New species of Cerambycinae (Coleoptera, Cerambycidae) from Guatemala

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Abstract. Three new species from Guatemala are described and illustrated: *Ectenessa canoi* **sp. nov.** (Ectenessini), from Petén; *Oxycoleus schusteri* **sp. nov.** (Oxycoleini), from Izabal; and *Odontocera nigroaurantia* **sp. nov.** (Rhinotragini), from Petén. Distinguishing characters from closely related species are provided.

Keywords. Longhorned beetle; Neotropical Region; Taxonomy.

INTRODUCTION

Guatemala has a complex topography and vegetation, which is reflected in its great biodiversity (Cano, 2006). In this country, the diversity of Cerambycidae was first summarized by Hovore (2006), who reported 769 species. Currently, Tavakilian & Chevillotte (2021), listed six subfamilies, 72 tribes, 350 genera, and 894 species and subspecies of cerambycids from Guatemala.

Currently, *Ectenessa* Bates, 1885 (Ectenessini) is a genus with 21 species distributed mainly in South America. Only *E. nitida* Bates, 1885 occurs in Mexico and Central America (including Guatemala) (Bezark 2022a; Monné, 2022).

Oxycoleus Lacordaire, 1868 (Oxycoleini) includes 13 species known from Mexico to South America. Only two species are recorded in Guatemala, *Oxycoleus mirabilis* Nascimento & Santos-Silva, 2021 and *O. piceus* Giesbert, 1993 (Bezark 2022a; Monné, 2022).

Odontocera Audinet-Serville 1834 (Rhinotragini) is a polymorphic genus with 71 species distributed mainly in South America. Only, *Odontocera aurocincta* Bates, 1873 is the species with the southernmost record of the genus (United States, México, Guatemala, Honduras). In Guatemala, *O. aurocincta* Bates, 1873, *O. clara* Bates, 1873, *O. fuscicornis* Bates, 1885, and *O. mthomasi* Wappes & Santos-Silva, 2017 have been recorded (Bezark 2022a; Monné, 2022).

During the research stay of the first author in the University of the Valley of Guatemala (UVG)

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MATERIAL AND METHODS

Morphological structures were studied using a Zeiss Stemi 305 stereomicroscope (Carl Zeiss, Jena, Germany). Measurements and pictures were taken with a Zeiss® AxioZoom V16 stereomicroscope, with a Zeiss® AxioCam MRc5, 5 megapixels camera, controlled by ZEN (Zeiss Efficient Navigation) application.

References and classification of known species are restricted to their original description, information in catalog by Monné (2022) and checklist by Bezark (2022a). The acronyms used in the text is as follows: **UVGC** University of the Valley of Guatemala Collection, Guatemala, Guatemala.

RESULTS

Ectenessa canoi sp. nov. (Fig. 1) http://zoobank.org/3548D23C-6263-4031-A9FA-F3D70DB2B1F2

Description: Holotype male: Integument mostly yellowish orange; head, scape, pedicel and pronotum reddish brown; pronotum with two semi-elliptical brownish areas on posterior half; posterior

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half of elytra yellowish white; each elytron with two whitish subcircular maculae surrounded by narrow brown band, one on anterior half, another on posterior half.

Head: Frons smooth close to clypeus, coarsely, sparsely punctate on remaining surface; with short, decumbent, sparse setae. Median groove distinct from postclypeus to vertex. Vertex coarsely, abundantly punctate throughout; with short, decumbent, sparse setae, and long, scattered orange setae close to eyes. Antennal tubercles with sculpturing and setae as on frons except nearly smooth apical area. Area behind eyes finely, abundantly punctate, mainly close to upper eye lobe, punctures gradually sparser toward inferior side of lower eye lobe; with short, sparse setae. Genae finely punctate; with short, decumbent, sparse setae. Postclypeus finely, abundant-

