Descriptions of Palliolatrix gen.n. and seven new species from Middle America (Coleoptera: Curculionidae: Baridinae)

JENS PRENA
Mozartstr. 24, 18069 Rostock, Germany. E-mail: baridinae@gmx.de

Abstract

Palliolatrix gen.n. is erected and distinguished from Peridinetus Schönherr and Peridinetellus Champion. Ten Neotropical species are included, with the following seven newly described: P. palliolatrix sp.n. (type species; Costa Rica and Panama), P. attenuata sp.n. (Costa Rica and Panama), P. crassa sp.n. (Colombia), P. infucata sp.n. (Costa Rica), P. pulchra sp.n. (Costa Rica and Panama), P. tuberosa sp.n. (Guatemala, Nicaragua to Colombia) and P. virgata sp.n. (Colombia). New combinations are P. lineola (Kirsch) (from Megops Schönherr), P. insignis (Chevrolat) and P. quadriramaculata (Champion) (both from Peridinetus).

Key words: weevils, taxonomy, Piperaceae, Neotropics

Introduction

Baridine weevils associated with plants in Piperaceae were studied as part of the National Inventory of Costa Rican Biodiversity. The material included a homogeneous group of mostly undescribed species that could not be assigned satisfactorily to Peridinetus Schönherr. Herein, I erect a new genus for the accommodation of 10 species, seven of which are newly described, while three others are transferred, two from Peridinetus and one from Megops Schönherr, respectively. Single specimens of three species not yet described were available from Ecuador, Peru and Bolivia (AMNH, CMNC, SNSD), but are not treated in this paper.

Material and methods

Middle America is understood here as the region from southern Mexico to Panama including the Pacific lowland of Colombia. 102 specimens of Palliolatrix were studied.
from the following collections (curators in brackets): AMNH, American Museum of Natural History, New York (L. Herman jr.); BMNH, The Natural History Museum, London (M. Barclay, C. Lyal); CMNC, Canadian Museum of Nature, Ottawa (R. Anderson); CWOB, Charles W. O’Brien personal collection, Green Valley; DEIC, Deutsches Entomologisches Institut, Müncheberg (L. Behne, L. Zerche); FOEC, Frode Ødegaard personal collection, Trondheim; HPSC, Henry P. Stockwell personal collection, Panama City (H. Stockwell, D. Windsor); INBC, Instituto Nacional de Biodiversidad, Santo Domingo de Heredia (A. Solís); JPPC, Jens Prena personal collection, Rostock; MEUP, Universidad de Panamá, Maestría en Entomología, Panama City (H. Barrios); MUCR, Universidad de Costa Rica, San José (P. Hanson); NMNH, National Museum of Natural History, Washington (S. Lingafelter); SNSD, Staatliche Naturhistorische Sammlungen, Dresden (K. Klass). The codens are used to refer to the collections in the text.

Measurements of length were made with an ocular micrometer in a dissecting microscope as follows: total length, from anterior margin of eye to abdominal apex in dorsal view; standard length, from anterior margin of pronotum (without protuberance in *P. tuberosa*) to abdominal apex in dorsal view; pronotal length, longest dorsal extension (without protuberance in *P. tuberosa*) in lateral view; elytral length, longest dorsal extension between humeri and elytral apex parallel to suture in dorsal view; length of rostrum, straight distance from apex (without mandibles) to anterior margin of eye at middle of rostrum in lateral view; ante-antennal portion of rostrum, straight distance from apex (without mandibles) to point of antennal insertion in lateral view.

Genital structures were studied of approximately 50% of the specimens. Inter-specific differences occurred in the development of the anterolateral membranous lobes of the aedeagus, the shape of the basal appendage of the aedeagal flagellum and the arrangement of the setae of the female styli, but were minor otherwise. As very little is known about the variability of those character states due to the few collections available and those details appear neither practicable nor necessary for the distinction of the species, I focused on the general description of the genital character states of the genus. Examples for variable, possibly species-specific details are given for *P. palliolatrix* (type species) and *P. crassa*.

