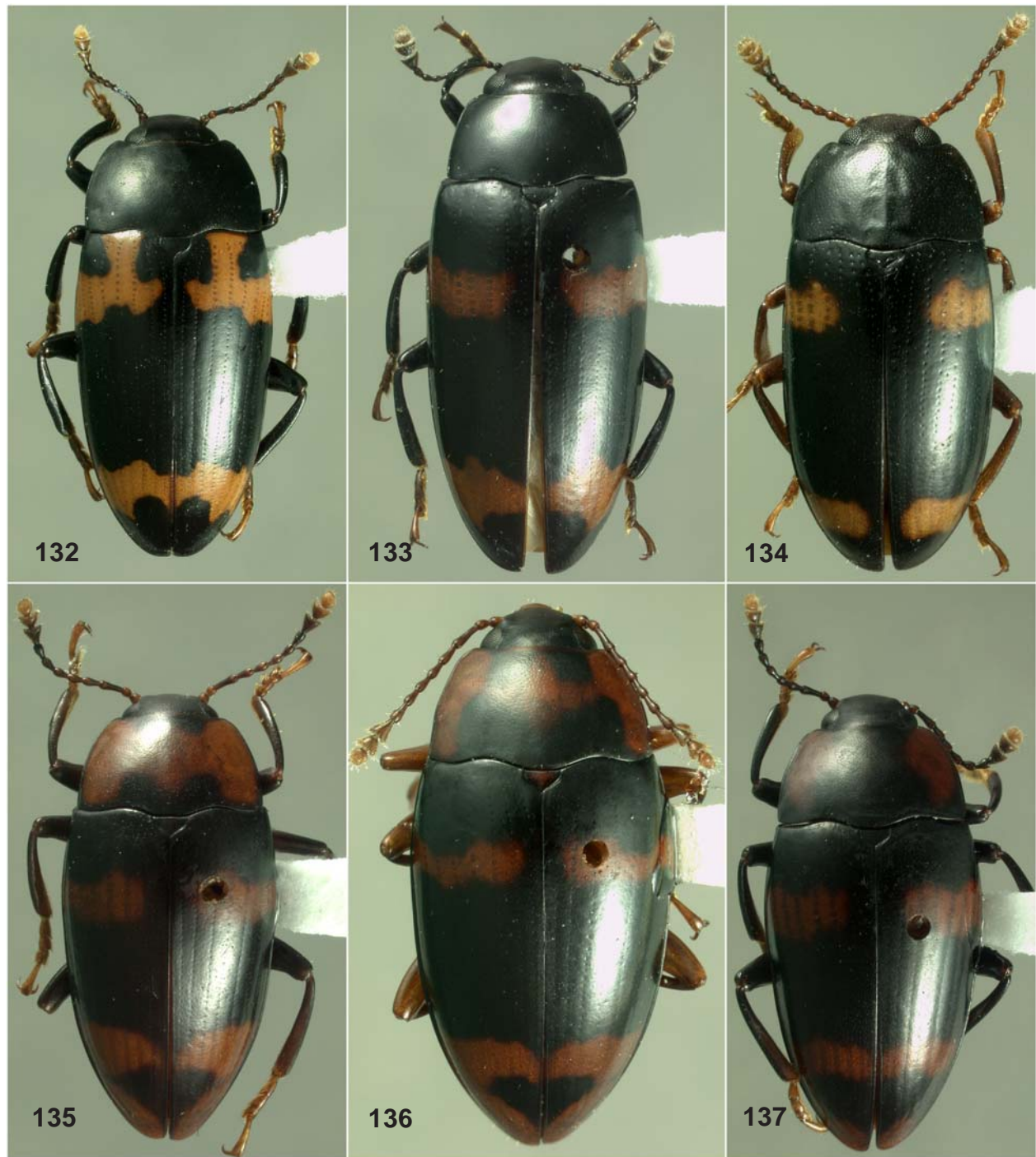


Figure 132-137. *Notaeptytus* spp. occurring on Hispaniola. **132)** *N. modestus*. **133)** *N. elongatus*, holotype. **134)** *N. cyclosignatus*, holotype. **135)** *N. haitensis*, paratype. **136)** *N. ignotensis*, paratype. **137)** *N. inversus*, holotype.

Pronotum transverse; punctures coarse, slightly smaller than those on vertex, evenly distributed; small group of large punctures at each side of basal midline. Scutellum pentagonal, length = 0.75 x width. Elytral stria punctures large, puncture size = an ocular facet diameter, separated by 2 x their diameter; fine interval punctures obscured in microreticulations; base lacking marginal bead. Wings present, fully developed.

Prosternum length = 2.5 x intercoxal width; sternal lines not continuous around coxal cavity; base shallowly concave. Mesosternal lines parallel, not continuous around coxal cavity. Metasternum long, distance between meso- and metacoxae = 1.7 x intermesocoxal width; anterior lines arching medially, but not meeting; lines not continuous around mesocoxal cavity, extending slightly out onto metasternum behind mesocoxa; punctures largest at anterolateral angles, rapidly decreasing in size medially. Abdomen with coxal lines not meeting medially; continuous around metacoxal cavity; punctures coarse laterally, medially decreasing in size and density. Male genitalia with flagellum short, slightly thickened apically, with small ventral subapical swelling (Fig. 110).

Distribution. Found in eastern Hispaniola (Fig. 140).

Type Material. The male holotype of *Notaepytus cyclosignatus* (Fig. 134) has the following label data: “/ DOMINICAN REPUBLIC: Duarte, Reserva Loma Quita Espuela, El Cadillar, 6.7 km NE San Francisco de Marcoirs, 19-20-12N, 70-08-59W / 280m, 5 Apr 2004, R. Davidson, J. Rawlins, C. Young, weedy re-growth with coffee, cacao, UV light, Sample 50313 / Carnegie Museum Specimen Number CMNH-346,485 / [pale yellow paper] Specimen imaged 2008- West Indies Erotylinae, P. Skelley / [red paper] HOLOTYPE *Notaepytus cyclosignatus* P.E. Skelley /” (CMNH). The female allotype label data: “/ DOMINICAN REPUBLIC: La Altagracia, Parque del Este, 2.9 km S. Boca de Yuma, 18-21-51N, 68-37-05W, 11 m, 28 May 2004 /, J. Rawlins, C. Young, C. Nunez, J. Fetzner, semihumid dry forest, limestone, UV light, Sample 52114 / Carnegie Museum Specimen Number CMNH-367.778 /” (CMNH). Paratypes studied (2): Dom. Rep.; Hato Mayor, W. Sabana del la Mar, Par. Nac. Los Haitise, 1-JUL-1992, M.A. Ivie, bosque humido [ex *Trametes sabrosa*; M. Ivie, pers. comm.] (1 female-WIBF); Dom. Rep.; La Altagracia, Nisibon, “Papagallo”, 16-19-JUN-1998, R.E. Woodruff/ P.H. Freytag, blacklight trap (1 male-FSCA).

Variation. The holotype has the basal elytral mark somewhat sinuate anteriorly, but this spot on the paratypes is nearly circular.

Etymology. The specific epithet is derived from the Latin “*cyclo*” for “circular” and “*signatus*” for “mark”. Hence, the species is named for the more “circular marks” on the elytra.

Remarks. *Notaepytus cyclosignatus* appears most closely related to *N. tarsatus* based on body form, head punctuation, and eye facet size.

***Notaepytus decoregens* Skelley, new species**

Figure 1b, 96, 118, 128, 139

Diagnosis. Distinguished by the following characters: apical and subapical orangish marks of the elytra in addition to a variable transverse band on the basal third, long metasternum, fully-developed wings, orangish marks at pronotal anterior angle greatly reduced, pronotum in most entirely black (Fig. 96, 128), and male genitalia with flagellum having a long narrow dorsal cartilaginous mass on apical third, lacking ventral subapical process.

Description. Length: 5.9-7.0 mm; width: 2.8-3.3 mm. Body elongate, somewhat flattened; surface microreticulate, weakly dilled. Color black except as noted: antennae, palpi, pronotal hypomeron, and legs red-brown; antennomere XI pale red-brown; elytra with orangish band at basal third and apical quarter, and an apical spot; elytral basal band often reduced, mark at apical quarter and apex always distinct; elytral epipleuron red-brown beyond basal quarter; abdomen generally red-brown, darkening toward base.

Head interocular width = 3 x ocular width; vertex and epistome finely distinctly punctate, puncture size = 0.33 x ocular facet diameter, separated by 2-3 x their diameter; epistome anterior margin shallowly concave. Eyes coarsely faceted. Antennomere III length = 3 x width, length = length of antennomeres IV+V combined; antennomeres IV-VIII equal in length, each with length = 2 x width; antennomere IX triangular, length slightly more than width; antennomere XI circular. Terminal maxillary palpomere

triangular, slightly asymmetrical, slightly wider than long. Terminal labial palpomere triangular, asymmetrical, width = 2 x length, expanded medially, width = 1.2 x terminal maxillary palpomere.

Pronotum transverse; punctures on disc equal in size and distribution to those on vertex; small group of larger indistinct punctures in shallow depression at each side of base, puncture size = an ocular facet diameter. Scutellum pentagonal, length = 0.5 x width. Elytral striae puncture size = puncture diameter at pronotal base, separated by 2 x their diameter; intervals with punctures very fine, indistinct, often bearing a short fine seta; base lacking marginal bead. Wings present, fully developed.

Prosternum weakly convex, length = 2.5 x intercoxal width; sternal punctures indistinct; sternal lines continuous or not around coxal cavity; base shallowly concave. Mesosternal lines slightly divergent anteriorly, not or weakly continuous around coxal cavity. Metasternum long, distance between meso- and metacoxae = 1.6 x intermesocoxal width; anterior lines not meeting medially; continuous around mesocoxal cavity, with short coxal line; punctures moderate in size, indistinct, widely-scattered. Abdomen with coxal lines not meeting medially; not continuous around metacoxal cavity, with short coxal lines; punctures similar to metasternum punctures, denser apically. Male genitalia with flagellum having a long narrow dorsal cartilaginous mass on apical third; apex acute, lacking a ventral subapical process (Fig. 118).

Distribution. Found in eastern Dominican Republic, La Altagracia Province (Fig. 139).

Type Material. Male holotype and female allotype of *Notaepytus decoregens*, with the following label data: “/ DOMINICAN REPUBLIC: Pr. La Altagracia, Nisibon, Finca Papagayo 6-IV-00, RE Woodruff, TJ Henry, bracket fungus at night /” (FSCA). Paratypes (12): same data as holotype (11-FSCA, PESC, WIBF); Dominican Republic: La Altagracia, Parque del Este, 2.9 km SW Boca de Yuma, 18-21-51N, 68-37-05W, 11m. 28 May 2004, J. Rawlins, C. Yong, C. Nunez, J. Fetzner, semihumid dry forest, limestone, UV light, Sample 52114 (1-CMNH).

Variation. Notable variation occurs in the size of the orangish pronotal and elytral spots. Although not usually present, one teneral specimen has a small but distinct spot on the anterior pronotal angle. The band at the basal third of the elytra, usually reduced or absent, is large and prominent in two specimens. While also variable in size, the subapical and apical elytral marks are the only orangish marks that are consistently prominent.

Etymology. The specific epithet is derived from the Latin *decor-egens* meaning “decoration poor”, in reference to the greatly reduced, usually absent anterior pronotal angle mark and males lacking the ventral subapical flagellar process.

Remarks. *Notaepytus decoregens* populations were initially believed to be a regional variant of *N. fulvitaris*; being partially sympatric and most similar with variant C (see Remarks under *N. fulvitaris*). However, they have diagnostic male genitalic flagella.

***Notaepytus elateroides* Skelley, new species**

Figure 1b, 104, 108, 125, 146-147

Diagnosis. The species is delimited by: an elongate parallel-sided body, quadrate pronotum (Fig. 104, 125), strong cuticular microreticulation, and uniform body color.

