

Revision of world species of the genus *Oreiscelio* Kieffer (Hymenoptera, Platygastroidea, Platygastriidae)

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Abstract

The world species of the genus *Oreiscelio* Kieffer (Hymenoptera, Platygastriidae) are revised. Nineteen species are recognized, of which four were previously named and are redescribed: *O. sechellensis* Kieffer (Seychelles), *O. turneri* Nixon (Botswana, Kenya, Namibia, Malawi, Mozambique, Somalia, South Africa, Tanzania, Zambia, Zimbabwe), *O. alluaudi* (Risbec) (Madagascar) and *O. rugosus* Sundholm (South Africa). The following species are described as new: *O. aequalis* Talamas, **sp. n.** (Central African Republic); *O. badius* Talamas & Johnson, **sp. n.** (Botswana); *O. coracinus* Talamas & Johnson, **sp. n.** (Botswana, Cameroon, Kenya, Malawi, Nigeria, South Africa, Tanzania, Uganda, Yemen, Zimbabwe); *O. cultrarius* Talamas, **sp. n.** (Tanzania); *O. gryphus* Talamas & Johnson, **sp. n.** (Cameroon, Central African Republic); *O. iommii* Talamas, **sp. n.** (South Africa); *O. magnipennis* Talamas, **sp. n.** (Kenya, Uganda); *O. majikununuensis* van Noort, **sp. n.** (Tanzania); *O. megadontus* Talamas, **sp. n.** (Tanzania); *O. naevus* Talamas & Johnson, **sp. n.** (Madagascar); *O. paradoxus* Talamas, **sp. n.** (Uganda, Zimbabwe); *O. rostratus* Talamas & Masner, **sp. n.** (Madagascar); *O. scapularis* Talamas, **sp. n.** (Madagascar); *O. zulu* Talamas & Polaszek, **sp. n.** (South Africa); *O. zuzkae* Talamas & Johnson, **sp. n.** (Benin, Central African Republic, Democratic Republic of the Congo, Guinea, Ivory Coast, Nigeria, South Africa,

Tanzania, Zimbabwe). An electronic version of the identification key is available at WaspWeb at <http://www.waspweb.org/Platygastroidea/Keys/>.

Keywords

Platygastridae; Scelionidae; *Oreiscelio*; key; revision; monograph; database; distribution

Introduction

The genus *Oreiscelio* was originally described by Kieffer (1910a) on the basis of a short series of females collected in the Seychelles during the Percy Sladen Trust Expedition in 1908-1909. Subsequently, only three authors described three more species, at twenty years intervals. Two species, *O. turneri* Nixon and *O. rugosus* Sundholm, were described from South Africa in 1933 and 1970, respectively. Risbec (1950) described *O. alluaudi* from Madagascar as a species in the genus *Lepidoscelio* Kieffer. Masner (1976) transferred *L. alluaudi* into *Oreiscelio*, redescribed the genus and placed it within the tribe Scelionini. Masner's concept of the tribe restricted that of Kozlov (1970) to include only forms with a reduced radial (submarginal vein) in the hind wing, tibial spur formula 1-1-1, and palpal formula 3-2 or 2-1. *Oreiscelio* and nine other genera were placed in this tribe. Five of these – *Heptascelio* Kieffer, *Pseudheptascelio* Szabó, *Scelio* Latreille, *Sceliocerdo* Muesebeck, and *Synoditella* Muesebeck – have host records that demonstrate they are parasitoids of short-horned grasshopper eggs (Acridoidea). The host of *Oreiscelio* remains unknown.

The goal of this paper is to reevaluate the described species of *Oreiscelio*, expand the biogeographic data associated with these species, and to describe new species. This work is conducted as part of the Platygastroidea Planetary Biodiversity Inventory, representing a planned step toward the revision and phylogeny of the Scelionini *sensu* Masner (1976). The contributions of the authors are as follows. E. J. Talamas and N.F. Johnson: character definition, generic concept development, species concept development, imaging, key development, manuscript preparation; S. van Noort and A. Polaszek: character definition, species concept development, imaging, key development; collection of new material (S. van Noort only); L. Masner: generic concept development, species concept development. The authors of the new species are indicated in the heading of each description.