**Palliolatrix Prena gen. n.**

(Figs. 1–28)

**Recognition.** *Palliolatrix* is related to *Peridinetus* Schöntherr and *Peridinetellus* Champion, with the general habitus approaching that of *Peridinetus lateralis* Champion. Species of these three genera possess dentate femora, a prosternal channel and have the procoxae separate. *Palliolatrix* differs from *Peridinetus* and *Peridinetellus* by the character states given in Table 1.
TABLE 1. Diagnostic character states for distinguishing Palliolatrix from Peridinetus and Peridinetellus.

<table>
<thead>
<tr>
<th>Character</th>
<th>Palliolatrix gen. n.</th>
<th>Peridinetus, Peridinetellus</th>
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<tbody>
<tr>
<td>Eyes</td>
<td>size moderate, separated by width of rostrum at base or more</td>
<td>size larger, almost always separated by less than width of rostrum at base</td>
</tr>
<tr>
<td>Frontal fovea</td>
<td>minute or absent</td>
<td>deep, elongate (except in female P. sanguinolentus and species with oval body shape)</td>
</tr>
<tr>
<td>Antenna</td>
<td>inserted in apical 29–42% of rostrum</td>
<td>inserted at midlength of rostrum</td>
</tr>
<tr>
<td>Rostrum</td>
<td>ventral margin edged, dorsal margin curved at antennal insertion; upper margin of antennal scrobe reaching ventral edge of rostrum before eye</td>
<td>subcylindrical in cross-section, curvature even; antennal scrobe less descending, upper margin not reaching ventral edge of rostrum</td>
</tr>
<tr>
<td>Pronotum</td>
<td>as long as wide or longer (slightly transverse in female P. attenuata), anterior margin strongly produced</td>
<td>evidentially transverse, anterior margin moderately produced</td>
</tr>
<tr>
<td>Male</td>
<td>internal sac with thin, sclerotized flagellum longer than body of aedeagus</td>
<td>internal sac with tubiform basal sclerite generally not longer than body of aedeagus (elongate in some small-sized species)</td>
</tr>
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Description. Habitus (Figs. 1–10): total length 4.2–10.3 mm, standard length 4.1–9.9 mm, humeri prominent, elytral disk nearly plane in lateral view. Color: integument reddish to dark brown, basic vestiture of minute scales, prothorax, elytra and flank often with color-pattern of large, imbricate scales. Head: retractile to hind margin of eyes, finely punctate, eyes of moderate size, not bulging, separated by width of rostrum at base or more, frontal fovea minute or absent, transition to rostrum depressed. Rostrum: moderately thick, basal portion curved gently, more (occasionally abruptly) curved at antennal insertion, apex slightly widened in dorsal view, ventral edge present below antennal scrobe, mandibles barely projecting behind labrum when closed, outer margin of mandible curved, secondary inner mandibular tooth distinct, antenna inserted in apical 29–42% of rostrum, scrobe descending and reaching ventral margin of rostrum before eye, scape not quite reaching base of rostrum, apex of scape tumid, funicle of 7 segments, club pubescent, oblong ovate, transition to funicle abrupt. Pronotum: as long as wide or longer (slightly transverse in female P. attenuata), greatest width at base or further apicad when sides subparallel in basal half, anterior margin produced over head, integument finely punctate. Scutellum: visible, transverse. Elytra: sides slightly convergent, apices rounded conjointly or nearly so, pygidium covered by elytral apices, humeri prominent, much wider than prothorax, striae subtle, punctures of varied size and depth, interstriae flat or convex, 9 faintly costate occasionally, preapical callus prominent, interstria 3 medially with or without tumidity or callus. Venter (Fig. 11): procoxae separated by less than one-
third of own width, prosternal channel distinct, moderately deep, channel ending at procoxae. Legs: femora moderately expanded dorsoventrally, ventral tooth present (Figs. 12–15), of subequal size at all legs, tibia ventrodistally with short cluster of long hairs, mucro well developed, premucro absent, tarsomere 3 bilobed, wider than 1 and 2, claw-bearing tarsomere 5 approximately 2× longer than 3, claws straight, approximate but not fused at base. Male (Figs. 11, 16–25): distal ventrite with median depression deeper and pronotum often larger compared to females, sexual dimorphism otherwise indistinct (particularly in small-sized specimens); sternite 8 membranous, distal margin and lateral portions pigmented; sternite 9 slightly curved, with 2 asymmetric lateral arms; tegmen as Fig. 19, aedeagus as Fig. 20, with more-or-less developed anterolateral membranous portion, apodemes slender, approximately 3× longer than body of aedeagus, internal sac nearly as long as apodemes, with ejaculatory duct modified to thin, sclerotized flagellum slightly longer than body of aedeagus (Fig. 23), base of flagellum curved gently, with minute basal appendage attached distally to internal sac, duct inserted at outer face of base of flagellum outside internal sac. Female (Fig. 26–28): sternite 8 symmetric, with 2 diverging, basally sclerotized arms, distal portion of arms pigmented, shapes various; hemisternite pigmented, stylus with approximately 10–15 distal setae, large-sized species with additional cluster of subdistal setae; spermatheca small, sclerotized; spermathecal duct short, not or little extended beyond bursa, not pigmented, inserted ventrally at midlength of bursa. Stridulatory organ: present in both sexes, ventral apical portion of elytral interval 2 with stridulatory files, tergite 8 and basal portion of tergite 7 with decumbent, elongate scales in irregular punctuation functioning as plectra, specialized asperities absent.