Description. Length: 8.5 mm; width: 3.7 mm. Body elongate, parallel-sided, somewhat flattened; surface strongly microreticulate. Color dark brown, with red-brown appendages and elytral apex.

Head interocular width = 3 x ocular width; vertex and epistome puncture size = 0.3-0.5 x ocular facet diameter, separated by 3-4 x their diameter; epistome anterior margin truncate. Eyes large, coarsely faceted. Antenna approach pronotal base; antennomere II length = width; antennomere III length = 3 x width, antennomere III length = length of antennomeres IV+V combined; antennomeres IV-VIII equal in length, each with length = 2 x width; antennomere VIII not wider than VII, not part of club; antennomere

IX triangular, length = 1.2 x width; antennomere XI narrower than X, subcircular. Terminal maxillary palpomere triangular, symmetrical, length = 0.8 x width. Terminal labial palpomere triangular, asymmetrical, width = 2 x length, expanded medially, width = terminal maxillary palpomere.

Pronotum quadrate; puncture size as those on vertex, dense, separated by 2-3 x their diameter; small group of large punctures at each side of base, puncture size = an ocular facet diameter; base sinuate, lacking marginal bead; hind angle produced posteriorly, partially covering elytral humerus. Scutellum transverse, length = 0.5 x width. Elytra with narrowly rounded apex; striae not impressed, punctures fine, puncture size = 0.5 x ocular facet diameter, separated by 2-3 x their diameter; interval punctures fine, obscured in microreticulation; base with faint marginal bead each side of scutellum, possibly due to indentation for pronotal hind angle reception. Wings not found.

Prosternum length = 3 x basal width; sternal plate flat, rugose; base strongly concave. Mesosternal lines parallel, continuous around coxal cavity. Metasternum short, distance between meso- and metacoxae = 1.1 x intermesocoxal width; anterior lines absent medially; continuous around mesocoxal cavity; coarsely punctate at anterolateral angles, fine scattered punctures medially and posteriorly. Abdomen with coxal lines not connecting medially; continuous around metacoxal cavity, short; punctures coarse anterolaterally on first ventrite, fine scattered punctures on remaining sterna. Male genitalia with flagellum thickened, weakly enlarged at apex (Fig. 108).

Distribution. Found in Jamaica.

Type Material. The male holotype of *Notaepytus elateroides* (Fig. 125, 146-147) has the following label data: “[white circle, hand written] Jamaica [underside] 45 110/ [red paper] HOLOTYPE *Notaepytus elateroides* P. E. Skelley” (NHML).

Etymology. The specific epithet reflects the species overall similarity to a click beetle (Elateridae).

Remarks. The unique holotype was in poor condition when first studied. The specimen was removed from the pin and placed on a card mount for protection. Based on the metasternal shortening, the species is suspected to be flightless. When the previously damaged holotype was relaxed for examination, no flight wings were found. These wings may have been lost when the damage occurred. This species lacks the diagnostic body shape and apical elytral color patterning of the *fulvitaris* species group. For now, *N. elateroides* is considered the only flightless *Notaepytus* that is not a member of the *fulvitaris* species group. More specimens are needed to reevaluate this relationship.

***Notaepytus elongatus* Skelley, new species**

Figure 1b, 94, 133, 138

Diagnosis. The species can be distinguished by: a narrowly elongate body and transversely elongate basal orangish elytral spot (Fig. 94, 133).

Description. Length: 8.6 mm; width: 3.8 mm. Body elongate, parallel-sided, somewhat flattened; surface weakly microreticulate, glossy. Color mostly black; elytron with narrow transverse mark at basal third attaining stria II medially (lacking anterior projection as seen in *N. modestus*), and a subapical spot with jagged edges attaining elytral suture medially; tarsi, antennomere XI and apical half of abdomen red-brown.

Head interocular width = 2.5 x ocular width; vertex and epistome puncture size = 0.3-0.5 x ocular facet diameter, separated by 3-4 x their diameter; epistome anterior margin truncate. Eyes large, facets moderate in size. Antennomere III length = 3 x width, antennomere III length = length of antennomeres IV+V combined; antennomeres IV-VIII equal in length, each with length = 2 x width; antennomere VIII not wider than VII; antennomere IX triangular, length = 1.2 x width; antennomere XI narrower than X, subcircular. Terminal maxillary palpomere triangular, weakly asymmetrical, length = 0.8 x width. Terminal labial palpomere triangular, asymmetrical, width = 2 x length, expanded medially, width = terminal maxillary palpomere.

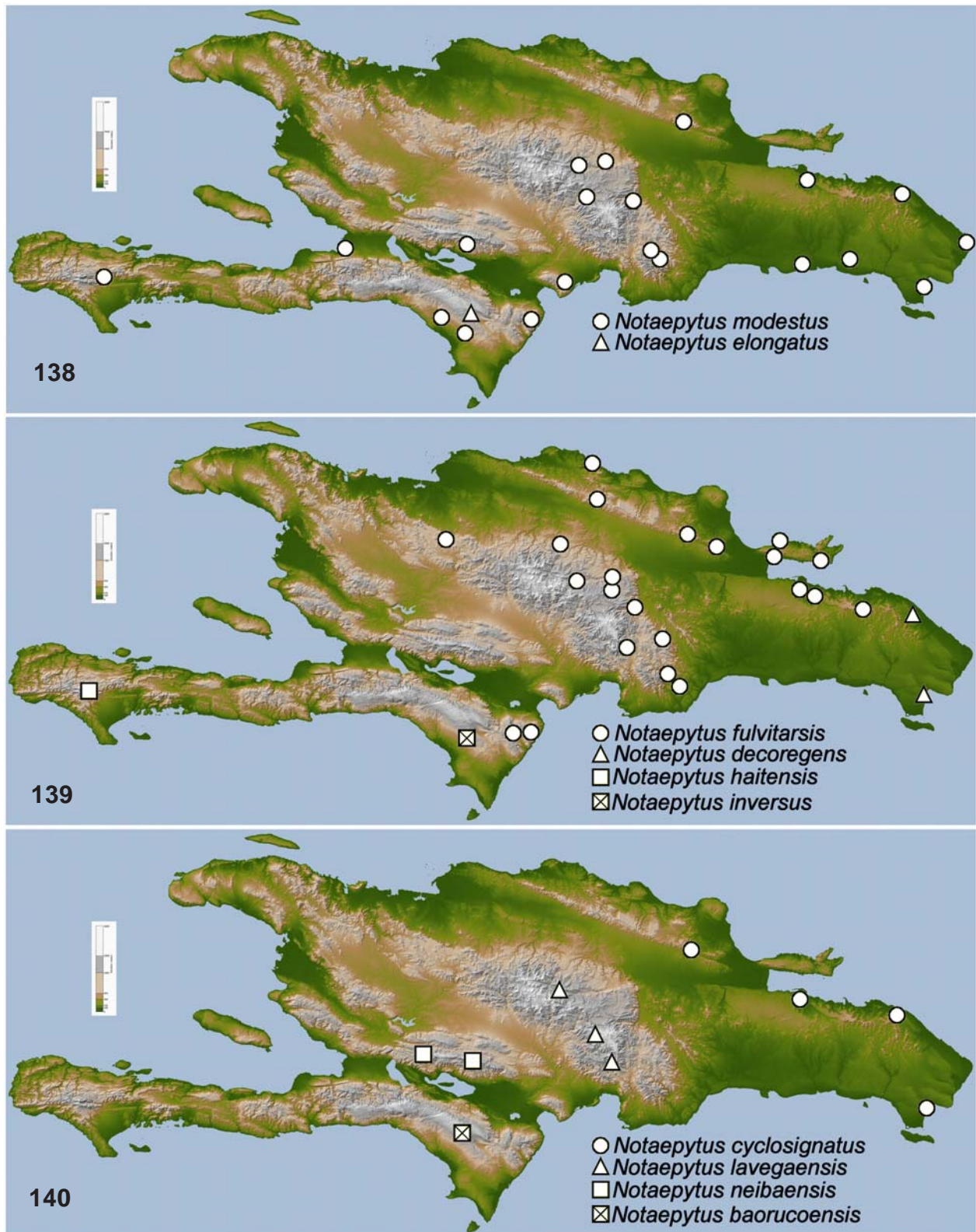


Figure 138-140. Distribution maps of *Notaeptytus* spp. on Hispaniola. **138)** Circle = *N. modestus*; triangle = *N. elongatus*. **139)** Circle = *N. fulvitaris*; triangle = *N. decoregens*; square = *N. haitensis*; square with 'X' = *N. inversus*. **140)** Circle = *N. cyclosignatus*; triangle = *N. lavegaensis*; square = *N. neibaensis*; square with 'X' = *N. baorucoensis*.

Pronotum distinctly transverse; punctures fine, puncture size as those on vertex, sparse, separated by 3-4 x their diameter; small group of large punctures at each side of base, puncture size = an ocular facet diameter. Scutellum transverse, length = 0.5 x width. Elytra long, 4.5 x longer than pronotum; apex narrowly rounded; striae not impressed, punctures moderate, puncture size = an ocular facet diameter, separated by 2-3 x their diameter; interval punctures fine, obscure; base lacking marginal bead. Wings present, fully developed.

Prosternum length = 3 x basal width; sternal plate flat, rugose; sternal lines not continuous around coxal cavity; base strongly concave. Mesosternal lines parallel, not continuous around coxal cavity. Metasternum long, distance between meso- and metacoxae = 2 x intermesocoxal width; anterior lines absent medially, continuous posteriorly around mesocoxal cavity; coarsely punctate at anterolateral angles, fine scattered punctures medially and posteriorly. Abdomen with coxal lines not connecting medially; continuous around metacoxal cavity; surface punctures fine and scattered. Male unknown.

Distribution. Found in the Dominican Republic in the Sierra de Baoruco (Fig. 138).

Type Material. The female holotype of *Notaepytus elongatus* (Fig. 133) has the following label data: “/ Dom. Rep.: Pedernales, 37 km. N. Cabo Rojo, 1500m, 18°09’N-71°35’W / 25-SEP-1991, J. Rawlins. R. Davidson, C. Young, S. Thompson, Grassland with pines / [red paper] HOLOTYPE *Notaepytus elongatus* P.E. Skelley /” (CMNH).

Etymology. The specific epithet reflects the notably elongate elytra and elytral markings.

Remarks. *Notaepytus elongatus* could be confused with *N. modestus*, see remarks under the latter.

***Notaepytus flavitarsis* (Lacordaire), new combination**

Figure 1b, 3, 14, 17, 21, 25, 83, 85, 89, 105, 121, 148

Mycotretus flavitarsis Sturm in Dejean 1836: 429 ~ Dejean 1837: 453; Sturm 1843: 305. [all listings of this combination are *nomina nuda*].

Ischyryus flavitarsis Lacordaire 1842: 130 ~ Jacquelin du Val 1856: 133, t. XI, f. 10; Guérin-Ménéville 1857: 321-322, t. 11, f. 10; Candèze 1861: 70-71, t. 6, f. 5 [larval]; Chapuis 1876: 35 (footnote 2); Crotch 1876: 432(56); Gemminger and Harold 1876: 3690; Gundlach 1891-1894: 127; Gorham 1898: 335; Kuhnt 1909: 62; Kuhnt 1911: 42; Leng and Mutchler 1914: 412; Deelder 1942: 82; Blackwelder 1945: 465; Roberts 1958: 283 [larval]; Skelley 1998b: 14.

Ischirus [sic] *flavitarsis* Lacordaire ~ Candèze 1861: index.

Oocyanyus flavitarsis (Lacordaire) ~ Curran 1944: 3, f. 2; Turnbow and Thomas 2008: 38.

Epytus flavitarsis (Lacordaire) ~ Alvarenga 1994: 18; Perez-Gelabert 2008: 108.

Eptyus [sic] *flavitarsis* (Lacordaire) ~ Peck 2005: 134.