ly punctate centrally, punctures sparser laterally; with a few short, erect setae and one very long, erect orange seta on each side; glabrous centrally. Labrum with long orange setae anteriorly; with short, erect setae on posterior area. Distance between upper eye lobes 0.70 times length of scape; in frontal view, distance between lower eye lobes 0.68 times length of scape. Gulamentum finely, sparsely punctate, glabrous between prothorax and eyes, transversely striate, with long, erect, sparse yellowish setae between eyes. Antennae 2.45 times elytral length, reaching elytral apex about apex of antennomere VII; scape coarsely, abundantly punctate dorsally, somewhat rugose-punctate on posterior half; with short, sparse setae, and long, erect, sparse setae ventrally, and a few long, erect setae dorsally. Antennomeres III-V dorsally carinate; antennomeres III-XI with short, yellowish



Figure 1. Ectenessa canoi sp. nov., holotype male: (A) Dorsal habitus; (B) Ventral habitus; (C) Lateral habitus; (D) Head, frontal view.

setae, shorter and denser on last antennomeres; pedicel and antennomeres III-VII with long, erect orangish setae on ventral surface, sparser on VIII-X. Antennal formula (ratio) based on length of antennomere III: scape = 0.47; pedicel = 0.15; IV = 0.95; V = 0.97; VI = 0.98; VII = 1.02; VIII = 0.95; IX = 0.87; X = 0.78; XI = 1.04.

Thorax: Prothorax 1.16 times longer than wide; barrel-shaped in dorsal view; sides coarsely, abundantly punctate, except striate anterior region; with very short, erect, sparse setae, and a few long, erect setae laterally. Pronotum with three, slightly elevated gibbosities, one longitudinal on each side, one centrally on basal half; coarsely, abundantly punctate, especially between gibbosities on distal half and laterally, smooth on gibbosities; with scarce short, erect setae. Sides of prothorax with sculpturing as on pronotum, punctures sparser posteriorly; with two small, semicircular gibbosities on anterior half. Prosternum transversely, coarsely striate centrally, except striate-punctate anterocentral region; coarsely, abundantly punctate laterally; with short, decumbent, abundant setae on posterior half, sparser on anterior half; with a few long, erect, yellowish setae. Prosternal process narrowed centrally, abruptly expanded posteriorly. Mesoventrite finely punctate, except smooth central area. Apex of mesoventral process 0.82 times width of mesocoxal cavity, deeply truncate-emarginate; with short, sparse setae, slightly denser laterally. Mesanepisternum, metaventrite and metanepisternum coarsely, shallowly, sparsely punctate; with short, sparse setae, denser laterally; with long, erect orangish setae on central area of metaventrite, and few on anterior half of metanepisternum. Scutellum finely punctate; with short, erect yellowish setae. Elytra: Coarsely, deeply, abundantly punctate, punctures sparser on posterior third; with short, erect, sparse setae, and long, erect, scattered orangish setae along suture, and a few long, erect orangish setae laterally; apex obliquely emarginate, with long acute projection at outer angle and short acute projection at sutural angle. Legs: Femora with long, erect, sparse orangish setae denser dorsally and ventrally; profemora fusiform; mesofemora pedunculate-clavate (metafemora are missing in the holotype).

Abdomen: Ventrites finely, sparsely punctate; with long, erect, sparse orangish setae, denser on ventrite 5; apex of ventrite 5 truncate.

Dimensions (mm): Holotype male: Total length, 12.05; prothoracic length, 2.30; anterior prothoracic width, 1.45; posterior prothoracic width, 1.30; maximum prothoracic width, 2.00; humeral width, 2.25; elytral length, 7.95.

Type material: Holotype male labeled: "GUATEMALA, Petén, Municipio La Libertad, Comunidad Bethel, 8-10/VI/1995, Col. E. Cano". (UVGC).