Materials and methods

This work is based upon specimens deposited in the following collections, with abbreviations used in the text: BMNH, Natural History Museum, London, England¹; CASC, California Academy of Sciences, San Francisco, CA²; CNCI, Canadian National Collection of Insects, Ottawa, Canada³; MZLU, Zoological Museum, Lund, Sweden⁴; OSUC, C.A. Triplehorn Insect Collection, Columbus, OH⁵; SAMC, Iziko Museums of Cape Town, South Africa⁶; SANC, South African National Collection,

Pretoria, South Africa⁷; UCRC, Entomology Research Museum, Riverside, CA⁸; USNM, National Museum of Natural History, Washington, DC⁹.

Abbreviations and morphological terms used in text: A1, A2, ... A12: antennomere 1, 2, ... 12; claval formula: distribution of the large, multiporous basiconic sensilla on the underside of apical antennomeres of the female, with the segment interval specified followed by the number of sensilla per segment (Bin 1981); e.g., A12–A7:1-2-2-2-2-2; S1, S2, ... S6: metasomal sternite 1, 2, ... 6; T1, T2, ... T7: metasomal tergite 1, 2, ... 7; submarginal ridge on T1: carina dorsal and roughly parallel to the lateral margin of T1 (Fig. 54); sublateral tergal carina: longitudinal carina at the junction of dorsal and lateral faces of a metasomal tergite (Fig. 60). Morphological terminology otherwise follows Masner (1980) and Mikó et al. (2007).

The locality data reported for holotypes are not a literal transcription of the labels: some abbreviations are expanded; additional data from the collectors is also included. The holotypes should be unambiguously identifiable by means of the unique identifier or the red holotype label. The numbers prefixed with “OSUC”, “CASENT” and “UCRC ENT” (note the blank space at the end of the acronyms) are unique identifiers for the individual specimens. The numbers prefixed with “SAM–HYM–P” and “BMNH #” are unique identifiers for collecting events; individual specimens from each event are referenced in parentheses immediately following the event identifier. Details on the data associated with these specimens may be accessed at purl.oclc.org/NET/hymenoptera/hol by entering the specimen identifier in the form.

The species descriptions were generated by a database application, vSysLab (purl.oclc.org/NET/hymenoptera/vSysLab), designed to facilitate the generation of taxon by character data matrices, to integrate these with the existing taxonomic and specimen-level database, and to export the data both as text and as input files for other applications. The output is in the format of “Character: Character state(s).” Images were produced using AutoMontage and Cartograph extended-focus software. The individual images are archived at the image database at The Ohio State University (purl.oclc.org/NET/hymenoptera/specimage) and with MorphBank (www.morphbank.net), the latter also contains collections of images organized by plate. All new species have been prospectively registered with Zoobank (Polaszek et al. 2005) and other taxonomic names have been retrospectively registered. Life sciences identifiers, lsids, may be resolved at the URLs specified in the footnotes or at lsid.tdwg.org.

For the purpose of this revision, species are defined as taxonomic units diagnosable by putative autapomorphies or a unique combination of fixed character states.

***Oreiselio* Kieffer**

Oreiselio Kieffer, 1910a: 293. Original description. Type: *Oreiselio sechellensis* Kieffer, by monotypy and original designation. Kieffer, 1913: 223 (description); Muesebeck and Walkley, 1956: 377 (citation of type species); Sundholm, 1970: 375 (key to species); Masner, 1976: 16 (description); Johnson, 1992: 450 (catalog of world species).

Scelio (*Oreiscelio*) Kieffer, 1910b: 62, 73 (description, list of species, change to subgeneric status, keyed).

Oriscelio Kieffer, 1912: 58 (description); Kieffer, 1926: 266, 346 (description, keyed); Nixon, 1933: 290, 292 (description, keyed).