Mycotretus signaticollis Klug in Dejean 1836: 429 [all listings of this name are *nomina nuda*] ~ Dejean 1837: 453; Sturm 1843: 305 [as synonym of *M. flavitarsis*]; Gemminger and Harold 1876: 3690 [as synonym of *I. fulvitarsis* “i. litt.”].

“*Mycotretus thoracica* Dej. (*Engis*)” in Dejean 1836: 429 [all listings of this name are *nomina nuda*] ~ Dejean 1837: 453; Gemminger and Harold 1876: 3690 [as synonym of *I. fulvitarsis*].

Diagnosis. *Notaepytus flavitarsis* is readily recognized by the mostly orange pronotum with two apical and four basal spots (Fig. 83, 89, 121).

Description. Length: 6.1-8.5 mm; width: 2.8-3.5 mm. Body elongate, parallel-sided, somewhat flattened; surface microreticulate. Color black except as noted: pronotum orangish with 2 widely separated black spots on apical margin and 4 basal black spots connected along the basal margin (Fig. 83, 89, 121); elytra with jagged orangish band at basal third and apical quarter; pronotal hypomerone and posterior 3/

4 elytral epipleural fold orangish; tarsi, last 2 abdominal ventrites, and palpi reddish-brown; antennomere XI pale.

Head interocular width = 2.0-2.5 x ocular width; vertex punctures fine, puncture size = 0.33 x ocular facet diameter, separated by 2-3 x their diameter; epistomal punctures impressed, punctures size = 0.5 x ocular facet diameter, separated by 2-3 x their diameter; epistome anterior margin shallowly concave. Eyes large, coarsely faceted. Antennomere III length = 3 x width, length = length of antennomeres IV+V combined; antennomeres IV-VIII equal in length; antennomere IX triangular (Fig. 25), length = 0.8 x width; antennomeres X and XI equal in length; antennomere XI subcircular. Terminal maxillary palpomere triangular, symmetrical, length = width. Terminal labial palpomere triangular, asymmetrical, width = 2 x length, expanded medially, width = terminal maxillary palpomere (Fig. 85).

Pronotum transverse; punctures on disc evenly distributed, slightly finer than those on vertex; separated by 2-4 x their diameter; base with large punctures at each side of base, puncture size = 0.9 x ocular facet diameter. Scutellum pentagonal, length = 0.5 x width. Elytral striae puncture size = an ocular facet diameter, separated by 2-3 x their diameter; intervals with fine punctures; base lacking marginal bead. Wings present, fully developed.

Prosternum length = 2.5 x intercoxal width; sternal plate flat, roughened; sternal lines not continuous around coxal cavity, or with faint division; base shallowly concave. Mesosternal lines parallel, not continuous around coxal cavity. Metasternum long, distance between meso- and metacoxae = 1.8 x intermesocoxal width; anterior lines disappearing under mesosternum medially; continuous around mesocoxal cavity; punctures coarse, puncture size = mesosternal punctures, evenly distributed, separated by 2-3 x their diameter. Abdomen with coxal lines not connected medially; continuous around metacoxal cavity; first ventrite punctured like metasternum; ventrite II-V with finer punctures, evenly distributed; apex of ventrite V with coarse punctures. Male genitalia with flagellum having a dorsal cartilaginous thickening at the apical third and truncate apex (Fig. 105).

Distribution. This is the only *Notaepytus* species found on multiple West Indian islands: Bahamas (Cat Island, Eleuthera, New Providence), Cuba, Hispaniola, Tortue Island (Fig. 1b).

Type Material. Lacordaire (1842) described variations which implies he had a series of specimens. Otherwise, he only stated the type(s) "Il se trouve à Cuba." However, the name was originally used as a *nomen nudum* in the Dejean collection which Lacordaire studied and used in his monograph (see Materials and Methods). Type specimens of *I. flavitarsis* are probably within the Dejean collection at the MRSN or Lacordaire's collection (present repository unknown). Dejean's collection has a single specimen standing over a label stating "Ischyryus flavitarsis Cuba Sturm, Dej. Lac.". To fix the concept of the species to a single specimen, this specimen (Fig. 148) is here designated as the **lectotype** of *Ischyryus flavitarsis*. The label data are as follows: "/ [green paper] S. gago / LECTOTYPE *Ischyryus flavitarsis* Lacord., det. P.E. Skelley 2008 /" (sex undetermined, MRSN).

Specimens Examined. A total of 211 specimens were studied. All label data are presented in the Appendix.

Variation. The only notable variation is the size of the orange elytral bands, which vary in size as much within a population as across the entire species range. These bands are present and distinct on all but one female specimen from Tortue Island, Haiti.

Remarks. *Notaepytus flavitarsis* is the most widely occurring species of the endemic West Indian fauna, and is expected to be found on other smaller island in the Caribbean.

***Notaepytus fulvitarsis* (Lacordaire), new combination**

Figure 1b, 87, 95, 115-117, 126-127, 139, 149-151

Ischyryus fulvitarsis Lacordaire 1842: 129 ~ Crotch 1876: 432(56); Gemminger and Harold 1876: 3690; Gorham 1898: 335; Kuhnt 1909: 62; Kuhnt 1911: 42; Leng and Mutchler 1914: 412; Blackwelder 1945: 465; Skelley 1998b: 14.

“Episcapha fulvitaris Mannerheim” in Lacordaire 1842: 129 [nomen nudum].

Oocyanus fulvitaris (Lacordaire) ~ Curran 1944: 3-4.

Epytus fulvitaris (Lacordaire) ~ Alvarenga 1994: 18; Perez-Gelabert 2008: 108.

Diagnosis. This species is distinguished by: apical and subapical orangish marks on elytra with a variable transverse band on the basal third, long metasternum, fully-developed wings, orangish marks of pronotal anterior angle not extending posteriorly past middle of pronotum (Fig. 95, 126-127), and male genitalia with flagellum possessing broad subapical ventral processes.

Description. Length: 5.5-9.2 mm; width: 2.6-4.5 mm. Body elongate, somewhat flattened; surface weakly microreticulate, glossy or satiny. Color black except as noted: antennae, palpi, and legs red-brown; antennomere XI always paler than antennomeres IX-X; pronotal hypomeron usually red-brown; pronotal anterior angles with red-brown to orangish spot, restricted to anterior half of pronotal sides, spot occasionally separated from lateral margin by narrow extension of black, rarely with small vague spot in middle of pronotal disc; elytra with orangish jagged bands of variable development at basal third and apical quarter, in addition to the orangish apical spot, subapical band and apical spot usually separated; elytral epipleuron reddish beyond basal quarter; abdominal ventrites laterally red-brown, apical abdominal ventrites entirely red-brown.

Head interocular width = 3.0-3.5 x ocular width; vertex and epistome finely punctate, puncture size = 0.33 x ocular facet diameter, separated by 2-3 x their diameter, vertex punctures becoming coarser at base; epistome anterior margin truncate to shallowly concave. Eyes moderately to coarsely faceted. Antennomere III length = 3-4 x width, antennomere III length slightly less than length of antennomeres IV+V combined; antennomeres IV-VIII equal in length, each with length = 2 x width; antennomere IX triangular, length = 1.0-1.5 x width; antennomere XI circular to slightly elongate. Terminal maxillary palpomere triangular, slightly asymmetrical, slightly wider than long. Terminal labial palpomere triangular, asymmetrical, width = 2 x length, expanded medially, width = 1.2 x terminal maxillary palpomere.

Pronotum transverse; punctures on disc equal to those on vertex in size and distribution; often with small group of indistinct larger punctures at each side of base. Scutellum pentagonal, length = 0.5-0.75 x width. Elytral striae punctures weak, often obscure; intervals with fine punctures indistinct or obscured in microreticulations; surface glossy or satiny with extremely fine, short pubescence. Wings present, fully developed.

Prosternum flat to slightly convex, length = 2.0-2.5 x intercoxal width; sternal punctures fine and obscure, surface occasionally with long, fine pubescence; sternal lines usually continuous around coxal cavity; base shallowly concave. Mesosternal lines parallel to slightly divergent anteriorly, not continuous around coxal cavity. Metasternum long, distance between meso- and metacoxae = 1.6-1.8 x intermesocoxal width; anterior lines usually meeting medially; continuous or not around mesocoxal cavity, occasionally with short coxal line; punctures fine, obscured, widely scattered. Abdomen with coxal lines not meeting medially; line continuous or not around metacoxal cavity, often with short coxa line; general punctation fine and indistinct. Male genitalia with flagellum bearing a dorsal, elongate oval, cartilaginous mass on apical quarter; apex acute with a thickened ventral subapical process that projects caudally (Fig. 87, 115-117).

Distribution. Found on Hispaniola in various mountain ranges (Fig. 139).

Type Material. Lacordaire described *Ischyryus fulvitaris* and stated it was from “De Haïty. Je l’ai recu de M. Reiche [...]”. The specimen in Crotch’s collection (CUMZ) is labeled “/ [green paper, hand written] Haïty / [blue paper] TYPE / [white paper] TYPE [hand written] fulvitaris R /” (Fig. 151). Skelley (1998b) discussed that the ‘R’ on Crotch’s labels indicated specimens came from Reiche’s collection. Lacordaire (1842) made no indication in the description that there was more than one specimen. In other descriptions he indicated variations or made statements about specimens studied, but in this description he used the term “it” at least twice. Thus, he likely had a single specimen on which the description is based. The specimen in CUMZ (Fig. 149-151) fits the description and has data showing it was part of the material Lacordaire studied. Therefore, that specimen should be considered the holotype (which is unfortunate, see

remarks below), and a red holotype label has been placed on it: “/ [red paper] HOLOTYPE *Ischyryrus fulvitaris* Lac., det. P.Skelley-08”.

Specimens Examined. A total of 115 specimens presently considered *N. fulvitaris* were studied. Their label data are presented in the Appendix.

Variation. Much variation occurs in several characters, most notably the color pattern and body size. Members show regional variations which warrant mentioning below.

One variation is represented only by the holotype. This specimen has large anterior pronotal spots, larger general body size (length 8.9 mm), and solid black legs that are the same color as venter, which may be discolored due to age or preservation. Unfortunately, the holotype is female, so male genitalic features are not available, and its locality of capture is unclear.

A second variation is widespread in the Cordillera Central and similar to the holotype in most respects: generally larger anterior pronotal spots (Fig. 126), generally larger body size (length 7.0-9.2 mm), and male flagellum with thickened subapical process well separated from the acute apex (10 males dissected) (Fig. 116). However, these differs from the holotype in leg color which varies from entirely pale reddish-brown contrasting with the venter to having darker bases of the femora and tibiae. Discoloration of leg color is obvious in some specimens.

A third variation occurs in specimens from the western part of the Cordillera Central in Dajabon Province, the Cordillera Septentrional, and the Cordillera Oriental. These specimens differ from specimens in the main part of the Cordillera Central in being smaller in body size (length 5.5-7.5 mm) and having slightly smaller orangish dorsal markings (Fig. 127). Otherwise, these smaller specimens are similar in leg color and male genitalia (8 males dissected, Fig. 115).

A single female specimen from the eastern Cordillera Central (Monseñor Noel Province) is similar to those from the rest of the Cordillera Central with darkened femoral bases, but this female has an entirely black pronotal hypomeron. All other variations have an orangish hypomeron. Considering the darker legs, the possibility exists that the pronotal hypomeron and legs are simply discolored.

A small series of specimens is known from the eastern Sierra de Baoruco. These specimens are externally similar to specimens from the Cordillera Central, with larger body size, larger anterior pronotal spots, and entirely pale reddish-brown legs contrasting with the venter. However, the single available male from the Sierra de Baoruco has the thickened subapical process on the flagellum narrowly separated from acute apex (Fig. 117).

Remarks. The holotype and the majority of those from the Cordillera Central differ only in leg color. Individuals from the Cordillera Central differ enough to consider the holotype a discolored specimen. In fact, in strong lighting, the forelegs of the holotype appear to be entirely reddish-brown. The holotype is suspected to be from the same geographic region, possibly in the vicinity of Santo Domingo.

