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NEW SPECIES OF *HEMIPHILEURUS* KOLBE
(COLEOPTERA: SCARABAEIDAE:
DYNASTINAE) FROM MEXICO,
GUATEMALA, COLOMBIA, AND BRAZIL

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NEW SPECIES OF *HEMIPHILEURUS* KOLBE
(COLEOPTERA: SCARABAEIDAE: DYNASTINAE)
FROM MEXICO, GUATEMALA, COLOMBIA, AND BRAZIL

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Abstract

The following **new species** of *Hemiphileurus* are described: *H. bispinosus* Ratcliffe from Brazil, *H. deslislesi* Ratcliffe from Colombia, *H. quadridentatus* Ratcliffe from Guatemala, and *H. warneri* Ratcliffe from Mexico. The parameres of *H. rugulosus* Endrödi (Venezuela and Colombia) are illustrated to enable easier identification of this species, and *H. kahni* Dupuis and Dechambre is redescribed and recorded from Brazil for the first time. Diagnostic illustrations of the male parameres are provided for the above taxa. A checklist for all the species in the genus is given.

Resúmen

Se describen las siguientes nuevas especies de *Hemiphileurus*: *H. bispinosus* Ratcliffe de Brasil, *H. deslislesi* Ratcliffe de Colombia, *H. quadridentatus* Ratcliffe de Guatemala, y *H. warneri* Ratcliffe de México. Se ilustraron los parámetros de *H. rugulosus* Endrödi (Venezuela y Colombia) para facilitar la identificación de esta especie. *Hemiphileurus kahni* Dupuis y Dechambre (Perú) es redescrita y registrada por primera vez en Brasil. Se proveen ilustraciones diagnósticas de los parámetros del macho para los taxa antes mencionados. Se incluye un listado de todas las especies del género.

*Where the telescope ends, the
microscope begins. Which of the two
has the grander view?*
—Victor Hugo

The genus *Hemiphileurus* contains the most species of any New World genus of Phileurini. Eighteen species are now found exclusively in South America, nine species occur in Mesoamerica (plus four additional in preparation by me), three species are found in both Central and South America, and 10 species inhabit the West Indies; one species is found in the Nearctic Region. Endrödi (1978, 1985) provided a synopsis of the genus, but additional species have been described since that time (Chalumeau 1988; Ratcliffe 1988; Ratcliffe and Ivie 1998; Dupuis and Dechambre 2000).

As a result of recent collecting by several colleagues, four new species are described below as well as comments to aid identification for two other species. Species of *Hemiphileurus* seem to be collected only intermittently at lights or from logs, and so additional new species will continue to be found. Well over half of the species in the genus have been described as new during the past decade.

Hemiphileurus kahni Dupuis and Dechambre
(Figs. 1–3)

Hemiphileurus kahni Dupuis and Dechambre 2000:26.

This species was described from a single male specimen from Genaro Herrera, Loreto, Peru. The specimens listed below represent a NEW COUNTRY RECORD:

BRAZIL: Amazonas; Rio Taruma Mirim—Igapo; J. Adis, 2.IX.1976 (2 specimens) and 10.XI.1976 (1 specimen). Specimens are deposited at the Instituto Nacional de Pesquisas da Amazonia (Manaus, Brazil) and in the B. C. Ratcliffe collection.