**Etymology.** Derived from Latin *palliolum* and modified by suffix; the “hood-wearer”; gender feminine.

**Type species.** *Palliolatrix palliolatrix* Prena sp. n., described below.

**Species included in** *Palliolatrix*

*P. attenuata* Prena sp. n.; Costa Rica, Panama
*P. crassa* Prena sp. n.; Colombia
*P. infucata* Prena sp. n.; Costa Rica
*P. insignis* (Chevrolat) 1880, **comb. n.** (*Peridinetus*); Guadeloupe
*P. lineola* (Kirsch) 1875, **comb. n.** (*Megops*); Peru, Suriname
*P. palliolatrix* Prena sp. n.; Costa Rica, Panama
*P. pulchra* Prena sp. n.; Costa Rica, Panama
*P. quadrimaculata* (Champion) 1907, **comb. n.** (*Peridinetus*); Guatemala, Mexico
*P. tuberosa* Prena sp. n.; Guatemala, Nicaragua, Costa Rica, Panama, Colombia
*P. virgata* Prena sp. n.; Colombia
**Distribution.** Neotropical; southern Mexico to Bolivia, Suriname, Guadeloupe.

**Life history.** I collected single specimens from plants of the *Piper hispidum* complex. An association with Piperaceae appears plausible, because plants of this family are the host for species in related genera, such as *Peridinetus, Peridinetellus, Pantoteles, Ambates* and *Embates*.

**Key to the Middle American species of Palliolatrix**

1. Elytra with macula of black scales ................................................................. 2
   - Elytra without black macula, yellowish or red color-pattern present or not .......... 3
2. Elytra with moderately raised preapical callus, additional median callus at interstriae 3 and 4 absent; pronotal disk without pair of tubercles; preapical callus without vitta of light colored scales (Fig. 1, 2); dorsal transition between head and rostrum slightly depressed; Guatemala and Mexico (Chiapas) ......................... 1. *P. quadrimaculata*
   - Elytra with notably raised preapical callus and additional median callus at interstriae 3 and 4 (may be indistinct in small specimens); pronotal disk with pair of tubercles, preapical callus with vitta of light colored scales (Fig. 3); dorsal transition between head and rostrum angular; Guatemala to Colombia ..................... 2. *P. tuberosa*
3. Total length 4.9–5.2 mm; prothorax and elytra with color-pattern of vermilion and light yellow scales (Fig. 8) .......................................................... 6. *P. pulchra*
   - Total length 6.9–10.3 mm; prothorax and elytra without vermilion scales ............ 4
4. Femoral tooth minute, shorter than tarsal claw (Fig. 13) ................................. 5
   - Femoral tooth distinct, approximately as long as tarsal claw (Fig. 12, 14) ............ 6
5. Body with distinct vestiture of elongate yellowish scales (Fig. 4), pronotum larger, bell-shaped ................................................................. 3. *P. infuscata*
   - Body with vestiture of microscopic hairs and minute scales (Fig. 5), pronotum smaller, conical ................................................................. 4. *P. attenuata*
6. Venter with indistinct yellow hairs; Costa Rica and Panama, Cordilleras Central and Talamanca ................................................................. 5. *P. palliolatrix*
   - Venter with light yellow, oval scales; Colombia, Pacific side .......................... 7
7. Elytral interstriae 3 and 5 without distinct vitta of light-colored scales, interstria 3 with distinct callosity at middle (Fig. 9) ................................. 7. *P. crassa*
   - Elytral interstriae 3 and 5 with distinct vittae of light-colored scales, interstria 3 without callosity at middle (Fig. 10) ................................. 8. *P. virgata*