Etymology: This species is dedicated to the recently deceased Enio Cano (Universidad del Valle de Guatemala), for his friendship, enthusiasm, and contribution to

the knowledge of the diversity and conservation of Passalidae and Scarabaeidae in Guatemala.

Remarks: By the presence of two white elytral maculae on each elytron, Ectenessa canoi sp. nov. (Fig. 1) is most similar to E. ocellata (Gounelle, 1909), E. quadriguttata (Burmeister, 1865), and E. spinipennis (Buquet, 1860) (see photographs on Bezark, 2022b). Ectenessa canoi sp. nov. differs from E. ocellata and E. quadriguttata by the two semi-elliptical brownish areas on posterior half of the pronotum (integument unicolorous in E. ocellata, and with two longitudinal black areas centrally in E. quadriguttata), white semicircular-shaped maculae on the elytra (semi-elliptic in *E. ocellata* and *E. quadriguttata*), and elytral apex obliquely emarginate and with spiniforms projections (without spiniform projections in E. ocellata and E. quadriguttata). Ectenessa canoi sp. nov. differs from E. spinipennis by the semicircular-shaped maculae on the elytra (semi-elliptic in E. spinipennis, the later one obligue and more elongate) (Martins, 1998).

Oxycoleus schusteri sp. nov. (Fig. 2) http://zoobank.org/F5E668FA-3262-4D26-8C91-2BDFBF0440B1

Description: Holotype Male: Integument mostly black; ventral mouthparts orangish yellow, except brown distal segments of palpomeres; anteclypeus and labrum orangish brown. Posterior half of area behind eyes, posterior ³/₃ of gulamentum, prothorax, and ventral surface of mesothorax bright orange, slightly yellowish on base of pronotum. Metaventrite with irregular dark brown areas interspersed. Elytra orangish brown, except brown anterior third laterally. Pro- and mesocoxae orange; trochanters and metacoxae reddish brown.

Head: Frons narrow, transverse, densely microscopically punctate, with fine, sparse punctures interspersed; with minute orangish-brown pubescence not obscuring integument, and orangish-brown long, erect setae laterally. Median groove deep, somewhat wide from clypeus to area between antennal tubercles. Vertex and area between antennal tubercles and upper eye lobes with coarse, shallow, sparse punctures, punctures sparser close to prothorax; with minute orangish-brown pubescence not obscuring integument, light orange pubescence on orange area; with long, erect, scattered orangish-brown setae; with longitudinal gibbosity on median groove, from frons to orange area. Area behind lower eye lobes transversely striate, except smooth inferior area; striate area with short, orangish-brown setae; smooth area almost glabrous. Genae with transverse row of minute punctures near eye, smooth on remaining surface; with minute, decumbent bright orange setae on punctate area, glabrous on remaining surface. Central area of postclypeus microscopically punctate, except coarsely, sparsely punctures close to anteclypeus; with minute orangish-brown pubescence. Sides of postclypeus smooth and glabrous. Labrum with short, somewhat abundant yellowish-brown setae and long, erect setae of same color interspersed posteriorly. Gulamentum smooth, glabrous on posterior 3/3; anterior third finely punctate-striate centrally, sculpturing coarser laterally; with short, erect yellowish-brown setae, almost absent centrally. Distance between upper eye lobes 0.75 times length of scape; in frontal view, distance between lower eye lobes 1.11 times length of scape. Antennae (from base of scape to apex of antennomere IX; missing antennomeres X and XI) 1.6 times elytral length, reaching elytral apex about apex of antennomere VIII. Scape clavate; finely, densely punctate; with long, erect dark brow setae; setae sparser on ventral surface. Pedicel and antennomeres III-IX with minute orangish-brown pubescence, and long, erect dark brown setae on pedicel and antennomeres III-V ventrally. Antennomeres III-IV cylindrical. Antennomere V-IX gradually widened toward area near apex on its outer surface. Antennal formula (ratio) based on length of antennomere III: scape = 1.20; pedicel = 0.17; IV = 1.41; V = 1.48; VI = 1.53; VII = 1.46; VIII = 1.36; IX = 1.33.