Original concept: urn:lsid:zoobank.org:act:B83E57E6-38E3-4EBB-A6E9-89917230A7FF

Diagnosis. *Oreiscelio* is distinguished from other genera of Scelionini *sensu* Masner (1976) by the combination of the bidentate or bispinose metascutellum, the presence of a transverse frontal carina, the strongly transverse antennomeres A4–A6, the developed inner propodeal projection, and the presence of an apically pointed S6 which is sometimes developed into a spine. Additionally, some species of *Oreiscelio* have a preocellar pit that may be conspicuous. Among the Platygastroidea, this structure was previously known only in the subfamily Telenominae (Bin and Dessart, 1983). The “horizontal flaps” of the posterior margin of the propodeum were used by Nixon (1933) as one character diagnostic for this genus. However, one new species, *O. paradoxus*, has the outer projection of the propodeum rounded (Figs 92, 94) and the typical “flap” is not present.

Description. Length 2.1–4.1 mm; body moderately elongate, robust; body dark brown to black; macropterous.

Head: In dorsal view weakly transverse; vertex coarsely sculptured; hyperoccipital carina absent; occipital carina well-developed, continuous medially; lateral ocellus distinctly separated from inner orbit of compound eye, OOL less than diameter of lateral ocellus; compound eye large, apparently glabrous; frons shallowly concave, transverse carina marking dorsal margin of frontal depression; interantennal process present, short, often excavate medially; submedian carina absent; orbital carina absent; lower frons, including cheek, without fanlike striae; inner ocular orbits diverging ventrally; clypeus very short, strongly transverse, slightly convex to emarginated medially, subequally divided by transverse carina into anteclypeus and postclypeus; malar sulcus present; gena strongly expanded, sculpture variable; labrum hidden behind clypeus; mandible of moderate length, apex with two apical, acute, teeth; ventral mandibular tooth may be smaller, equal or significantly larger than dorsal tooth; maxillary palpus 3-segmented, all segments cylindrical; labial palpus 2-segmented; antenna 12-merous in both sexes; radicle inserted apically into A1, nearly parallel to longitudinal axis of A1; A1 more or less cylindrical, ventral surface flattened; A2 with distinctive elongate seta at ventral apex, seta in females usually extending beyond apex of A3; A3 in females shorter than A2; A4–A6 strongly transverse; A7 distinctively the largest clavomere; basiconic sensilla on female antenna arranged in longitudinal pairs on apical antennomeres; claval formula A12–A7:1-2-2-2-2-2; male antenna with tyloid on A5.

Mesosoma: In dorsal view longer than wide, in lateral view longer than high; pronotum in dorsal view broad laterally, anterolateral corners angulate; transverse pronotal carina weakly indicated or indistinguishable from coarse surface sculpture; vertical epomial carina present; dorsal epomial carina present; anterior face of pronotum