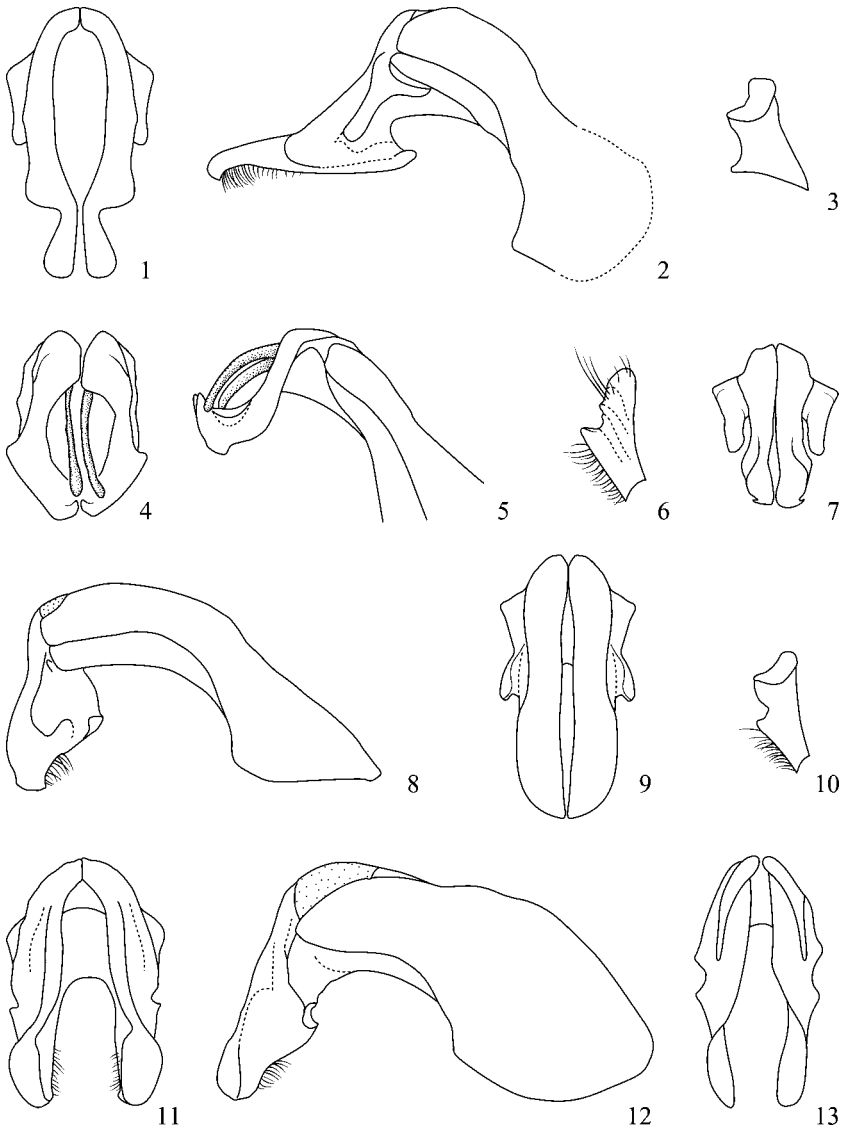
The Peruvian specimen was collected to the SSW of Iquitos where the El Capite river empties into the Ucayali which, in turn, almost immediately empties into the Amazon. The Brazilian specimens were taken near Manaus just above where the Rio Negro joins the Amazon. These two localities are approximately 1,540 km apart and are both characterized by lowland rainforest. The Brazil specimens represent a substantial range extension.

Inasmuch as the description by Dupuis and Dechambre did not include a female, is based on only one specimen, and is overly brief, I provide below a detailed re-description.

Male. Length 22.4 mm; width 10.7 mm. Color black. *Head:* Surface completely, transversely rugose. Frons with large, laterally compressed tubercle mesad of anterior border of each eye; surface between tubercles foveate, moderately rugose. Clypeus triangular, apex acute and strongly reflexed, a distinct carina extending from apex to base of each tubercle. Interocular width equals 4.5 transverse eye diameters. Antenna with 10 segments, club slightly longer than segments 2–7. Mandibles arcuate on lateral edge, apices acute. *Pronotum:* Surface finely shagreened, moderately punctate; punctures moderately large, each with a minute seta, punctures becoming slightly denser on sides. Median, longitudinal furrow shallow (nearly obsolete), becoming wider apically, not reaching base or apex. Base with complete marginal bead. *Elytra:* Surface with 5 distinct, punctate striae between suture and humeral umbone; punctures large, ocellate, separated from one another in each row by 1–2 puncture diameters. Intervals convex, with sparse micropunctures. *Pygidium:* Surface completely, densely punctate; punctures large, deep, setigerous; setae tawny in color, short, a few longer at center apex. In lateral view, surface strongly convex. *Legs:* Foretibia tridentate, teeth subequally separated. Median transverse carina on meso- and metatibiae ending in a long, acute spine on upper surface. Apex of posterior tibia with strong, acute spine on upper angle and with 8 short, broad spinules below spine. Apex of first tarsomere on posterior tarsus with strong, acute spine dorsally. *Venter:* Prosternal process broad, moderate in length, apex flattened into a concave, suboval plate (Fig. 3). Last sternite with small, dense punctures in lateral angles, elsewhere with small, sparse punctures. *Parameres:* Figures 1–2.