Thorax: Prothorax wider than long; sides rounded between anterolateral angles and anterior constriction, with distinct obtuse projection centrally, then slightly divergent toward posterolateral angles. Pronotum tumid between anterior margin and sulcus of anterior constriction; anterocentral area with distinct longitudinal gibbosity; with narrow, transverse, somewhat arched sulcus on each side of apex of anterior fifth; with large, slightly elevated gibbosity on each side between anterior and posterior constrictions, more elevated on its posterior half; with slightly elevated gibbosity centrally, from near middle to posterior constriction; lateral gibbosities surrounded in-



Figure 2. Oxycoleus schusteri sp. nov., holotype male: (A) Dorsal habitus; (B) Ventral habitus; (C) Lateral habitus; (D) Head, frontal view.

ternally and posteriorly with narrow semicircular sulcus; with coarse, shallow sparse punctures, denser and finer on gibbosities; with minute, dense bright orange pubescence not obscuring integument, somewhat darker on lateral gibbosities; apex of antero- and posterocentral gibbosities glabrous; with long, erect, scattered orangish setae. Sides of prothorax with sculpturing and pubescence as on pronotum. Prosternum finely, transversely striate; with short, erect orangish-yellow setae centrally close to coxal cavities and laterally, absent on remaining surface. Prosternal process very narrow on anterior half, strongly widened posteriorly, with apex truncate; with short, erect bright orange setae. Mesoventrite with short, erect orangish-yellow pubescence, not obscuring integument; mesanepisternum and mesepimeron with dense, minute bright orange pubescence not obscuring integument. Metanepisternum and sides of metaventrite with sparse orangish-brown pubescence not obscuring integument, and long, erect orangish-yellow setae interspersed, almost glabrous on central area of metaventrite. Scutellum glabrous, except narrow fringe of short orangish-yellow setae along margins. Elytra: Reaching about apex of abdominal segment II; slightly narrowed toward apex, distinctly dehiscent internally from anterior third; lateral carina well-marked, especially from anterior third; coarsely and abundantly punctate; with orangish-brown pubescence not obscuring integument; with a few short, erect orangish-yellow setae; apex rounded. Legs: Coxae and trochanters with short, sparse orangish-yellow setae. Profemora fusiform, meso- and metafemora pedunculate; with short, erect, somewhat orangish-brown setae; with long, erect, sparse brown setae. Tibiae with short, erect orangish-brown setae, and long, erect brown setae interspersed, erect setae distinctly denser dorsally and ventrally. Metatarsomere I longer than II-III together.

Abdomen: Finely, sparsely punctate. Basal third of ventrite 1 and 2 with short, erect, abundant yellowish-white setae, with long, erect, sparse orangish-brown setae on remaining surface; ventrites 3-5, with long, erect, sparse orangish-brown setae, slightly denser laterally. Distal margin of 5 widely concave. Apex of 6 widely emarginate.

Dimensions (mm): Holotype male: Total length, 8.20; prothoracic length, 1.15; anterior prothoracic width, 1.00; posterior prothoracic width, 1.15; maximum prothoracic width, 1.55; humeral width, 1.80; elytral length, 4.00.

Type material: Holotype male labeled: "GUATEMALA, Izabal, Sureste de Morales, Sierra de Caral. Finca Firmeza, 8/II/2000, 1150m. J. Monzon". (UVGC).

Etymology: This species is named after Jack Schuster (Universidad del Valle de Guatemala), a prominent entomologist interested in the study of the diversity and conservation of Guatemala, and author of several publications on the family Passalidae.