1. *Palliolatrix quadrimaculata* (Champion), comb. n.
   (Figs. 1, 2)

*Peridinetus quadrimaculatus* Champion 1907: 179–180. Holotype male, dissected by me, labeled:
Redescription. Total length 5.2 mm, standard length 4.9 mm (n=1). Integument brown, antenna and legs partially reddish; basic vestiture of moderate-sized, light-colored scales; elytra with black scales in short, rhombic fascia near middle of interstriae 3–5 and in small macula on subapical callus (ventral and lateral vestiture indistinct and partially abraded in type specimen). Rostrum 0.88× length of pronotum, dorsal curvature at antennal insertion moderate, finely costate medially and dorsolaterally, portion distal to antennal insertion 0.34× length of rostrum. Pronotum 1.08× longer than wide, greatest width at base, sides very slightly converging toward middle, then narrowed and tubulate in front. Elytra 1.67× longer than wide, humeri 1.50× wider than pronotum; interstria 9 convex, not clearly costate, preapical callus produced. Legs with moderate femoral tooth, hind tibia produced ventrally, ventral margin with few hairs, base slightly curved.

Distribution. Guatemala and probably adjacent Mexico (see discussion).

Discussion. In addition to the holotype from Senahú in Guatemala, I apply the name provisionally to two specimens from Jitotol in Chiapas, Mexico and one specimen from Zapotitlan in Suchitepequez, Guatemala (CWOB 3). The latter (Fig. 2) has a dense fringe of hairs on the ventral edge of the hind tibia. The entire material forms a morphological complex of possibly more than one species.

2. Palliolatrix tuberosa Prena sp. n.
(Fig. 3)


Description. Total length 4.2–8.2 mm, standard length 4.1–8.0 mm (n=21).

Integument brown; basic vestiture of small, light-colored to cupreous scales; scales black in vitta between basal third of interstria 3 and preapical callus; pale yellow scales condensed around eye, in narrow median and broad dorsolateral pronotal vittae (with contour-lines emphasized), in narrow lines behind humeri, on preapical callus, on thoracic flank, along sutures of lateral plates and lateral portion of ventrites. Rostrum 0.71–0.88× length of pronotum, curvature over antennal insertion distinct, dorsum sharply costate medially, portion distal to antennal insertion 0.34–0.38× length of rostrum. Pronotum 0.95–1.17× longer than wide, sides subparallel in basal half, then constricted abruptly and tubulate in front, frontal lobe and disk with pair of protuberances. Elytra 1.39–1.64× longer than wide, humeri 1.26–1.61× wider than pronotum; interstriae 3 and 4 with
tumidity at midlength, preapical callus notably produced for genus. Legs with large, triangular femoral tooth, tibia moderately produced ventrally, base notably curved.

**Distribution.** The species has been collected at elevations below 1600 m in Guatemala, Nicaragua, Costa Rica, Panama and Colombia.