Female. Length 23.0–23.4 mm; width 11.2–11.3 mm. As male except in the following respects: *Pronotum:* Punctures slightly larger. *Elytra:* Intervals slightly wider. *Pygidium:* Setae shorter. *Venter:* Last sternite completely, moderately densely punctate, punctures moderate in size.

Remarks. *Hemiphileurus kahni* will key only to couplet 41 in Endrödi (1985) where the following two choices are for Mesoamerican species [*H. laevicauda* (Bates) and *H. punctatostratus* (Bates)] that each have totally different parameres than *H. kahni*. The parameres (Figs. 1–2) of *H. kahni* are unique among species of *Hemiphileurus* and are diagnostic for the species. The distinct microsetae in the pronotal punctures are also unusual for a species of *Hemiphileurus*, but this may simply reflect a pristine specimen where the



Figs. 1–2. Parameres of *H. kahni* Dupuis and Dechambre.

Fig. 3. Prosternal process of *H. kahni* Dupuis and Dechambre.

Figs. 4–5. Parameres of holotype of *H. bispinosus* Ratcliffe, n. sp.

Fig. 6. Prosternal process, lateral oblique view, of *H. deslislesi* Ratcliffe, n. sp.

Figs. 7–8. Parameres of holotype of *H. deslislesi* Ratcliffe, n. sp.

Fig. 9. Parameres of *H. variolosus* (Burmeister).

Fig. 10. Prosternal process, lateral oblique view, of *H. variolosus* (Burmeister).

Figs. 11–13. Parameres of *H. rugulosus* Endrödi. **11–12** new drawing; **13** Endrödi drawing.

tiny setae have not been worn away; these setae are less noticeable in the two other specimens.

The biology of this species is unknown. The specimens reported here were collected in arboreal photoelectors mounted on tree trunks in an area of black-water inundation forest (igapo) near where the Tarumã Mirim river empties into the Rio Negro about 20 km upstream from Manaus (Adis 1981). The photoelector traps were modified to capture insects walking downward on the trunk of the trap tree.

Hemiphileurus bispinosus Ratcliffe, **new species**

(Figs. 4–5)

Type Material. Holotype labeled “BRAZIL: Minas Gerais, Belo Horizonte, UFMG, Estação Ecologica, IV-IV-1998, D. Yanega, ex blacklight.” Holotype deposited at the Museu de Zoologia of the Universidade de São Paulo, São Paulo, Brazil.

Holotype. Male. Length 16.0 mm; width 7.1 mm. Color black. *Head:* Frons in center with deep fovea, surface smooth; frons on sides with moderately-sized horns, horns erect and curving slightly posteriorly. Clypeus triangular, surface nearly smooth, with a few scattered, small, transverse punctures; apex acute and strongly reflexed, a weak carina extending from apex to base of each horn. Interocular width equals 4.0 transverse eye diameters. Antenna 10-segmented, club slightly longer than segments 2–7. Mandibles arcuate on lateral edge, apices acute. *Pronotum:* Surface weakly, finely shagreened, punctate; punctures in longitudinal furrow sparse, large, ocellate, punctures just either side of furrow sparse, small; punctures on disc moderate in density, large, ocellate, punctures becoming dense in anterior angles. Median longitudinal furrow deep, extending from base to anterior fifth of pronotum, furrow widest at middle. Base with complete marginal bead. *Elytra:* Surface with 5 punctate striae between suture and humeral umbone; punctures moderate to mostly large, umbilicate, separated from one another in each row by about 1 puncture diameter. Odd intervals slightly convex, becoming transversely wrinkled on sides of disc; even intervals with rows of punctures similar to those of striae. *Pygidium:* Surface moderately densely punctate; punctures moderate to moderately large, most setigerous either side of middle; setae short, tawny in color. In lateral view, surface regularly convex. *Legs:* Foretibia tridentate, teeth subequally separated. Median transverse carina on meso- and metatibiae crenulate. Apex of posterior tibia with strong, acute spine on upper angle and with several small serrations and a short, broad spinule between each serration (7 spinules on each side). Apex of first tarsomere of posterior tarsus extended into acute spine dorsally. *Venter:* Prosternal process short, subtriangular, flattened from front to back, and with small swelling on posterior face near base. Last sternite transversely rugopunctate to punctate in anterior half, apical half nearly smooth. *Parameres:* Figures 4–5.