Other problems are associated with the holotype female. This specimen was in poor condition when first studied while cataloguing Crotch's collection (Skelley 1998b). The specimen had originally been pinned, but was placed on a small card with excessive glue. The specimen became disarticulated when relaxed for cleaning and study. The resultant pieces were placed on larger cards, and arranged in a manner which should facilitate future studies without removal (Fig. 150). Secondly, the type locality is given only as Haiti in the original 1842 description, 2 years before the Dominican Republic was formed. All that can be confidently said is that it is from Hispaniola. If it is truly from present-day Haiti, this is the only known specimen of *N. fulvitaris* from that part of Hispaniola. Lastly, being a female, no male characters are available for comparison with other species or populations. These problems will continue to hinder studies regarding the true identity and type locality of *N. fulvitaris*.

While specimens from the Sierra de Baoruco appear geographically isolated and the only available male has slightly different genitalia, all other character states fall well within the range of variation seen in *N. fulvitaris* from the Cordillera Central. Before considering this population distinct, even as a subspecies, at least one additional male is needed to confirm a consistent genitalic difference before proposing a name.

***Notaepytus haitensis* (Curran), new combination**

Figure 1b, 98, 113, 135, 139

Oocyanus haitensis Curran 1944: 2-3, f. 1.*Epytus haitensis* (Curran) ~ Alvarenga 1994: 18; Perez-Gelabert 2008: 108.

Diagnosis. This species is diagnosed by: apical and subapical orangish marks of the elytra in addition to the transverse band on the basal third, a long metasternum, fully-developed wings, large orangish spots of pronotum occupying majority of pronotal disc leaving two apical and two basal black marks (Fig. 98, 135), and male genitalia with flagellum possessing a subapical ventral process directed anteriorly away from apex.

Description. Length: 7.4-7.8 mm; width: 3.5-3.6 mm. Body elongate, somewhat flattened; surface weakly microreticulate, weakly dulled to glossy. Color black except as noted: basal antennomeres, palpi, tarsi, apical 4 abdominal ventrites, and apical 3/4 of elytral epipleural fold red-brown; antennomere XI pale; pronotum broadly orangish with 2 black spots each on anterior and posterior margin; elytra with orangish band at basal third, subapical and apical marks broadly connected into one spot.

Head interocular width = 3.5 x ocular width; vertex and epistome finely punctate, puncture size = 0.33 x ocular facet diameter, separated by 2-3 x their diameter; vertex punctures coarser at base; epistome anterior margin truncate. Eyes large, coarsely faceted. Antennomere III length = 3 x width; antennomeres IV-VIII equal in length, length = 2 x width; antennomere IX triangular, length = 1.2 x width; antennomeres IX-XI equal in length; antennomere XI subcircular. Terminal maxillary palpomere triangular, slightly asymmetrical, length = 0.75 x width. Terminal labial palpomere triangular, asymmetrical, width = 2 x length, expanded medially, width = 1.2 x terminal maxillary palpomere.

Pronotum transverse; puncture size and distribution as those on vertex; base with small group of slightly larger punctures in shallow depression at each side of base. Scutellum pentagonal, length = 0.8 x width. Elytra with striae faintly impressed; punctures fine, puncture size larger than pronotal disc, separated by 2 x their diameter; interval punctures fine; base lacking marginal bead. Wings present, fully developed.

Prosternum weakly convex, length = 2.5 x intercoxal width; sternal plate flat with fine punctures; sternal lines not continuous around coxal cavity; base shallowly concave. Mesosternal lines parallel, not continuous around coxal cavity. Metasternum long, distance between meso- and metacoxae = 1.6 x intermesocoxal width; anterior lines weakly connecting medially, lines not continuous around mesocoxal cavity, coxal lines short; surface with fine, scattered punctures. Abdomen with lines not meeting medially; not continuous around metacoxal cavity, coxal lines short; punctures fine, most noticeable apically and laterally. Male genitalia with the flagellum having a large cartilaginous mass at apical third; apex acute with distinct subapical ventral process directed anteriorly away from apex (Fig. 113).

Distribution. Found in southwestern Haiti on the Massif de La Hotte (Fig. 139).

Type Material. Holotype (not examined) type locality "Northeast Foothills, La Hotte, Haiti, 2000 to 4000 feet" (AMNH). Paratypes examined (2): Haiti: Taridieu, Mt. La Hotte, 3000 ft., 14-OCT-1934, Darlington (1 male-AMNH); Haiti: NE. foothills La Hotte, 2-4000ft., 10-24-OCT-1934, Darlington (1 male-AMNH).

Variation. As Curran (1944) noted, even the two available paratypes showed variation in the size of the orangish dorsal marks. However, the extent of the pronotal markings is unique.

***Notaepytus ignotensis* Skelley, new species**

Figure 1b, 97, 114, 136, 152

Diagnosis. This species is distinguished by: apical and subapical orangish marks of elytra in addition to the transverse band on the basal third, a long metasternum, fully-developed wings, orangish marks of

lateral pronotum complete from base to apex (Fig. 97, 136), with an additional central pronotal mark narrowly connected to each lateral mark, and male genitalia with flagellum possessing an apical process widely separated with the ventral process acute.

Description. Length: 8.2-8.8 mm; width: 4.0-4.2 mm. Body elongate, somewhat flattened; surface weakly microreticulate, glossy. Color dark brown to black except as noted: antennae, palpi, and legs red-brown; pronotum with elongate lateral marks from base to apex, narrowly connected medially to longitudinal spot on middle of pronotal disc, hypomerion orangish; elytra with orangish, jagged band at basal third and apical quarter, and apical spot narrowly separated from band on apical quarter; elytral epipleuron reddish on apical 3/4; abdomen basally dark brown, becoming red-brown laterally and apically.

Head interocular width = 3.5 x ocular width; vertex and epistome finely punctate, puncture size = 0.33 x ocular facet diameter, separated by 2-3 x their diameter; epistome anterior margin shallowly concave. Eye facets moderate in size. Antenna surpassing base of pronotum; antennomere II slightly longer than wide; antennomere III length = 4 x width, length = length of antennomeres IV+V combined; antennomeres IV-VIII equal in length, each with length = 3 x width; antennomere IX triangular, length = 1.5 x width; antennomere XI subcircular. Terminal maxillary palpomere triangular, slightly asymmetrical, slightly wider than long. Terminal labial palpomere triangular, asymmetrical, width = 2 x length, expanded medially, width = 1.2 x terminal maxillary palpomere.

Pronotum transverse; punctures on disc slightly larger in size than those on vertex, separated by 2-3 x their diameter; indistinct group of punctures in shallow depression each side of base. Scutellum pentagonal, length = 0.75 x width. Elytral striae punctures weak, obscure on disc, indistinct laterally; intervals with punctures indistinct; base lacking marginal bead. Wings present, fully developed.

Prosternum convex, length = 2.5 x intercoxal width; sternal punctures indistinct; sternal lines continuous around coxal cavity; base shallowly concave. Mesosternal lines parallel, continuous around coxal cavity. Metasternum long, distance between meso- and metacoxae = 1.5 x intermesocoxal width; anterior lines faintly meeting medially; continuous around mesocoxal cavity, coxal line short and weak; punctures fine, widely scattered. Abdomen with coxal lines not meeting medially; continuous around metacoxal cavity; punctures similar to metasternal punctures. Male genitalia with flagellum bearing a dorsal, elongate-oval, cartilaginous mass on apical quarter; flagellar apex acute with a well-separated ventral subapical, caudally pointing, acute process (Fig. 114).

Distribution. Found on Hispaniola.

Type Material. The male holotype of *Notaepytus ignotensis* has the following label data “/ LaCavite [possibly LaCavito, see Fig. 152], St Domingo / RH Beck Coll, March 5 1917 / [red paper] HOLOTYPE *Notaepytus ignotensis* P. E. Skelley ♀ (CASC). Only one male paratype was studied with same data as the holotype (PESC).

Variation. Little variation is observed from the available specimens.

Etymology. The specific epithet is derived from the Latin “*ignotus*” for “unknown” and with the suffix “-ensis” denoting “place” or “locality”. This name was chosen because of the unlocated type locality.

Remarks. Although the label states “St Domingo”, in the late 1800s-early 1900s collectors often used “Santo Domingo” as an alternative for Hispaniola. Thus far, no locality bearing the name “La Cavite” or “La Cavito” has been located.

The genitalia and color pattern of *N. ignotensis* clearly place it within the *fulvitaris* species group. Fully winged species of this group on Hispaniola show a clinal trend where populations from more western localities have larger orange-red marks on the pronotum, while those with smaller markings are from more eastern localities. The larger orange pronotal markings of *N. ignotensis* suggest the species is from western Hispaniola, possibly Haiti.

***Notaepytus inversus* Skelley, new species**

Figure 1b, 99, 111, 137, 139

Diagnosis. This species is diagnosed by: apical and subapical orangish marks of elytra in addition to a transverse band on the basal third, a long metasternum, fully-developed wings, orangish marks of pronotal anterior angle extending posteriorly almost to base (Fig. 99, 137), and male genitalia with flagellum possessing a ventral cartilaginous mass and no apical processes.

Description. Length: 9.0 mm; width: 4.0 mm. Body elongate, somewhat flattened; surface weakly microreticulate, somewhat glossy. Color black except as noted: palpi, tarsi and antennomere XI pale brown; legs and basal antennomeres dark red-brown; pronotal hypomeron red-brown; pronotal anterior angles with red-brown which extends posteriorly nearly to base, spot separated from lateral margin basally by narrow black edge, medial pronotal disc with large vague dark red-brown mark; elytra with orangish sinuate-edged bands at basal third and apical quarter in addition to the orangish apical spot, subapical band and apical spot well separated; elytral epipleuron reddish beyond basal quarter; basal abdominal ventrite nearly black, apical 4 ventrites entirely red-brown.

Head interocular width = 3.5 x ocular width; vertex and epistome finely punctate, puncture size = 0.33 x ocular facet diameter, separated by 2-3 x their diameter; epistome anterior margin shallowly concave. Eyes facets moderate in size. Antennomere III length = 2.5 x width, antennomere III length slightly less than length of antennomeres IV+V combined; antennomeres IV-VIII equal in length, each with length = 2 x width; antennomere IX triangular, length = 1.2 x width; antennomere XI circular, slightly transverse. Terminal maxillary palpomere triangular, slightly asymmetrical, slightly wider than long. Terminal labial palpomere triangular, asymmetrical, width = 2.2 x length, expanded medially, width = 1.5 x terminal maxillary palpomere.

Pronotum transverse; punctures on disc equal in size and slightly denser than those seen on vertex; with small group of indistinct slightly larger punctures in shallow depression at each side of base. Scutellum pentagonal, length = 0.75 x width. Elytral striae punctures fine, indistinct, lacking laterally; interval punctures indistinct; surface glossy. Wings present, fully developed.

Prosternum slightly convex, length = 2.5 x intercoxal width; sternal punctures obscure; sternal lines not continuous around coxal cavity; base shallowly concave. Mesosternal lines parallel, not continuous around coxal cavity. Metasternum long, distance between meso- and metacoxae = 1.6 x intermesocoxal width; anterior lines weakly meeting medially; continuous around mesocoxal cavity, with weak, short coxal line; punctures fine, indistinct, widely scattered. Abdomen with coxal lines not meeting medially; line continuous around metacoxal cavity; general punctation fine. Male genitalia with flagellum bearing a ventral, subapical, elongate oval, cartilaginous mass; flagellar apex acute, lacking additional processes (Fig. 111).

Distribution. Found in the Dominican Republic, Pedernales Province (Fig. 139).