Remarks: Oxycoleus schusteri **sp. nov.** differs from congeners by the metafemora distinctly not abruptly clavate, instead pedunculate. *Oxycoleus schusteri* **sp. nov.** is similar to *O. brasiliensis* (Tippmann, 1953) *O. laetus* Julio, 1997, and *O. ruficollis* (Zajciw, 1964) (see photographs on Bezark, 2022b), but differs as follows: elytra narrower toward apex (almost subparallel in *O. brasiliensis, O. laetus* and *O. ruficollis*), metafemoral peduncle proportionally slender and longer (metafemoral club abruptly widened in *O. brasiliensis, O. laetus* and *O. ruficollis*).

Oxycoleus schusteri **sp. nov.** resembles *Callimoxys* species (Stenopterini), but in this species, males have five abdominal ventrites, whereas in *Oxycoleus schusteri* **sp. nov.** there are six.

Odontocera nigroaurantia sp. nov. (Fig. 3) http://zoobank.org/1E95D0B8-BD3E-4056-9FE9-ABD393AD97F5

Description: Holotype male: Integument mostly black; frons, anterior portion of vertex, about middle of genae, basal portion of area behind lower eye lobes, and mouthparts orangish brown, except brown distal segments of palpomeres; postclypeus reddish brown laterally; anteclypeus orangish yellow; anterior 3/3 of labrum brown, remaining surface orangish yellow; prothorax orangish brown on anterior and posterior quarter; longitudinal area on middle of mesoventrite, and mesoventral process orangish brown; scape, pedicel and antennomeres III-IV orangish basally, black in remaining area; antennomeres V-XI light orangish brown on basal half, dark brown on posterior half; vitreous orangish-yellow area of elytra starting at base, somewhat orangish-brown close to scutellum, becoming slightly translucent posteriorly, gradually narrower toward apex, not reaching apex; proand mesocoxae orangish brown; metacoxae, trochanters and anterior ³/₃ of femora orangish yellow, posterior third of femora dark brown; tibiae and tarsi dark brown, except orangish-brown anterior third of tarsomere II, somewhat darker on basal portion of tarsomere I.

Head: Frons moderately coarsely, abundantly punctate, with yellowish-white pubescence. Median groove distinct from postclypeus to vertex, especially between eyes. Vertex and area behind upper eye lobes coarsely, abundantly punctate; both short and long yellowish setae, sparser behind upper eye lobes. Antennal tubercles elevated, somewhat coarsely, shallowly, sparsely punctate; with short, erect, scattered yellowish setae. Area behind lower eye lobes shallowly rugose-punctate; with short, sparse yellowish setae, interspersed with long, erect yellowish setae close to eye. Genae about half length of lower eye lobe; moderately finely, sparsely punctate except smooth apex; with short, sparse yellowish setae except glabrous smooth area, with long, erect setae of same color interspersed toward ventral surface. Wide central area of postclypeus with sculpturing as on frons, except smooth sides; with yellowish-white pubescence partially obscuring integument centrally, glabrous laterally; with one long, erect, yellowish seta on each side. Gulamentum smooth, glabrous on posterocentral area; moderately coarsely, sparsely striate-punctate on middle, obliquely striate, with finer punctures on anterocentral area; with long, erect yellowish seta emerging from each puncture on sides of anterior area, almost absent centrally. Distance between upper eye lobes 0.62 times length of scape; in frontal view, distance between lower eye lobes 0.20 times length of scape. Antennae 1.2 times elytral length, reaching posterior quarter of elytra. Scape coarsely, abundantly punctate, punctures sparser ventrally; with long, erect, sparse yellowish setae, denser ventrally. Pedicel and antennomeres III-IV with short, erect yellowish setae; antennomeres V-XI with brownish pubescence, and short, scattered yellowish setae; pedicel and antennomere III-VII with long, erect brownish setae on ventral surface; antennomeres III-V nearly cylindrical,



very slightly widened toward apex; antennomeres VI-XI gradually widened toward apex. Antennal formula (ratio) based on length of antennomere III: scape = 0.75; pedicel = 0.25; IV = 0.57; V = 0.89; VI = 0.78; VII = 0.71; VIII = 0.64; IX = 0.57; X = 0.50; XI = 0.66.