Etymology. From the Latin *bi*, meaning two, and *spina*, meaning spine or thorn; this combination of words in reference to the two distinctive, curved spines between the parameres of the male genitalia (Figs. 4–5), hence the two-spined *Hemiphileurus*.

Remarks. *Hemiphileurus bispinosus* will key to couplet 31 in Endrödi (1985) where neither of the subsequent two choices fit the character states. The parameres of *H. bispinosus* (Figs. 4–5) are remarkable because of the two, long, slender spine-like processes arising from between the parameres. Among all the other species of *Hemiphileurus*, only *H. elongatus* Dupuis and Dechambre from Bolivia has parameres with internal processes, but these are very different from those of *H. bispinosus*. In addition, the form of the prosternal process is unusually short and “undeveloped” in this new species relative to most other species in the genus.

The biology of this species is unknown. The single specimen was taken at blacklights.

Hemiphileurus deslislesi Ratcliffe, **new species**
(Figs. 6–8)

Type Material. Holotype labeled “COLOMBIA, Calima Valley, 45 km. west of Buga. 29-III-1990.” Holotype deposited at the Canadian Museum of Nature, Ottawa, Canada.

Holotype. Male. Length 24.0 mm; width 11.4 mm. Color black. *Head:* Entire surface smooth. Frons with 2 large, arcuate horns, horns erect and curving posteriorly. Clypeus triangular, apex acute and strongly reflexed, a distinct carina extending from apex to base of each horn. Interocular width equals 5.0 transverse eye diameters. Antenna with 10 segments, club slightly longer than segments 2–7. Mandibles arcuate on lateral edges, apices acute. *Pronotum:* Surface finely shagreened, with punctures mostly large in size; punctures moderately dense in median furrow and on disc anteriorly either side of furrow, moderate in density elsewhere. Median, longitudinal furrow shallow, extending from in front of base to just behind apex, becoming gradually wider anteriorly. Apical tubercles absent. Base with complete marginal bead. *Elytra:* Surface with 5 distinct rows of punctate striae between suture and humeral umbone; punctures large, umbilicate, separated from one another in each row by about 1 puncture diameter. Intervals slightly convex, finely shagreened. *Pygidium:* Surface densely punctate (more so than on elytral apices); punctures moderate to moderately large, less dense at apex, setigerous; setae minute, tawny in color. In lateral view, surface evenly convex. *Legs:* Foretibia tridentate, teeth subequally separated. Median transverse carina on meso- and metatibiae culminating with strong spine on upper surface. Apex of posterior tibia with strong, acute spine on upper angle and with several small serrations and a short, broad spinule between each serration (4 spinules on right side, 5 on left side). Apex of first tarsomere of posterior tarsus extended into long, acute spine dorsally. *Venter:* Prosternal process moderate in length with weakly expanded and suboval apex; shaft at middle on posterior face with obliquely transverse swelling and at base with strong, tooth-like swelling (Fig. 6). Last sternite densely punctate along anterior margin, moderately to sparsely punctate elsewhere. *Parameres:* Figures 7–8.

Etymology. At the request of Martin Hardy, who generously provided me with the specimen, I take pleasure in naming this species after its collector, Gilles Deslisles, who has been a dedicated amateur lepidopterist in Quebec, Canada, for more than 30 years.

Remarks. *Hemiphileurus deslislesi* will key only to couplet 36 in Endrödi (1985) where the following two choices are either *H. cylindroides* (Bates) or *H. simplex* Prell, both from Central America. The parameres of the males in each of these species are formed very differently from those of *H. deslislesi*. The parameres (Figs. 7–8) of *H. deslislesi* are similar to those of *H. variolosus* Burmeister (Fig. 9) as are the transverse carinae of the meso- and metatibiae. However, the prosternal process is tall, columnar, and with the apex broadly and triangularly flattened in *H. variolosus* (Fig. 10) whereas in *H. deslislesi* it is shorter, the shaft has transverse swellings, and the apex is not triangularly flattened (Fig. 6). In addition, the elytra in *H. variolosus* are strongly and densely punctate and lack the relatively smooth intervals of *H. deslislesi*.

Nothing is known of the biology of this species. Like other species of *Hemiphileurus*, the larvae probably live in rotting wood, and the adults may not be strongly attracted to lights (personal observation).

Hemiphileurus rugulosus Endrödi
(Figs. 11–13)

Hemiphileurus rugulosus Endrödi 1978:91.