Type Material. The male holotype of *Notaepytus inversus* (Fig. 137) has the following label data: “/Dom. Rep: Prov. Pedernales, 24 km N. Cabo Rojo, 610 m, 21 AUG 1988, wet forest, at light & night beating, M. Ivie, Philips & Johnson / [pale yellow paper] Specimen imaged 2008-West Indies Erotylinae, P. Skelley / [red paper] HOLOTYPE *Notaepytus inversus* P. E. Skelley /” (WIBF, to be deposited in NMNH).

Etymology. The specific epithet is derived from the inverted position of the cartilaginous mass at the apex of the flagellum.

***Notaepytus lavegaensis* Skelley, new species**

Figure 1b, 88, 102, 129, 140

Diagnosis. This species is diagnosed by: apical and subapical orangish marks of elytra in addition to a variable transverse band on the basal third, a short metasternum, greatly reduced wings, orangish marks of pronotal anterior angle extending posteriorly to the base (Fig. 102, 129), and male genitalia with

flagellum possessing a small dorsal cartilaginous thickening at apical third, flagellar apex straight and narrowly truncate.

Description. Length: 7.8-9.1 mm; width: 3.9-4.5 mm. Body elongate, robust; surface weakly microreticulate, glossy. Color dark brown to black except as noted: antennae, palpi, pronotal hypomeron, and legs reddish-brown, antennal club usually paler; pronotal sides with orangish mark entire form anterior to posterior edge, some with distinct longitudinal orangish mark in center of pronotal disc; elytra with orangish band at basal third and apical quarter, and spot at the apex; elytral epipleuron orangish beyond basal quarter; basal abdominal ventrites laterally red-brown, apical 1-2 ventrites entirely red-brown.

Head interocular width = 3.5-4.0 x ocular width; vertex and epistome finely punctate, puncture size = 0.33 x ocular facet diameter, separated by 2-3 x their diameter; epistome anterior margin shallowly concave. Eyes facets moderate in size. Antennomere III length = 4 x width, length = length of antennomeres IV+V combined; antennomeres IV-VIII equal in length, each with length = 2.5 x width; antennomere IX triangular, length = 1.5 x width; antennomere XI elongate, subcircular. Terminal maxillary palpomere triangular, slightly asymmetrical, slightly wider than long. Terminal labial palpomere triangular, asymmetrical, width = 1.5 x length, expanded medially, width = 1.2 x terminal maxillary palpomere.

Pronotum transverse; punctures on disc equal in size and distribution to vertex; small group of slightly larger punctures in shallow depression each side of base. Scutellum pentagonal, length = 0.5 x width. Elytral striae punctures indistinct to absent, striae indicated by a vague wrinkle; intervals with punctures apparently lacking; base lacking marginal bead. Wings reduced to narrow strips.

Prosternum convex, length = 2.5 x intercoxal width; sternal punctures indistinct; sternal lines continuous around coxal cavity; base shallowly concave. Mesosternal lines parallel, continuous around coxal cavity. Metasternum short, distance between meso- and metacoxae = 0.9-1.0 x intermesocoxal width; anterior lines not meeting medially; continuous around mesocoxal cavity; punctures fine, obscured, widely scattered. Abdomen with coxal lines not meeting medially; continuous around metacoxal cavity; punctures similar to metasternum punctures. Male genitalia with flagellum bearing a small dorsal cartilaginous thickening at apical third; flagellar apex straight and narrowly truncate, lacking additional processes (Fig. 88, 120).

Distribution. Found in the Dominican Republic, Cordillera Central (Fig. 140).

Type Material. The male holotype and female allotype of *Notaepytyus lavegaensis* bear the following label data: "/Valle Nuevo Valle Nuevo, SE. Constanza, Aug.'38, Dom. Rep., c. 7000ft., Darl. ♀" (AMNH); each bearing the appropriate type label [red paper] holotype or [blue paper] allotype "*Notaepytyus lavegaensis* P. E. Skelley ♀". Paratypes (9): same as holotype (3-AMNH, PESC); La Vega, cloud forest vic. Valle Nuevo, c.6000ft, AUG-1938, Darlington (2-MCZC); La Vega [?], 53 km. SE. Constanza, 9-AUG-1979, C.W. O'Brien (2-PESC); [LaVega or Santiago?], Loma Rucilla & Mts.N., 5-8000 ft., JUN-1938, Darlington (1-MCZC); Sto. Domingo, 15-MAR-1917, R.H. Beck (1-CASC).

Variation. There is notable variation in the size and distinctness of the pronotal and elytral markings, with some members bearing the same collection data. Sometimes, these elytral marks are reduced and indistinct. One female, which lacks the basal elytral band, was collected with a male possessing a large, well-defined band. Other specimens have an additional longitudinal spot in the middle of the pronotal disc.

Etymology. The specific epithet is derived from the province where the type material was collected.

***Notaepytyus modestus* (Olivier), new combination**

Figure 1b, 81-82, 84, 92, 107, 132, 138, 153-155

Erotylus modestus Olivier 1807: 483 ~ Dejean 1821: 128; Duponchel 1825: 165, t.3 f.82.

Mycotretus modestus (Oliv.) ~ Dejean 1836: 429; Dejean 1837: 453.

Ischyryus modestus (Oliv.) ~ Lacordaire 1842: 130-131; Crotch 1876: 432(56); Gemminger and Harold 1876: 3691; Gorham 1898: 335; Kuhnt 1909: 62; Kuhnt 1911: 43; Leng and Mutchler 1914: 412; Blackwelder 1945: 465; Skelley 1998b: 14.

Oocyanus modestus (Oliv.) ~ Curran 1944: 3.

Epytus modestus (Olivier) ~ Alvarenga 1994: 18; Perez-Gelabert 2008: 108.

Diagnosis. *Notaepytus modestus* is readily recognized by: entirely black pronotum and elytral apex, and basal orange elytral band extending anteriorly to attain the elytral base (Fig. 92, 132). No other *Notaepytus* species has an orange band attaining the elytral base.

Description. Length: 7.0-8.5 mm; width: 3.2-4.0 mm. Body elongate, parallel-sided, somewhat flattened; surface microreticulate. Color black except as noted: elytra with 2 jagged transverse bands, one at apical quarter and one occupying most of the basal quarter which projects forward to attain elytral base; antennomere XI pale; last abdominal ventrites, elytral epipleural fold, and tarsi reddish-brown.

Head interocular width = 2 x ocular width; vertex and epistome finely punctate, puncture size = 0.33 x ocular facet diameter, separated by 2-3 x their diameter, epistomal punctures more distinct than those on vertex; epistome anterior margin shallowly concave. Eyes large, coarsely faceted. Antennomere III length = 3 x width, length = length of antennomeres IV+V combined; antennomeres IV-VIII equal in length; antennomere IX triangular, length = 0.9 x width; antennomeres X shorter than XI; antennomere XI subcircular. Terminal maxillary palpomere triangular, slightly asymmetrical, length = 0.75 x width. Terminal labial palpomere triangular, asymmetrical, width = 2 x length, expanded medially, width = 1.2 x terminal maxillary palpomere.

Pronotum transverse; punctures on disc equal in size and distribution to those on vertex; separated by 2-4 x their diameter; base with large punctures at each side of base, puncture size = an ocular facet diameter. Scutellum pentagonal, length = 0.5 x width. Elytral striae puncture size = an ocular facet diameter, separated by 2 x their diameter; intervals with fine punctures, obscured in microreticulations; base lacking marginal bead. Wings present, fully developed.

Prosternum length = 2.5 x intercoxal width; sternal plate flat; sternal lines continuous around coxal cavity, or faintly divided; base shallowly concave. Mesosternal lines parallel, not continuous around coxal cavity. Metasternum long, distance between meso- and metacoxae = 1.8 x intermesocoxal width; anterior lines disappearing under mesosternum medially, not meeting medially; continuous around mesocoxal cavity; punctures coarse at anterolateral angles becoming smaller medially, medial puncture size = mesosternal puncture size, evenly distributed, separated by 2-3 x their diameter. Abdomen with coxal lines not meeting medially; continuous around metacoxal cavity; punctures similar to metasternum punctures. Male genitalia with flagellum elongate and gradually narrowing to an acute apex (Fig. 107).

Distribution. Restricted to Hispaniola (Fig. 138).

Type Material. For *Erotylus modestus*, Olivier (1807) illustrated the species and stated "Il a été trouvé à Saint-Domingue, par M. Palisot de Beauvois." Lacordaire (1842) stated "Il a été découvert à Haïty par Palisot de Beauvois, qui l'avait communiqué à Olivier. L'exemplaire unique que je possède a été donné également par lui à M. Dejean." This latter statement by Lacordaire roughly translates to "it has been found in Haiti by Palisot de Beauvois who communicated it to Olivier. The unique specimen which I have has been given by him to Mr. Dejean." The question remains whether or not Palisot de Beauvois gave Dejean the single type or a specimen from a type series.

Horn et al. (1990) stated that part of the beetle collection of Palisot de Beauvois went to Chevrolat, whose erotylids eventually became part of the Crotch collection. In the Crotch collection there is a specimen of *N. modestus* labeled as a type from the Chevrolat material (Skelley 1998a). While Crotch did purchase materials from various collections and his specimen has a paper record indicating it is type material, Lacordaire's statement indicates that additional type specimens may be in the Dejean collection. Since there is evidence that Olivier had a type series, the specimen in the Crotch collection is here designated as the **lectotype** of *E. modestus* Olivier, with the following label data: "/ TYPE [handwritten] modestus Ol, type Chev. / [blue paper] TYPE / [red paper] LECTOTYPE *Erotylus modestus* Oliv., det. P. Skelley-08 ♀" (Fig. 153, specimen not dissected, sex undetermined, CUMZ). This specimen was loose on a

pin when first studied and is missing most of its appendages. To better preserve the specimen, it was removed from the old pin and glued onto a card (Fig. 154-155).

Specimens Examined. A total of 106 specimens were studied. Their label data are presented in the Appendix.

Variation. In a few specimens the basal elytral band is thickened so that there is a free black humeral spot. In most specimens this black spot attains the lateral margin.

Remarks. A couple specimens of *N. modestus* have the anterior projection of the basal transverse elytral mark somewhat reduced. If it were lacking, the specimens could be confused with *N. elongatus*. However, the basal transverse elytral mark of *N. modestus* is located at approximately the basal quarter, while that of *N. elongatus* is located more posterior at the basal third (see Fig. 132 vs. 133).

***Notaepytus neibaensis* Skelley, new species**

Figure 1b, 101, 112, 130, 140

Diagnosis. This species is distinguished by: apical and subapical orangish marks of the elytra (although reduced), a short metasternum, greatly reduced wings, small and weakly defined pronotal and elytral marks (Fig. 101, 130), microreticulate and distinctly dull dorsal surface, and male genitalia with flagellum having a distinct S-curve at apical third and narrowly truncate apex.

Description. Length: 9.8-11.5 mm; width: 4.9-5.1 mm. Body elongate, somewhat robust; surface microreticulate, distinctly dulled. Color dark-brown to black except as noted: antennal clubs, palpi, legs, elytral epipleural folds, lateral and apical abdomen red-brown; extreme pronotum anterior angles and elytral apex with small vague orangish marks; elytral marks consisting of subapical and apical mark.

Head interocular width = 3.5 x ocular width; vertex and epistome finely punctate, obscured in microreticulation; epistome anterior margin shallowly concave. Eye facets moderate in size. Antennomere III length = 4 x width, length = length of antennomeres IV+V combined; antennomeres IV-VIII equal in length, each with length = 3 x width; antennomere IX triangular, length = 1.5 x width; antennomere XI subcircular. Terminal maxillary palpomere triangular, slightly asymmetrical, slightly wider than long. Terminal labial palpomere triangular, asymmetrical, width = 2 x length, expanded medially, width = 1.2 x terminal maxillary palpomere.

Pronotum transverse, weakly narrowed anteriorly; anterior angles rounded; anterior margin straight medially; punctures on disc indistinct in microreticulation; small group of large punctures at each side of base, puncture size = an ocular facet diameter. Scutellum pentagonal, length = 0.5 x width. Elytral striae and interval punctures absent; base lacking marginal bead. Wings reduced to strips.