Thorax: Prothorax 1.17 times longer than wide; posterior constriction well-marked; sides slightly rounded, anteriorly; posterior margin sinuous. Pronotum coarsely, abundantly punctate; with abundant yellowish pubescence; with long, erect, sparse yellowish setae throughout. Sides of prothorax with sculpturing as on pronotum, with yellowish-white pubescence, denser than pronotum. Prosternum coarsely, abundantly punctate on posterior $\frac{2}{3}$; with transverse band of punctures on central area of





Figure 3. Odontocera nigroaurantia sp. nov., holotype male: (A) Dorsal habitus; (B) Ventral habitus; (C) Lateral habitus; (D) Head, frontal view.

anterior third, followed by narrow, smooth band; with abundant, long, erect yellowish setae. Narrowest area of prosternal process 0.25 times width of procoxal cavity; posterior area triangular. Mesoventrite finely, densely punctate, somewhat striate; with abundant yellowish pubescence, slightly denser laterally. Mesanepisternum and mesepimeron with dense, thick yellowish pubescence. Metaventrite and metanepisternum with dense yellowish-white pubescence, denser and thicker on anterior half of metaventrite and laterally on metanepisternum; with long, erect, sparse yellowish setae, denser laterally on metaventrite. Scutellum with short, scattered yellowish setae, apex emarginate. Elytra: Coarsely, abundantly punctate, punctures slightly finer toward apex, sparser on vitreous area; sides longitudinally concave from near base to near apex; sutural margins slightly divergent from posterior half; with very short, erect yellowish setae, gradually sparser toward apex; with long, erect, sparse yellowish setae on anterocentral area, close to scutellum; vitreous area with short, sparse yellowish setae; apex obliquely truncate, with short, erect yellowish setae. Legs: Coxae and trochanters with long, erect yellowish-orange setae. Femora with long, erect, sparse yellowish setae. Protibiae with short, erect yellowish-brown setae, distinctly denser ventrally, and long, erect setae on outer margin; meso- and metatibiae with long, erect, sparse yellowish setae, slightly denser laterally and ventrally. Tarsi with long, erect brownish setae. Metatarsomere I as long as II-III together.

Abdomen: Subcylindrical. Ventrites 1-3 very sparsely, finely punctate except smooth distal area; with long, erect, sparse yellowish setae except on smooth distal area. Ventrite 4 with punctures and erect setae distinctly more abundant than on 1-3, slightly denser laterally, except on smooth and glabrous distal area. Central area of ventrite 5 gradually depressed from near base to apex; with moderately abundant, long, erect yellowish setae throughout; apex concave with central area rounded and projected.

Dimensions (mm): holotype male/paratype male: Total length 12.25/11.65; prothoracic length 2.55/2.25; anterior prothoracic width 1.70/1.40; posterior prothoracic width 1.65/1.35; maximum prothoracic width 1.90/1.60; humeral width 3.00/2.65; elytral length 6.15/5.85.

Type material: Holotype male labeled: "GUATEMALA: El Petén, Sayaxche. Parque Nac. El Rosario. 150 msnm. 17/ junio/1999, E. Cano". (UVGC). Paratype male: same data, except: 19/junio/1999. (UVGC).

Etymology: The specific name *nigroaurantia* is composed from the Latin "niger, nigro" (black) and "aurantia" (orange), referring to the combination of black and orange integument.

Remarks: Odontocera nigroaurantia **sp. nov.** (Fig. 3) is similar to *O. annulicornis* Magno, 2001, and *O. molorchoides* (White, 1855) (see photographs on Bezark, 2022b). It differs from both by the femora in the male holotype specimen, especially the metafemora, shorter and club distinctly stouter (longer and club slender in *O. annulicornis* and *O. molorchoides*).

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