Endrödi described this species based on 43 specimens, most of which were from Venezuela; two specimens were from Colombia. Endrödi's (1985) key to the species of *Hemiphileurus* generally works for identifying this species, but when one attempts to confirm the identification by comparing the parameres of the specimen with the illustration in the book, considerable doubt sets in because the two don't appear to be the same. The reason for this is the oversimplified illustration which, unfortunately, is typical for so many of the drawings by Endrödi. When compared with specimens identified by Endrödi, the illustration is simply not accurate.

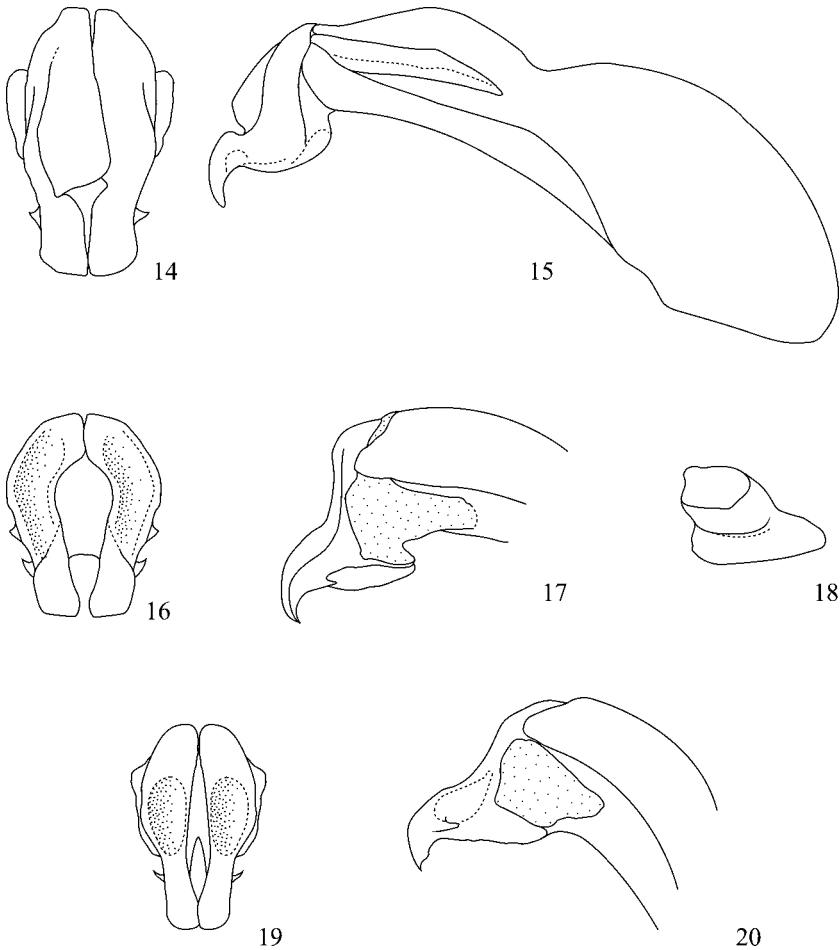
To help alleviate this confusion, I am providing new illustrations (Figs. 11–12) of the male genitalia of *H. rugulosus* specimens collected at Rancho Grande (near Maracay), Venezuela as well as Endrödi's original drawing (Fig. 13).

Hemiphileurus quadridentatus Ratcliffe, **new species**
(Figs. 14–15)

Type Material. Holotype labeled "GUATEMALA: Izabal, SE Morales nr. Negro Norte, IV-1997, ~1,000 m, 15°22'67"N 88°41'68"W, col. José Monzon." Allotype with same data. Six male and three female paratypes with same data. Holotype and allotype deposited at the University of Nebraska State Museum (Lincoln, NE). Paratypes deposited in the collections of the University of Nebraska State Museum, U.S. National Museum (Washington, D.C. but currently at the University of Nebraska for off-site enhancement), Universidad del Valle (Guatemala City, Guatemala), and the B.C. Ratcliffe collection.