**Specific epithet.** A Latin adjective; the humpy hood-wearer.

**Discussion.** The specimens from the Pacific side of the Cordillera de Talamanca are on average larger (6.6–8.2 mm vs. 4.2–6.6 mm total length) and the elytral vitta of black scales is curved around the median callosity rather than running straight across. The protuberances of the anterior pronotal margin are obsolete in all large-sized specimens from any location. Not included in the type series is a specimen from Cerro San Gil in Izabal, Guatemala (CMNC) with deviating body proportions and non-tuberculate pronotum.

3. *Palliolatrix infucata* Prena sp. n.  
(Figs. 4, 13)


Paratypes none.

**Description.** Total length 10.3 mm, standard length 9.9 mm (n=1). Integument dark red; basic vestiture of small, elongate yellowish scales which are larger and condensed in fuzzy dorsolateral pronotal vittae, in fuzzy oblique elytral fascia, along elytral striae (particularly in and behind fascia) and along suture of lateral plates. Rostrum 0.85× length of pronotum, curvature over antennal insertion moderate, dorsum finely costate medially, portion distal to antennal insertion 0.33× length of rostrum. Pronotum as long as wide, greatest width in basal third, sides rounded gently toward tubulate frontal portion. Elytra 1.77× longer than wide, humeri 1.38× wider than pronotum; interstria 3 without tubidity at midlength, preapical callus moderate for genus. Legs with minute femoral tooth, tibia barely produced ventrally, base slightly curved (Fig. 13).

**Distribution.** The species is known only from one specimen collected in the Cordillera de Talamanca at 2350 m elevation.

**Specific epithet.** A Latin participle; the made-up hood-wearer.

(Fig. 5)

Holotype male (dissected), labeled: “PANAMA: Chiriqui/ Cerro Punta, 8°35’N/ 82°36’W, 23.VI.1999/ W. Reeves” (CMNC).

Description. Total length 7.8–8.6 mm, standard length 7.3–8.3 mm (n=3). Integument dark red; basic vestiture of microscopic, cupreous scales, minute white scales condensed in elytral fascia, pronotal vitta and on flank. Rostrum 0.95–1.09× length of pronotum, curvature over antennal insertion moderate, dorsum finely costate medially, portion distal to antennal insertion 0.30–0.33× length of rostrum. Pronotum 0.87–1.00× longer than wide, greatest width near base, sides gradually narrowed toward tubulate frontal portion. Elytra 1.75–1.79× longer than wide, humeri 1.46–1.56× wider than pronotum; interstria 3 without tumidity at midlength, preapical callus moderate for genus. Legs with minute femoral tooth, tibia barely produced ventrally, base slightly curved (as Fig. 13).

Distribution. The species is known from two sites in the Cordilleras Central (Costa Rica) and Talamanca (Panama) above 2000 m elevation.

Specific epithet. A Latin participle; the plain hood-wearer.

5. Palliolatrix palliolatrix Prena sp. n.
(Figs. 6, 7, 11, 12, 16, 17, 19–21, 23, 24, 26–28)


Description. Total length 6.9–8.3 mm, standard length 6.6–8.0 mm (n=6). Integument reddish; basic vestiture microscopic; hair-like, light-colored scales in dorsolateral pronotal vitta and adjacent portions of elytron, in indistinct, compound, oblique elytral fascia behind middle, on flank of prothorax behind eyes and on portions of lateral plates and ventrites 1 and 2. Rostrum 0.76–0.95× length of pronotum, curvature over antennal insertion moderate, dorsum faintly costate or not, portion distal to antennal insertion 0.29–0.33× length of rostrum. Pronotum 0.99–1.17× longer than wide, greatest width at base, sides converging more or less gradually to tubulate front. Elytra 1.64–1.72× longer than wide, humeri 1.40–1.46× wider than pronotum; interstria 3 tumid at midlength, preapical callus produced. Legs with moderate femoral tooth, tibia barely produced ventrally, base slightly curved (Fig. 12).

Distribution. The species is known from three sites in the Cordilleras Central and Talamanca in Costa Rica and Panama.

Specific epithet. A Latin noun, adopted from the name of the genus.
(Figs. 8, 15)

Holotype male (dissected), labeled: “Coco Solo Hospital/ Canal Zone/ 9°21'N 79°51'W/ 6.1V.76 Engleman”, “beating plants/ at night”, “HPS-211” (CMNC).