tum vertical, not visible in dorsal view; lateral face of pronotum facing anterolaterally, deeply concave below dorsal epomial carina; netrion present, wide, widening ventrally, open; anterior margin of mesoscutum horizontal, not flexed ventrally to meet pronotum; mesoscutum pentagonal in outline, posterolateral corner rounded; parapsidal line sometimes visible; notaulus sometimes distinguishable amid sculpture; skaphion absent; transscutal articulation well-developed; mesoscutellum semicircular, quadrate or trapezoidal, convex, posterior margin convex to deeply notched, sometimes with medial longitudinal furrow; axilla small, dorsal margin sinuate; metanotum narrow, metascutellum clearly differentiated, apex bidentate; dorsal surface of propodeum sparsely setose; inner and outer propodeal projections usually well-developed, fairly short, approximately equal in length, sometimes slightly curved; posterior face of propodeum areolate to irregularly reticulate, sparsely setose, with small to large areolae medially; mesopleural depression well-developed; mesopleural carina present or indicated by rows of small ridges or punctures; anteroventral portion of mesepisternum strongly sculptured to smooth with few punctures; sternaulus not distinguishable; postacetabular foveae not distinguishable; mesopleural pit present, distinct; anterior margin of ventral portion of mesepisternum and acetabular carina transverse, not extended forward between forecoxae; mesepimeral sulcus absent or indicated by dorsoventral line of foveae; posterodorsal corner of mesepimeron prominent, rounded or angulate, not produced into sharp posteriorly directed tooth; mesopleuron usually with strong longitudinal ledge below subalar pit, dorsally delimiting mesopleural furrow; anteroventral portion of metapleuron continuous with lateral face, sparsely setose to glabrous; metapleuron triangle present, often divided into two distinct cells, ventral cell longitudinal, often setose; metapleuron epicoxal carina present; paracoxal sulcus present as a dorsoventral line of strong setigerous foveae extending to dorsal apex of metapleuron triangle; metapleuron epicoxal sulcus present as a line of foveae; metapleuron sulcus present, sometimes difficult to distinguish amid coarse sculpture; metapleuron pit present, sometimes difficult to distinguish amid coarse sculpture; posterior margin of metapleuron narrowly lamellate; legs not unusually proportioned, often rather short; posterior surface of hind coxa smooth, sparsely setose to glabrous; trochantellus absent; tibial spur formula 1-1-1; tarsal formula 5-5-5; pretarsal claws simple.

Wings: Hyaline to infusate; submarginal vein (Sc+R) straight, extending at most through basal 0.5 of length of forewing, curved costad apically, bifurcating near apex before reaching costal margin, r-rs straight, R1 ending near costal margin, postmarginal vein absent; bulla absent; no other tracheate veins in forewing; hindwing with tracheate portion of R present only basally; three hamuli present.

Metasoma: Generally flattened dorsally, S2 the largest and most convex, subsequent sternites becoming flatter posteriorly; female with 6 terga, 6 sterna visible externally, male with 8 terga, 7 sterna visible externally; submarginal ridge well-developed, defined by narrow laterotergites to form submarginal rim; no spiracles visible; all terga with distinct reticulation or longitudinal striae throughout, basal rows of crenulae present on each segment, continuous with striae or reticulation; base of T1 with submedial depressions into which inner propodeal angles fit, depressions shallow to deep;

T1 with sublateral keel or carina; female T6 without median raised field of microsetae or secretion; S1 not laterally compressed; anterior margin of S2 straight; felt fields on S2–S5 highly reduced, present only as slight differences in sculpture or setation; S4 in male smooth; S6 in female pointed apically, sometimes with an apical spine extending beyond the apex of T6; sculpture of S6 punctate reticulate.

Comments. *Oreiselio* can be distinguished from *Heptascelio* by the strongly transverse A4–A6, bidentate metascutellum, and the lack of conspicuous felt fields on the metasomal sterna (Johnson et al. 2007). Among the genera of the Scelionini, only *Oreiselio*, some *Scelio*, and *Heptascelio* are known to have the conspicuous, elongate seta arising from the ventral side of the apex of A2. In *Heptascelio* this seta is usually present only in the males, while in *Oreiselio* it is found in both sexes. Its function is unknown.

Two years after describing this genus, Kieffer (1912) published a description of *Oriselio*, labelling it as a new genus, with the sole species *Oriselio seychellensis*, it also labelled as a new species. Muesebeck and Walkley (1956) treated these names as emendations of the names *Oreiselio* and *O. sechellensis*, respectively. We do not consider Kieffer’s 1912 description of *Oriselio* to be an emendation because it makes no mention of the 1910 publication, or the names therein, and thus does not fulfill article 33.2 of the Code. Consequently, we agree with Masner (1976) that the similar generic name was an error by Kieffer and do not render *Oriselio* as available.