Holotype. Male. Length 21.1 mm; width 9.7. Color black. *Head:* Surface of frons and base of clypeus coarsely rugose, apex of clypeus with sparse, moderately-sized punctures. Frons near its apex with 2 low, rounded tubercles; center of frons with large, moderately deep, oval fovea. Clypeus triangular, apex acute and strongly reflexed, carinae from apex to each tubercle absent. Interocular width equals 3.1 transverse eye diameters. Antenna with 10 segments, club subequal in length to segments 2–7. Mandibles arcuate on external edge, apices acute. *Pronotum:* Surface with disc either side of middle moderately punctate, punctures mostly large and weakly ocellate; punctures along anterior margin a little smaller, becoming rugopunctate, punctures on lateral margins moderate in size. Median, longitudinal furrow deep, with large and dense punctures, furrow extending from near base to near apex. A faint (nearly obsolete) tubercle present just behind apex either side of median furrow. All margins completely beaded. *Elytra:* Surface with 6 distinct, punctate striae between suture and humeral umbone; punctures moderate to large, oval to elongate, strongly ocellate, separated from one another in each row by about 1 puncture length. Intervals convex, impunctate. *Pygidium:* Surface moderately densely punctate; punctures moderate to mostly large, ocellate, setigerous; setae moderate to mostly long, reddish brown. In lateral view, surface regularly convex. *Legs:* Foretibia quadridentate, teeth subequally spaced from one another. Median transverse carina on meso- and metatibiae terminating with strong, acute spine. Apex of posterior tibia with strong, acute spine on upper angle and with 5 short spinules below spine. Apex of first tarsomere on posterior tarsus with strong, acute spine dorsally. *Venter:* Prosternal process broadly rounded, short, apex truncate and weakly concave. Last sternite rugopunctate in narrow band along base, elsewhere virtually impunctate. *Parameres:* Figures 14–15.

Allotype. Female. Length 21.9 mm; width 9.4 mm. As holotype except in the following respects: *Head:* Clypeus with a small, weak carina extending from apex to base of



Figs. 14–15. Parameres of *H. quadridentatus* Ratcliffe, n. sp.

Figs. 16–17. Parameres of *H. warneri* Ratcliffe, n. sp.

Fig. 18. Prosternal process, lateral oblique view, of *H. warneri* Ratcliffe, n. sp.

Figs. 19–20. Parameres of *H. illatus* (LeConte).

each frontal tubercle. *Elytra*: Punctures of striae mostly round to oval, only a few elongate. *Venter*: Last sternite with basal 1/3 rugopunctate, with sparse micropunctures elsewhere.

Variation. Males (5). Length 19.5–21.8 mm; width 8.6–9.3 mm. The male paratypes do not differ appreciably from the holotype. One specimen has fewer punctures on the pronotum and less setae on the pygidium.

Females (3). Length 18.5–23.3 mm; width 8.5–10.3 mm. The female paratypes do not differ from the allotype except for the presence of faint clypeal carinae, and the pygidium is weakly convex with smaller punctures in one specimen.

Etymology. This species is descriptively named for the four teeth present on the foretibia.

Remarks. *Hemiphileurus quadridentatus* will key only to couplets 45/46, the last in Endrödi's (1985) key. Here one finds the only other continental species with quadridentate foretibiae: *H. microps* (Burmeister) and *H. illatus* (LeConte), both from Mesoamerica. A third continental species with quadridentate foretibiae, *H. warneri*, is described in this paper. The diagnostic male parameres must be examined for reliable identification because of overlapping external character states between the four species.

The only other species with quadridentate foretibiae, out of 43 (currently) in the genus, are *H. dispar* (Kolbe) and *H. parvus* Dupuis and Dechambre, from Hispaniola and Cuba respectively.

The specimens of *H. quadridentatus* were taken at lights along with several specimens of *H. microps*; nothing is known of their biology. Although the type locality near Negro Norte is only 1,000 m in elevation, it is a cloud forest because of the high amount of moisture received from the Caribbean (>4,000 mm of rain/year). According to J. Monzon (pers. comm., September 2000), this forest is the northernmost limit for many Central and South American Cerambycidae as well as the metallic species of Central American *Plusiotis* (Scarabaeidae: Rutelinae) and other beetles. This is one of the most biologically rich forests in Guatemala and should be considered in any conservation programs there.

Hemiphileurus warneri Ratcliffe, new species

(Figs. 16–18)

Type Material. Holotype labeled "MEXICO: Nayarit, Hwy 200, 20 km E Los Piedras, VI-7-1991, 730 m, U.V. light, W.B. Warner." Holotype deposited at the University of Nebraska State Museum (Lincoln, NE).