Prosternum convex, length = 2.5 x intercoxal width; sternal punctures fine and obscure; sternal lines continuous or not around coxal cavity; base truncate. Mesosternal lines parallel to slightly divergent anteriorly, continuous or not around coxal cavity. Metasternum short, distance between meso- and metacoxae = intermesocoxal width; anterior lines strongly impressed, meeting medially; continuous around mesocoxal cavity, with short coxal lines; punctures obscured. Abdomen with coxal lines not meeting medially; not continuous around metacoxal cavity, with short coxal line; punctures obscured. Male genitalia with flagellum having a distinct S-curve at apical third; flagellar apex narrowly truncate (Fig. 112).

Distribution. Found in the Dominican Republic, in the Sierra de Neiba (Fig. 140).

Type Material. The male holotype of *Notaepytus neibaensis* (Fig. 130) has the following label data: "DOMINICAN REPUBLIC: San Juan. Sierra de Neiba, Sabana del Silencio, 10.0 km. SSW. El Cercado, 18-39-07N, 71-33-21W. 2009m. 20 June 2003 / J. Rawlins, C. Nunez, R. Davidson, C. Young, P. Acevado, M. de la Cruz, cloud forest along Danthonia savannah, hand collected, Sample 33242 / Carnegie Museum Specimen number CMNH-349,310 / [pale yellow paper] Specimen imaged 2008-West Indies Erotulinae-P. Skelley / [red paper] HOLOTYPE *Notaepytus neibaensis* P.E. Skelley /" (CMNH). The female allotype label data: "/ DOMINICAN REPUBLIC: San Juan. Sierra de Neiba, 9.4 km. SSW. El Cercado, 18-39-18N,

71-33-51W, 1973m, 22 June 2003, R. Davidson, C. Nunez, C. Young, J. Rawlins, P. Acevado, M. de la Cruz, meadow near mature pine forest, hand collected, Sample 32242 / Carnegie Museum Specimen number CMNH-349,014 /" (CMNH). Paratypes (2): same as holotype except "CMNH-348,832" (1 male-PESC); DOM.REP.: Independencia, 32 km. NW. La Descubierta, Sabana Real, 1800m, cloud forest car- rion traps, 26. XI-5-XII.1991, S. & J. Peck, 91-333, (1 teneral female-CMNC).

Variation. The few specimens studied exhibit variation in the visibility and size of the orangish marks on the elytra and anterior pronotal angles. These marks are never as sharply defined as those in closely related species like *N. baorucoensis*.

Etymology. The specific epithet is derived from the mountain range where this species occurs.

Remarks. *Notaepytus neibaensis* appears most similar to *N. tarsalis*, but differs in color pattern, surface sculpture, and pronotal characters as stated in the key.

***Notaepytus tarsalis* (Lacordaire), new combination**

Figure 156-158

Ischyryus tarsalis Lacordaire 1842: 106 ~ Dejean 1836: 428; Dejean 1837: 452 [both Dejean citations are *nomina nuda* attributed to Mannerheim, from "S. Domingue"]; Crotch 1876: (57)433 [as synonym of *E. tarsatus*]; Blackwelder 1945: 465.

Epytus tarsalis (Lacordaire) ~ Alvarenga 1994: 18; Perez-Gelabert 2008: 108.

Diagnosis. This species is diagnosed by: small and weakly defined apical orangish marks of the elytra only (Fig. 156), a short metasternum, greatly reduced wings, weak strial punctation, and weakly dull dorsal surface.

Description. Length: 9.4 mm; width: 4.7 mm. Body elongate, somewhat robust; surface microreticulate, weakly dulled. Color dark-brown to black except as noted: antennal club, palpi, and tarsi red-brown; central pronotal disc with faint red-brown central mark; elytral apex with distinct orangish mark, no subapical mark.

Head interocular width = 4 x ocular width; vertex and epistome finely punctate, obscured in microreticulation; epistome anterior margin shallowly concave. Eye facets moderate in size. Antennomere III length = 4 x width, length = length of antennomeres IV+V combined; antennomeres IV-VIII gradually decreasing in length, each with length = 2.5-3.0 x width; antennomere IX triangular, length = width; antennomere XI subcircular. Terminal maxillary palpomere triangular, slightly asymmetrical, slightly wider than long. Terminal labial palpomere triangular, asymmetrical, width = 2 x length, expanded medially, width = 1.2 x terminal maxillary palpomere.

Pronotum transverse, distinctly narrowed anteriorly; anterior angles acute; anterior margin evenly arched across width; punctures on disc indistinct in microreticulation; small group of larger punctures at each side of base, puncture size = an ocular facet diameter. Scutellum pentagonal, length = 0.5 x width. Elytral striae punctures weakly impressed near base, obscured toward apex; intervals with punctures absent; base lacking marginal bead. Wings reduced to strips.

Prosternum convex, length = 2.5 x intercoxal width; sternal punctures fine and obscure; sternal lines continuous around coxal cavity; base truncate. Mesosternal lines slightly divergent anteriorly, not continuous around coxal cavity. Metasternum short, distance between meso- and metacoxae = 1.1 x intermesocoxal width; anterior lines strongly impressed, weak medially; not continuous around mesocoxal cavity, with short coxal line; lacking punctures. Abdomen with coxal lines not meeting medially; not continuous around metacoxal cavity, with short coxal line; punctures obscured. Male unknown.

Distribution. Found on Hispaniola (Haiti).

Type Material. Lacordaire (1842: 106) stated *Ischyryus tarsalis*, "Il se trouve à Haïty." and cited "Mannerheim in Dej. Cat., ed. 3. p. 452." Lacordaire studied Dejean's collection, often validating Dejean's

nomina nuda. Because of this close relationship, type material of *Ischyryus tarsalis* was sought in the Dejean collection. Lacordaire made no indication of how many specimens were studied. To fix the identity of the species to a single specimen and stabilize the nomenclature, the female specimen in the Dejean collection (Fig. 156-158) with found over a label "Ischyryus tarsalis Haity, Lac. Mann. Dej." is here designated as the **lectotype** of *I. tarsalis*. The specimen possesses the following label data: "/ [green paper] Mannerheim / [red paper] LECTOTYPE *Ischyryus tarsalis* Lacordaire, des. P. E. Skelley 2008 /" (MRSN).

Remarks. *Notaepytyus tarsalis* is most similar in color pattern and general body shape to *N. neibaensis*, but differs in pronotal shape and development of elytral stria punctures as stated in the key. Unfortunately, *N. tarsalis* is only known by a unique female whose everted genitalia are broken. There are enough external characters available to distinguish *N. tarsalis* from *N. neibaensis*, thus they are considered herein as distinct species.

Nomenclaturally, there has been confusion between the names "*tarsalis*" and "*tarsatus*", which is discussed further under *N. tarsatus*.

***Notaepytyus tarsatus* (Lacordaire), reinstated species, new combination**

Figure 90, 106, 122, 159-161

Oocyanyus tarsatus Lacordaire 1842: 196-197 ~ Gemminger and Harold 1876: 3696 [as synonym of *O. tarsalis*]; Gundlach 1891-1894: 127-128; Kuhnt 1910: 231; Leng and Mutchler 1914: 412 [as synonym of *O. tarsalis*]; Curran 1944: 4 [as synonym of *O. tarsalis*]; Blackwelder 1945: 465 [as synonym of *O. tarsalis*]; Peck 2005: 134 [as synonym of *E. tarsalis*].

Epytyus tarsatus (Lacordaire) ~ Crotch 1876: (57)433 [synonymy with *O. tarsalis*]; Skelley 1998a: 14.

Ischyryus (*Oocyanyus*) *tarsalis* Lacordaire ~ Gorham 1898: 335.

Oocyanyus tarsalis (Lacordaire) ~ Gemminger and Harold 1876: 3696; Kuhnt 1909: 64; Kuhnt 1911: 44; Leng and Mutchler 1914: 412; Curran 1944: 4; Blackwelder 1945: 465.

Epytyus tarsalis (Lacordaire) ~ Alvarenga 1994: 18.

Epytyus [*sic*] *tarsalis* (Lacordaire) ~ Peck 2005: 134.

Diagnosis. The species may be delimited by an entirely black body (Fig. 90, 122), with only tarsi and antennomeres IX-XI distinctly pale.

Description. Length: 5.3-9.2 mm; width: 2.8-4.5 mm. Body elongate, parallel-sided, somewhat flattened; surface microreticulate, moderately dulled. Color black except as noted: apical third of antennomere IX, and all of antennomeres X-XI pale; tarsi and basal half of antennomeres I-II red-brown.

Head interocular width = 2.5-3.0 x ocular width; vertex and epistome coarsely punctate, puncture size = 0.75 x ocular facet diameter; separated by 1-2 x their diameter; epistome anterior margin truncate. Eyes moderately to coarsely faceted. Antennomere III length = 3 x width, length = length of antennomeres IV+V combined; antennomeres IV-VIII equal in length, each with length = 1.5 x width; antennomere VIII wider than VII, but not part of club; antennomere IX triangular, length = 0.8 x width; antennomere XI subcircular. Terminal maxillary palpomere triangular, symmetrical, slightly wider than long. Terminal labial palpomere triangular, asymmetrical, width = 2 x length, expanded medially, width = terminal maxillary palpomere.

Pronotum transverse; punctures coarse, slightly smaller than those on vertex, evenly distributed; small group of large punctures at each side of base. Scutellum pentagonal, length = 0.75 x width. Elytral striae punctures large, puncture size = an ocular facet diameter, separated by 2 x their diameter; fine interval punctures obscured in microreticulations; base lacking marginal bead. Wings present, fully developed.

Prosternum length = 2.0-2.5 x intercoxal width; sternal lines continuous around coxal cavity; base shallowly concave. Mesosternal lines parallel, not continuous around coxal cavity. Metasternum long, distance between meso- and metacoxae = 1.7 x intermesocoxal width; anterior lines arching medially, continuous around mesocoxal cavity; coarse punctures laterally and at anterolateral margins, decreasing in size medially. Abdomen with coxal lines not meeting medially; continuous around metacoxal cavity;

punctures coarse laterally, medially decreasing in size and density. Male genitalia with flagellum thickened, with acute apex slightly arcuate (Fig. 106).

Distribution. Found on Cuba.

Type Material. For *Oocybanus tarsatus*, Lacordaire (1842: 196-197) stated “De la Colombie, Collection de M. Reiche.” Crotch purchased Reiche’s collection and his specimen is labeled in a manner indicating it as a type (Skelley 1998b). Lacordaire made no indication of how many specimens were studied, so the Crotch specimen could be the single true holotype or part of a type series. As there has been an apparent error in the locality labeling and there is the possibility other type material exists, Crotch’s specimen (Fig. 159-160) is here designated as the **lectotype** of *Oocybanus tarsatus* Lacordaire, label data: “/ [green paper] Colomb / TYPE. [handwritten] tarsatus R. / [blue paper] TYPE / [red paper] LECTOTYPE *Oocybanus tarsatus* Lac., det. P.Skelley-08 ♀” (Fig. 161, CUMZ).

Specimens Examined. A total of 45 specimens were studied. Their label data are presented in the Appendix.

Variation. The distinct, dull, dorsal body surface varied between a few specimens, with some being almost glossy. Some specimens have the coarse punctures on the head distinct, while others are smaller and less distinct. The largest specimen examined, a female, is substantially larger than all other specimens studied, has a slightly more robust body, and the least developed dorsal punctation.

Remarks. Crotch (1876: 433) originally synonymized *I. tarsalis* and *O. tarsatus*, stating “I cannot doubt from the description that Lacordaire has described this species twice over, the only discrepancy being size. The locality ‘Columbia’ assigned to Reiche’s specimen is probably erroneous, as I have seen numerous examples from Cuba.” Crotch then presented the species as *E. tarsatus*. However, all subsequent authors used *I. tarsalis*, probably because that description came on an earlier page in Lacordaire (1842).