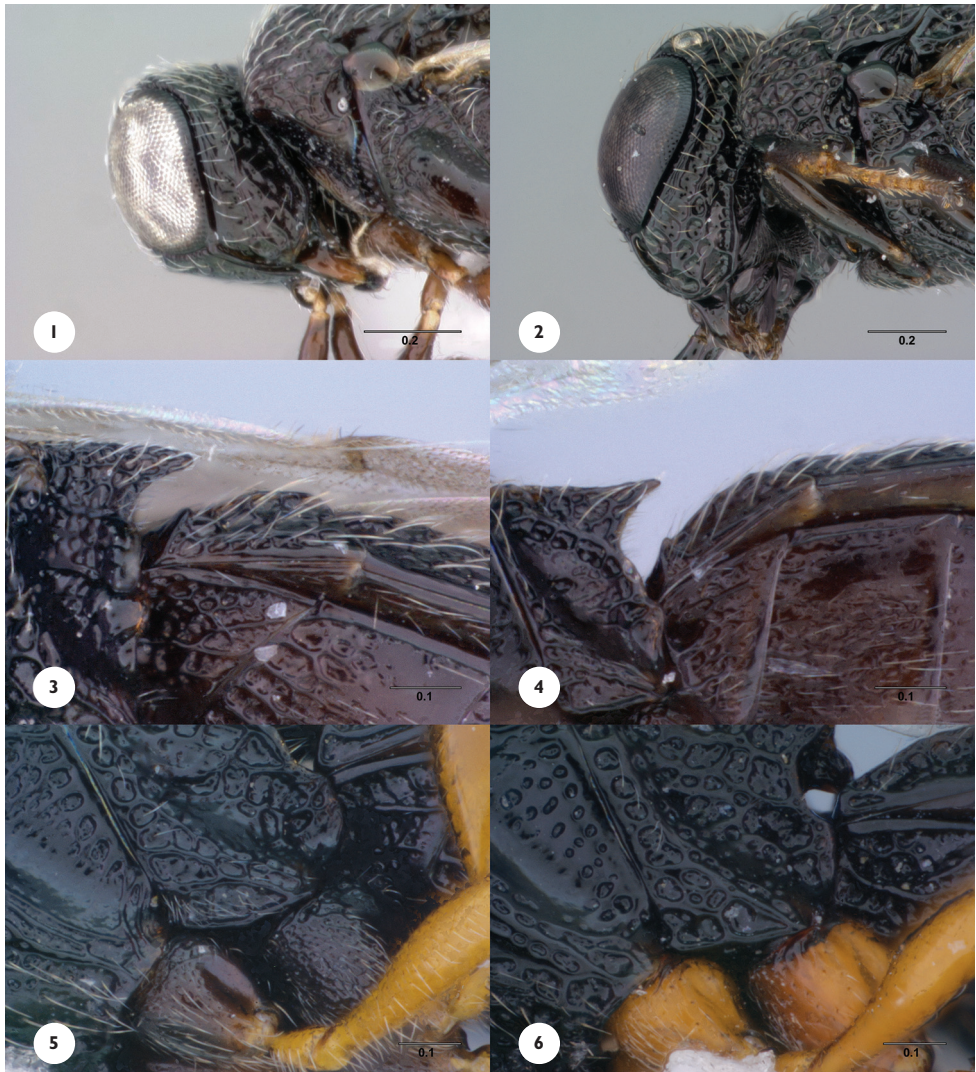
Link to distribution map.¹⁰ *Oreiselio* is found widely through sub-Saharan Africa, as well as Madagascar, the Seychelles, and the Arabian Peninsula.