Holotype. Male. Length 21.0 mm; width 9.7 mm. Color black. *Head:* Surface of frons completely, coarsely rugose, with median, deep fovea; a low, rounded tubercle present mesad of anterior border of each eye. Clypeus triangular, apex acute, reflexed; surface with sparse, moderately-sized punctures and with strong carina extending from clypeal apex to base of each tubercle. Interocular width equals 3.1 transverse eye diameters. Antenna 10-segmented, club slightly longer than segments 2–7. Mandibles with external edges arcuate, apices acute. *Pronotum:* Surface with moderately large punctures; punctures moderately dense, becoming denser in anterior fourth and in longitudinal furrow. Median, longitudinal furrow deep, narrow, extending from near base to near apex. Apex just behind marginal bead with small tubercle either side of midline. Base with complete marginal bead. *Elytra:* Surface with 5 distinct, punctate striae between suture and humeral umbone; punctures moderately large, ocellate, subcontiguous or separated from one another in each row by less than half a puncture length. Intervals convex, with sparse micropunctures. *Pygidium:* Surface with punctures moderately dense, moderately large, weakly ocellate, setigerous; setae minute, tawny. In lateral view, surface regularly convex. *Legs:* Foretibia with 4 subequally separated teeth. Median transverse carina on meso- and metatibiae ending with acute spine on upper surface. Apex of posterior tibia with strong, acute spine on upper angle and with 7 (left) and 4 (right) short, broad spinules below spine. Apex of first tarsomere of posterior tarsus with strong, acute spine dorsally. *Venter:* Prosternal process (Fig. 18) broad, moderate in length, apex flattened into transversely subrectangular, slightly concave plate, setae lacking. Last sternite with sparse, scattered punctures. *Parameres:* Figures 16–17.

Etymology. I take great pleasure in naming this species after Bill Warner

(Chandler, AZ) who collected the specimen and provided it to me for description.

Remarks. *Hemiphileurus warneri* is similar externally to *H. illatus* (LeConte) and will key to this species in Endrödi (1985). The parameres of *H. warneri* (Figs. 16–17) are different than those of *H. illatus* (Figs. 19–20). The most striking difference between the parameres, aside from the obvious length proportions, is the almost entirely concave surface of each paramere that abruptly becomes convex at the apices in *H. warneri* whereas in *H. illatus* there is only an oblong depression on the center of the paramere. In addition, the base of the last sternite in *H. illatus* is densely punctate to transversely rugulose in a narrow band while in *H. warneri* the entire surface of the last sternite is sparsely punctate and lacks any distinctive sculpturing across the base.

The holotype was taken at a U.V. light trap in lowland deciduous forest in a mesic canyon at the end of dry season.

Checklist of the Genus *Hemiphileurus* Kolbe, 1910

- H. beckeri* (Kolbe 1910) (as *Epiphileurus*)—Mexico
Epiphileurus beckeri ab. *parumstriatus* Kolbe 1910
H. bispinosus Ratcliffe, n. sp. 2001—Brazil
H. brasiliensis Endrödi 1978—Brazil, Peru
H. carinatipenis Dupuis and Dechambre 2000—Ecuador
H. costaricensis Endrödi 1978—Costa Rica, Panama
Hemiphileurus jamesonae Ratcliffe 1988
H. costatus Endrödi 1978—Paraguay
H. cribratus (Chevrolat 1844) (as *Phileurus*)—Cuba
H. cubaensis Chalumeau 1981—Cuba
H. curvicornis Dupuis and Dechambre 2000—Colombia
H. cylindroides (Bates 1888) (as *Phileurus*)—Guatemala, Belize, Costa Rica, Panama
H. dejeani (Bates 1888) (as *Phileurus*)—Mexico to Amazonian Brazil
H. depressus (Fabr. 1801) (as *Geotrupes*)—Colombia
Hemiphileurus deplanatus Endrödi 1978
H. deslislesi Ratcliffe, n. sp. 2000—Colombia
H. dispar (Kolbe 1910) (as *Epiphileurus*)—Hispaniola
H. elongatus Dupuis and Dechambre 2000—Peru, Bolivia
H. gibbosus Dupuis and Dechambre 2001—Colombia
H. hieki Chalumeau 1988—Colombia
H. howdeni Endrödi 1978—Peru
H. illatus (LeConte 1854) (as *Phileurus*)—United States, Mexico
H. illatus mexicanus Endrödi 1978—Mexico
Phileurus femoratus Burmeister 1847
Phileurus vitulus LeConte 1863
Phileuris phoenicus Casey 1915
Phileurus puncticollis Casey 1915
H. insularis Ratcliffe 1988—Brazil
H. jamaicensis (Howden 1970) (as *Epiphileurus*)—Jamaica
H. kahni Dupuis and Dechambre 2000—Peru, Brazil
H. laevicauda (Bates 1888) (as *Phileurus*)—Mexico, Guatemala, El Salvador, Costa Rica, Panama
H. laeviceps (Arrow 1947) (as *Epiphileurus*)—Dominica