**Description.** Total length 4.9–5.2 mm, standard length 4.7–5.0 mm (n=5). Integument dark red; basic vestiture microscopic, light yellow scales in irregular patches on pronotum and elytra, in spots on elytral interstria 3 and behind preapical callus, along flank of prothorax behind eye, in fascia on metepisternum down to metasternum, and laterally on ventrites; vermilion scales on head and in depressed portions of yellowish patches on pronotum and elytra. Rostrum 0.78–0.81× length of pronotum, curvature over antennal insertion distinct, dorsum costate medially, portion distal to antennal insertion 0.40–0.42× length of rostrum. Pronotum 0.96–1.02× longer than wide, sides subparallel in basal half, then constricted and tubulate in front, lateral portion depressed and with vermilion scales at places. Elytra 1.55–1.61× longer than wide, humeri 1.40–1.45× wider than pronotum; interstria 3 without tumidity at midlength, preapical callus weak compared to congeners. Legs with large femoral tooth, tibia produced ventrally, base notably curved (Fig. 15).

**Distribution.** The species is known from two sites on the Atlantic slope of the Cordillera de Guanacaste in northwest Costa Rica and two sites in central Panama.

**Specific epithet.** A Latin adjective; the pretty hood-wearer.

7. *Palliolatrix crassa* Prena sp. n.  
(Figs. 9, 14, 18, 22, 25)

Holotype male (dissected), labeled: “COLOMBIA: Choco, Munguirri–Motordo,/ 30km e. Quibdo, 400m/ 1° for. 27 June 1985/ leg. D.G . Furth” (CASC, currently in CWOB as long-term loan).


**Description.** Total length 8.3–9.1 mm, standard length 8.1–8.8 mm (n=4). Integument reddish; basic vestiture of yellow, hair-like scales condensed in narrow dorsomedian and broad dorsolateral pronotal vittae, venter (except median portion of ventrites 3–5) with
large whitish scales. Rostrum 0.71–0.78× length of pronotum, curvature over antennal insertion slight, dorsum finely costate medially, antennal club relatively small, portion distal to antennal insertion 0.37–0.39× length of rostrum. Pronotum 1.09–1.14× longer than wide, greatest width in basal third, sides gently rounded and tubulate in front. Elytra 1.43–1.50× longer than wide, humeri 1.35–1.46× wider than pronotum; interstria 3 with gently rising and abruptly declining tumidity at midlength, preapical callus rather weak for genus. Legs with large femoral tooth, tibia produced ventrally, base notably curved (Fig. 14).

Distribution. The species is known from two sites on the Pacific slope in Colombia, both at approximately 500 m elevation.

Specific epithet. A Latin adjective; the big hood-wearer.

8. Palliolatrix virgata Prena sp. n.
(Figs. 10)

Holotype female, labeled: “1200’ [365 m], Anchicaya Dam/ 70km. E. Buenaventura,/ Valle, Colombia./ II.17.1970. H. Howden” (CMNC, ex HPSC).

Paratypes none.

Description. Total length 7.5 mm, standard length 7.3 mm. Integument reddish; vestiture of variously sized oval yellow scales condensed in narrow dorsomedian and broad dorsolateral pronotal vittae, in basal half of elytral interstria 3, in distal half of interstria 5 before preapical callus, at apex, flank and venter (except median portion of ventrites 3–5). Rostrum 0.83× length of pronotum, curvature over antennal insertion slight, dorsum finely costate and glabrous medially, portion distal to antennal insertion 0.40× length of rostrum. Pronotum 1.09× longer than wide, greatest width near base, subconical, tubulate in front. Elytra 1.60× longer than wide, humeri 1.42× wider than pronotum; interstria 3 without tumidity at midlength, preapical callus produced moderately. Legs with large femoral tooth, tibia slightly produced ventrally, base curved.

Distribution. The species is known only from one site on the Pacific slope in Colombia, at approximately 400 m elevation.

Specific epithet. A Latin participle; the striped hood-wearer.

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