Study of type specimens representing both “*tarsatus*” and “*tarsalis*” proved they are distinct and Crotch’s synonymy, based solely on the literature is in error. *Notaepytyus tarsatus* has fully-developed wings, longer metasternum and is from Cuba, while *N. tarsalis* has reduced wings, shorter metasternum and is from Haiti. Thus, citations in the synonymy above for “*tarsalis*”, being mostly catalog listings, all or in part refer to *N. tarsatus*.

While the *N. tarsatus* and *N. tarsalis* are distinct and from separate islands, the size difference mentioned by Crotch is present in Cuban materials of *N. tarsatus*. One female of *N. tarsatus* from Cuba (“Soledad, Cuba, Cienfuegos, XI-14-1927, Matagua, Wilson”; FSCA) is notably larger than any other specimen, has a general loss of coarse punctation, and a more robust body. Of the remaining smaller specimens, males were available from only three populations and showed no notable variation in genitalic structure. Without additional male specimens of both body sizes, these are all tentatively considered conspecific.

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Figure 141-147. Holotypes, lectotypes, neotype, and labels. **141-143)** Holotype *Ocyanus brunnipes* Kuhnt dorsal, ventral and labels. **144)** Lectotype *Galleruca guadeloupensis* Fabricius (= Neotype *Erotylus marginatus* Olivier) [photo from A. Solodovnikov]. **145)** Lectotype *Brachysphaenus suturalis* Lacordaire. **146-147)** Holotype *Notaepytus elateroides* venter of head and thorax, and venter of abdomen.



Figure 148-155. Lectotypes, holotype and labels. 148) Lectotype *Ischyryus flavitarsis* Lacordaire. 149-151) Holotype *Ischyryus fulvitaris* Lacordaire. 149) Dorsal habitus. 150) Final card mounting of *I. fulvitaris* holotype parts. 151) Labels for holotype of *I. fulvitaris*. 152) *Notaeptylus ignotensis* type collection labels. 153-155) Lectotype *Erotylus modestus* Olivier labels, dorsal and lateral habitus.



Figure 156-161. Lectotypes and labels. **156-158)** Lectotype *Ischyryus tarsalis* Lacordaire, dorsal habitus with label, ventral habitus and head and pronotum. **159-161)** Lectotype *Oocyanyus tarsatus* Lacordaire dorsal habitus, ventral habitus and labels.

Appendix. Specimen data.

Prov.	Locality	Elev.	Long-Lat	Date	Collr.	Method/Notes	No-Colln.
NOTAEPYTUS FLAVITARSIS (LACORDAIRE 1842)							
	[no locality data]						
	Americque du Nord.						2-ZHMB, 2-FMNH
	Sued-Amerika					ex Coll. Montrozier	1-RISB 1-NHMB
Bahamas							
	Cat Island			JUL to AUG-1935	W. J. Clench		1-AMNH
	Rainbow Bay			AUG to DEC-1988	D. B. & R. W. Wiley		1-FSCA
	Eleuthera			1-AUG-1988	D. B. & R. W. Wiley		1-FSCA
	Eleuthera			12-February 2005	W. E. Steiner, et al.,	under bark, rotting log, Bursera simaruba,	2-USNM
Cuba							
	[no further locality data]						
	Abuendares [spelling]			JUN-1928	A. Bierig	4-NHMB, 4-RISB, 7-ZHMB, 4-MZPW, 3-HNHM, 4-ANSP	1-FMNH
	Baracoa [multiple provinces]			FEB-1907	D. R. Johnson	in cocconut log	1-NMNH
	Baracoa [multiple provinces]			AUG-1901	Aus. Busck		1-NMNH
	Caimito [multiple provinces]			6-JUL-1928	A. Bierig		2-FMNH
	La Palma [multiple provinces]			30-JUN-1928	A. Bierig		4-FMNH
	R. Bogeros			28-MAY-1928	A. Bierig		2-FMNH
	upper Ovando R., eastern Oriente	1000-2000ft.		17-20-JUN-1936	Darlington	at light	1-AMNH
	Monte Imias, nr. California			7-JUN-1959	M. W. Sanderson	at light	1-WIBF
	Monte Imias, nr. California			7-JUN-1959	W. M. Sanderson	at light	1-INHS
	Baragua			20-JUL-1929	L. S. Scaramuzza	at light, T.P.R.F. Ent. No. 2427	1-AMNH
	Baragua			16-APR-1929	L. C. Scaramuzza	at light, T.P.R.F. Ent. No. 2474	1-NMNH
	Cienfuegos			26-NOV-1927	Wilson		1-FSCA
	Cienfuegos			APR-1936	Darlington		1-MCZC
	Cienfuegos			MAY to JUN-1939	Parsons		1-MCZC
	Cienfuegos			3-NOV-1927			1-FSCA
	Cienfuegos			13-JUN-1933			1-MNHC
	Cayamas			24-5	E. A. Schwarz		1-NMNH
	Cayamas			11-3	E. A. Schwarz		1-NMNH
	Cayamas			9-3	E. A. Schwarz		2-NMNH
	Cayamas			17-APR-1905	G. Dimmock	No. 2215b, see Dimmock notes	2-NMNH
	Cayamas			1-6	E. A. Schwarz		1-NMNH
	Cayamas			10-6	E. A. Schwarz		2-NMNH
	Cayamas			8-3	E. A. Schwarz		1-NMNH
	Cayamas			12-3	E. A. Schwarz		1-NMNH
	Cayamas			4-3	E. A. Schwarz		2-NMNH
	Cayamas			6-3	E. A. Schwarz		2-NMNH
	Cayamas			3-6	E. A. Schwarz		1-NMNH
	Mina Carlota, Trinidad Mts.			25-MAR-1925	Geo. Salt		2-MCZC
	Mina Carlota, Trinidad Mts.			25-MAR-1925	Geo. Salt		1-AMNH
	Pico San Juan Escambray			MAY-1987	J. A. Genaro		1-MNHC, 1-PESC
	Penalver-Cotorro (Laguna)			17-MAY-1990	G. Haghebaert		2-RISB
	San Carlos Est., Guantánamo			4-8-OCT-1913		#3424B	1-AMNH
	Botanico Nacional			FEB-1987	J. A. Genaro		1-MNHC
	Camao			25-MAY-1933			1-PESC
	Cueva de Cotilla			16-JUN-1957			1-FSCA
	Cotorro			27-OCT-1926			5-ANSP
	Havana, vicinity of			22-MAY-1950	Mel. T. Cook		4-AMNH
	Artemisia			3-NOV-1977	E. & Z. Meszaros		2-HNHM
	Havana						2-FMNH, 7-MGFT, 1-NMNH

Appendix. Specimen data.

Prov.	Locality	Elev.	Long:Lat	Date	Collr.	Method/Notes	No-Colln.
NOTAEPYTUS FLAVITARSIS (LACORDAIRE 1842) (Cont.)							
Cuba (Cont.)	Rio Hoguquito			Oct-1992	L. Roque		2-CMNC
La Habana	Stgo.-Vega			12-APR-1905	G.Dimmock		1-NMNH
[La Habana]	Stgo.-Vega			26-MAR-1905	G.Dimmock		1-NMNH
Holguin	Holguin			1904		Sharp Coll.	9-NHML
Pinar del Rio	Candelaria			JUN-1958			1-AMNH
Pinar del Rio	S. Anafé			20-JUN-1932		[Ramos collection]	2-EPRL
[Pinar del Rio]	S. Vicente			JUN-1948			1-NMNH
Pinar del Rio	San Vicente			15-AUG-1959	R.E.Woodruff		2-FSCA
Pinar del Rio	San Vicente			19-JUN-1957	D.R.Paulson		1-FSCA
[Pinar del Rio]	San Vicente			17-JUN-1948	H.F.Strohecker		3-UCDC
[Pinar del Rio]	St. Vicente			JUN-1948			4-FSCA
[Santiago de Cuba]	Pico Turquino, coast below			26-30-JUN-1936	Darlington		1-AMNH
Dominican Republic							
Barahona	4.5 km.S.Barahona			22-MAY-1992	R.H.Turnbow		2-RHTC
Barahona	4.5 km.S.Barahona			22-MAY-1992	M.C.Thoomas		2-PESC
Barahona	11 km.S.Barahona			6-17-MAY-1985	E.Giesbert		1-FSCA
Barahona	Boca Chica	240m		4-JUL-1922	M.A.&R.O.Ivie	Polo Magnetico	1-WIBF
[Distrito Nacional]	Boca Chica	10m		18-APR-1977	J.&S.Klapperich		1-NHMB
Distrito Nacional	24 km.E.S.Domingo			30-MAY-1978	C.O'Brien et al.		1-FAMU
Distrito Nacional	Hama			21-JAN-1983	Dguez	#29706	1-MNH
Duarte	Mt. Quito-Espuela	2-3000ft.		JUL-1988	Darlington		1-AMNH
Hato Mayor	3kmS. Sabana de la Mar	21m	19°01.800'N, 69°29.092'W		4-AUG-1999	M.A.Ivie	dead logs and fungus
12-WIBF							
Hato Mayor	3kmS. Sabana de la Mar	21m	19°01.800'N, 69°29.092'W		3-AUG-1999	M.A.Ivie&K.A.Guerrero, at night	4-WIBF
Hato Mayor	3kmS. Sabana de la Mar	21m	19°01.800'N, 69°29.092'W			M.A.Ivie&K.A.Guerrero, under bark	1-WIBF
Independencia	4km.S.Los Pinos, Loma de Vientos	475m	18°35'N-71°46'W	12-OCT-1999	R.Davidson et al.	semi-arid deciduous forest with pastures, 1-CMNH	beating vegetation
La Altagracia	Boca del Yuma entr., Parc nac. del Este	12m	18°21.904'N, 68°37.094'W		6-AUG-1999	M. A. Ivie	
12-WIBF							
La Altagracia	Boca del Yuma entr., Parc nac. del Este	12m	18°21.904'N, 68°37.084'W		5-AUG-1999	M. A. Ivie	beating at night
5-WIBF							
La Altagracia	Boca del Yuma, P.N. del Este	20m	18°21.875'N, 68°37.081'W		16-17-DEC-2003	D. Perez, R. Bastardo, RD-199	1-NMNH
La Altagracia	Parque del Este, Caseta Guaraguao, 4.4 km. S. Bayahibe, 3m, 18-19-59N, 64-48-42W, 26-27-MAY-2004, C.Young et al., semihumid forest near sea, limestone, UV light,						
1-CMNH							
La Vega	3 km.W. Manabao			18-JUL-1996	R.H.Turnbow		2-RHTC
La Vega	Constanza	3-4000ft.		AUG-1938	Darlington		1-AMNH
Pedernales	PN.Jaragua, 3 km.S.Los Tres Charcos	99m		16-JUN-2005	Nearns&Lingafelter	UV light, SpecID: 7010	1-FSCA
Pedernales	1 km. N. of Banano, Rio Multitos	290m		17-JUN-2005	Nearns&Lingafelter	UV light, SpecID: 7145, 7146	2-FSCA
Pedernales	19-20 km.N.Cabo Rojo	375m		10-JUL-1996	M.C.Thomas		1-PESC
Pedernales	24 km.N.Cabo Rojo	610m		19-AUG-1988	M.A.Ivie et al.	wet forest	1-WIBF
Pedernales	25.5 km.N.Cabo Rojo			12-21-MAY-1992	M.C.Thomas		2-PESC
San Cristobal	Hato Damas			21-OCT-1986	R.E.Woodruff, J.H.Frank, night hand catch		2-FSCA
San Pedro de Macoris	7 km. W. S.P. Macoris			31-JUL-1979	C.W.O'Brien		1-WIBF
Haiti							
	[no further locality daa]						
	Camp Perrit [Camp Perrin ?]			8-28-OCT-1927	Darlington		1-CUIC
	Le Moutit Vendit	1000ft.					1-AMNH
	Plaine de l'Artibonite						1-RUSB
	Port au Prince			6-SEP-1934	Darlington		1-AMNH
[L'Ouest]	Pt. au Prince			1-10-MAY-1908	M.Cmeron	Cameron Journal WI 508	6-NHML
[L'Ouest]	P. au Prince				R.J.Crew		3-NMNH
[Artibonite]	St. Marc						1-MGFT, 1-NMNH
Tortue Isl.,	Bisse Terre			APR-1929	W.M.Mann		1-AMNH
					E.C.&G.M.Leonard	#20	1-NMNH

Appendix. Specimen data.