- H. laminicornis* Dupuis and Dechambre 2000—Cuba
H. laticollis (Burmeister 1847) (as *Phileurus*)—Colombia
H. microps (Burmeister 1847) (as *Phileurus*)—Mexico, Guatemala
H. parvus Dupuis and Dechambre 2000—Cuba
H. phratrius Ratcliffe and Ivie 1998—Dominican Republic
H. puertoricensis (Chapin 1935) (as *Epiphileurus*)—Puerto Rico
H. punctatostratus (Prell 1914) (as *Epiphileurus*)—Mexico, Belize, Panama
H. quadridentatus Ratcliffe, n. sp. 2001—Guatemala
H. rugulosus Endrödi 1978—Venezuela, Colombia
H. ryani Ratcliffe and Ivie 1998—Dominican Republic
H. scutellaris Howden and Endrödi 1978—Dominican Republic
H. similis Dupuis and Dechambre 2000—Ecuador
H. simplex Prell 1914—Guatemala, Costa Rica, Panama
 Phileurus cylindroides Bates 1888 (in part)
 Epiphileurus cylindroides Prell 1914
 Hemiphileurus fraternus Arrow 1937
H. unilobus Dupuis and Dechambre 2000—Venezuela
H. variolosus (Burmeister 1847) (as *Phileurus*)—Costa Rica, Panama, Colombia, Venezuela, French Guiana, Ecuador, Trinidad
 Epiphileurus irregularis Prell 1914
 Hemiphileurus variolosus ab.? *striatus* Endrödi 1978
H. vicarius Prell 1936—Costa Rica, Panama, Colombia, French Guiana, Ecuador, Brazil
H. vulgatus Dupuis and Dechambre 2000—Ecuador
H. warneri Ratcliffe, n. sp. 2001—Mexico.
H. n. sp. 1 Ratcliffe (in prep.)—Panama
H. n. sp. 2 Ratcliffe (in prep.)—Costa Rica, Panama
H. n. sp. 3 Ratcliffe (in prep.)—Costa Rica, Panama
H. n. sp. 4 Ratcliffe (in prep.)—Panama

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Literature Cited

- Adis, J. 1981. Comparative ecological studies of the terrestrial arthropod fauna in Central Amazonian inundation-forests. *Amazoniana* 7:87–173.

- Chalumeau, F. 1988.** Phileurini américains: nouvelle espèce, notes et synonymie (Coleoptera, Scarabaeidae). *Nouvelle Revue d'Entomologie* (N.S.) 5:397–400.
- Dupuis, F., and R.-P. Dechambre. 2000.** Dix nouvelles espèces d'*Hemiphileurus* Kolbe, 1910 (Coleoptera, Dynastidae). *Coléoptères* 6:21–32.
- Endrödi, S. 1978.** Monographie der Dynastinae 8. Tribus: Phileurini, amerikanische Arten II. (Coleoptera). *Folia Entomologica Hungarica* (series nova) 31:85–164.
- Endrödi, S. 1985.** *The Dynastinae of the World*. Dr. W. Junk Publishers, Dordrecht. 800 pp., 46 plates.
- Ratcliffe, B. C. 1988.** New species and distribution records of Neotropical Phileurini and a new phileurine from Burma (Coleoptera: Scarabaeidae: Dynastinae). *Coleopterists Bulletin* 42:43–55.
- Ratcliffe, B. C., and M. A. Ivie. 1998.** New species of *Hemiphileurus* Kolbe (Coleoptera: Scarabaeidae: Dynastinae) from the Dominican Republic with a key to the West Indian species of *Hemiphileurus*. *Coleopterists Bulletin* 52:201–208.

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