Prov.	Locality	Elev.	Long-Lat	Date	Collr.	Method/Notes	No-Colln.
NOTAEPYTUS MODESTUS (OLIVIER 1807)							
Dominican Republic							
Azuza	East side of crest, Sierra Martin Garcia, 7 km WNW Barrero, 860m, 18-21N, 70-58W, 25-26-JUL-1992, C. Young et al., Cloud forest adjacent to disturbed forest			25-JUN to 7-JUL-1992	R.E.Woodruff et al.		1-CMNH
Barahona	nr. Filipinas, Larimar Mine			5-6-MAY-1985	E. Giesbert		2-PESC
Barahona	vic. Filipinas	1700 ft.		JUL-1938	Darlington		1-FSCA
Duarte	Mt. Quita - Espuela	2-3000 ft.		JUL-1938	Darlington		3-AMNH
Hato Mayor	3km S. Sabana de la Mar,	21 m	19°01.800'N, 69°29.092'W		3-AUG-1999	M. A. Ivie & K.A. Guerrero, at night	4-MCZC
Hato Mayor	3km S. Sabana de la Mar,	21 m	19°01.800'N, 69°29.092'W		4-AUG-1999	M. A. Ivie	17-WIBF dead logs and fungus
Independencia	Rio Guayabal, 4.5 km al N. de Postrer Rio			25-MAR-1999	E. Perez		1-WIBF
La Altagracia	Boca del Yuma entr., Par. Nac. del Este,		18°21.904'N, 68°37.094'W		6-AUG-1999	M. A. Ivie	beating vegetation
La Altagracia	P.N. del Este, Boca del Yuma entr.,		18°21.904'N, 68°37.087'W		5-VIII-1999	M. A. Ivie	at night
La Altagracia	Nisibon, Finca Papagayo		18°21.904'N, 68°37.087'W	6-APR-2000	R.E.Woodruff, T.J. Henry, bracket fungus at night		4-WIBF
La Altagracia	Punta Cana. Reserve,		18°30'40"N, 68°22'38"W		11-14-NOV-2005	L. Masner,	6-REWC forest, yellow P.T.
La Vega	Constanza	3-4000 ft.		AUG-1938	Darlington		1-AMNH
La Vega	Constanza	3-4000 ft.		AUG-1938	Darlington		2-MCZC
La Vega	10 km. NE. Jarabacoa		8-12-MAY-1985		J.E. Wappes		1-JEWC
La Vega	3 km. W. Manabao		18-JUL-1996		R.H. Turnbow		1-RHTC
Monseñor Noel	Rio Blanco Hydroelectric Dam	613m		13-V-2001	R. E. Woodruff, C. Nunez, blacklight trap		1-REWC
Pedernales	Par. Nac. Sierra de Baoruco, 24 km N. Cabo Rojo	610m,			22-JUL-1999	M. A. Ivie,	under bark of dead tree
Pedernales	1-WIBF						
Pedernales	24 km. N. Cabo Rojo	610 m		21-JUL-1988	M. Ivie et al.	wet forest at light and beating	5-WIBF
Pedernales	25 km. N. Cabo Rojo	679 m		19-JUN-2005	Nearns & Lingafelter	UV light, SpecID: 6922, 6933	2-FSCA
Pedernales	23.5 km N. Cabo Rojo,	540m	18-06N, 71-38W	26-27-SEP-1991	J. Rawlins et al.	wet deciduous forest	4-CMNH
Pedernales	N. of Pedernales, border rd. Rio Banana, S. of Arroyos		18°09.291'N, 71°45"540'W		21-JUL-1999	Ivie & Guerrero	
Pedernales	N. of Pedernales, La Aguita	188m	18°09.172'N 71°44.786'W	21-JUL-1000	Ivie, Guerrero, & Dominici		1-WIBF
[La Romana]	Higueral			10-APR-1913	J.R. Johnston	P.R.S.G.A., Ac.No. 842-1913	7-NMNH
Sanchez	Naranjo, Los Haitises			19-JAN-1980	Marcano	#13746	1-MNHID
Sanchez				7-12-MAY-1915		F3767	1-AMNH
San Cristobal	2km. SE. Borgon (El Pomier), 7km. N. San Cristobal			18-AUG-1988	Ivie et al.	ex fungus [with larvae]	1-WIBF
[San Cristobal]	S. Frasco, St. Domingo			SEP-1905	Aub. Busck		1-NMNH
San Pedro de Macoris	12 km. W. San Pedro de Macoris			5-19-MAY-1985	E. Giesbert		1-FSCA
Haiti							
	NE. Foothills La Hotte	2-4000 ft.		10-24-OCT-1934	Darlington		1-MCZC
	Parish			1899			3-NHML
L'Ouest	Port au Prince			1-10-MAY-1908	M. Cameron	Sharp Coll.	1-NHML
L'Ouest	Pt. au Prince				R.J. Crew	M. Cameron Journal WI-503 Wickham Coll.	1-NMNH

Appendix. Specimen data.

Prov.	Locality	Elev.	Long-Lat	Date	Collr.	Method/Notes	No-Colln.
NOTAEPYTUSFULVITARSIS (LACORDAIRE 1842)							
"St. Domingo"							
Dominican Republic							
Barahona	Filipinas, Larimar Mine			20-26-VI-1992			1-NHML
Barahona	Polo	900m,		23-VII-1987	R.E. Woodruff & P.E. Skelley, at night		4-PESC
Dajabon	La Ceiba Arriba, 4 km. S. Loma de Cabrera	200m		26-SEP-1987	E. S. & Marti Ross		1-CASC
Duarte	Cabrera	2-3000 ft.		1-AUG-1978	L.F. Armas	, under bark	1-WIBF
El Seibo	Mt. Quita - Espuela	5000ft.		JUL-1938	R.O. Schuster		7-UCDC, PESC
Hato Mayor	6 km. N. Castillo			8-AUG-1978	Darlington		1-UCDC
3-WIBF	7 mi. N. Pedro Sanchez	21m	19°01.800'N, 69°29.092'W	20-JUN-1998	Loma de Chivo, R. E. Woodruff, under bark		3-REWC
Hato Mayor	3 km S. Sabana de la Mar,				M. A. Ivie		dead logs and fungus
Hato Mayor	3 km S. Sabana de la Mar,	70'	19°01.8'N, 69°29.1'W	27-SEP-1989	M. A. Ivie & K. A. Guerro, under bark		5-WIBF
Hato Mayor	Los Haitises Nat'l. Park			16-APR to 1-JUL-1992, Ivie et al.	A. Mudge	under dead wood	2-WIBF
Hato Mayor	Par. Nac. Los Haitises			16-APR to 1-JUL-1992, Ivie et al.		bosque humido FIT #1	2-WIBF
Hato Mayor	Par. Nac. Los Haitises			16-JUL-1993	D. Sikes et al.	bosque humido FIT #2	4-WIBF
Hato Mayor	Par. Nac. Los Haitises			2-6-JUL-1992	D. Sikes & R. Rosenfield, flight intercept trap	in rotten log	1-WIBF
Hato Mayor	Par. Nac. Los Haitises		19°05'N-26°29'W	16-JUL-1993	D. Sikes	litter in buttress	1-WIBF
Hato Mayor	Parque Los Haitises, 3 km. W. Cueva de Arena,	20 m	19°04'N-69°29'W	19-JUL-1992	R. Davidson et al.,		mesic lowland forest
2-CMNH							
Hato Mayor	W. Sabana de la Mar, Par. Nac. Los Haitises			2-JUL-1992	M. A. & R. O. Ivie	bosque humido	1-WIBF
Hato Mayor	W. Sabana de la Mar, Par. Nac. Los Haitises			1-JUL-1992	M. A. & R. O. Ivie	bosque humido	9-WIBF
La Vega	6 mi. NW of Rt. 1 on road to Constanza			27-JUN-1998	R. E. Woodruff, R. M. Baranowski		1-REWC
La Vega	20 km. SW. Piedra Blanca			29-MAY-1978	C. W. O'Brien et al.		1-FSCA
La Vega	4.7 km. S. Jarabacoa			24-25-MAY-1992	R. Turnbull		3-RHTC
La Vega	4.7 km. SE. Jarabacoa			16-JUL-1996	M. C. Thomas		1-PESC
La Vega	5 km. SE. Jarabacoa			3-JUN-1994	R. Turnbull		2-RHTC
La Vega	La Cienega.			19°04.07'N-70°51.68'W, 29-JUL-1999	Ivie & Guerro	at night	2-WIBF
La Vega	La Cienega. Parque Nac. HQ	1100m		19°04.07'N-70°51.68'W, 29-JUL-1999	Ivie & Guerro	in rotten log	2-WIBF
La Vega	La Cienega. Parque Nac. HQ	1100m		4-APR-1992	Ivie et al.		1-WIBF
La Vega	P.N. Bermudez, 1 km. W. Cienega	1050m		2-AUG-1995	S. & J. Peck	forest litter, 95-53	2-CMNC
La Vega	Parc. Nac. Armando Bermudez, La Cienega - Los Tablones, 1100-1245m			9-APR-1992	Ivie et al.		1-WIBF
La Vega	Cordillera Central, Loma Casabito, 15.8 km NW. Bona, 1455m, 19-02-12N, 70-31-08W, 28-MAY-2003					J. Rawlins et al., evergreen cloud forest, east slope,	2-CMNC
1-CMNH							1-WIBF
La Vega	Cordillera Central, Loma Casabito, 15.8 km NW. Bona, 1455m, 19-02-21N, 70-31-05W, 28-MAY-2003					J. Rawlins et al., evergreen cloud forest, at summit	1-UCDC
1-CMNH							1-REWC
La Vega	10 km. S. Jarabacoa			5-AUG-1978	R. O. Schuster		2-AMNH
Monsenor Noel	9.2 km W. Rt. 1 to Constanza, nr. waterfall			27-JUN-1998	R. E. Woodruff,	night	1-UCDC
[Puerto Plata]	Mt. Diego de Ocampo	3-4000 ft.		JUL-1983	Darlington		1-REWC
[Puerto Plata]	Mt. Diego de Ocampo	3-4000 ft.		JUL-1938	Darlington		2-AMNH
Puerto Plata	Puerto Plata			20-JUL-1931	W. I. Clench		1-AMNH
Samana	Las Terreras			21-JUL-1978	R. O. Schuster		7-UCDC
Samana	Samana			19-AUG-1937	R. O. Schuster		1-UCDC
[Samana]	Sanchez			JUL-1938	Darlington		1-AMNH
[Samana]	Sanchez			JUL-1938	Darlington		2-AMNH
[Samana]	Sanchez			JUL-1938	Darlington		1-AMNH
San Cristobal	Villa Altigracia			13-28-JUL-1995	S. & J. Peck	trop. decid. for. FIT, 95-23	1-CMNC
San Cristobal	Bordon Cuevas Pomier	200m		15-SEP-1905	Aug. Busck		7-AMNH
[San Cristobal]	S. Frisco Mts., St. Domingo			SEP-1905	Aug. Busck		9-AMNH
[San Cristobal]	S. Frisco Mts., St. Domingo			JUN-1938	Darlington		4-CMNC
[Santiago]	San Jose de las Matas	1-2000 ft.		JUN-1938	Darlington		1-AMNH
[Santiago]	San Jose de las Matas	1000-2000 ft.					1-CUMZ
Haiti						[holotype female]	
"Haity"							