Key to species of *Oreiselio*¹¹

Females

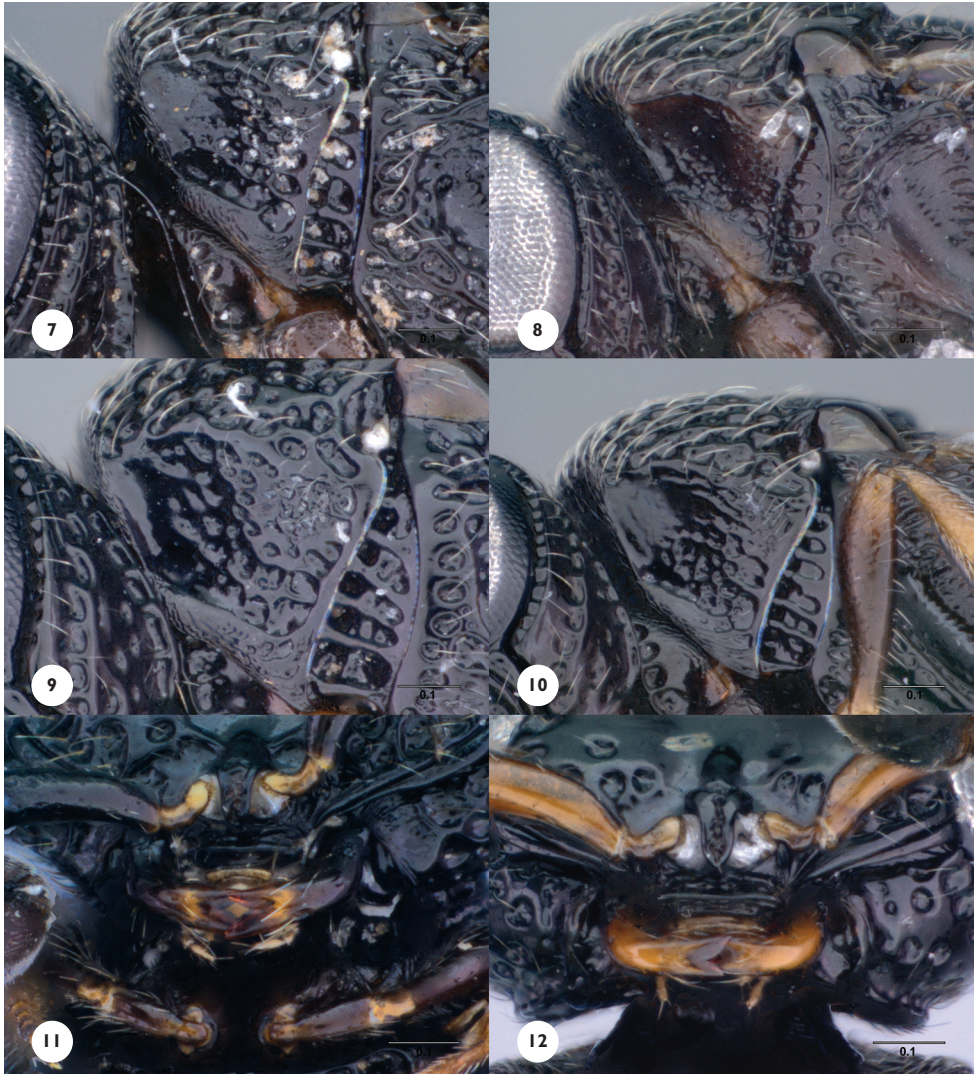
- 1 Outer propodeal projection reduced, distinctly shorter than inner projection, posterior margin of propodeal shelf strongly oblique (Figs 92, 94); mesoscutellum depressed posteriorly, in lateral view posterior margin of mesoscutellum not projecting beyond upper margin of metanotum (Figs 91, 93) ..
..... ***Oreiselio paradoxus* Talamas, sp. n.**
- Outer propodeal angle well-developed, subequal in length to inner projection, posterior margin of propodeal shelf more or less transverse, sometimes medially excised (Figs 36, 76, 100, 124); mesoscutellum variable, in lateral view posterior margin of mesoscutellum often extending beyond upper margin of metanotum (Figs 39, 51, 57, 69, 81, 87, 105, 135) **2**
- 2 Apex of fore wing extending well beyond apex of T6 by at least twice the length of T6 (Figs 67, 68, 72); antennal clava large (Fig. 71); preocellar pit present, large (as in Fig. 17); A1 dark brown, A2–A6 yellow, A7–A12 dark brown (Fig. 71) ***Oreiselio magnipennis* Talamas, sp. n.**
- Apex of fore wing ending approximately at or before apex of metasoma (Figs 37, 38, 103, 109, 120), if apex of fore wing distinctly extending beyond the apex of T6, then preocellar pit absent (as in Fig. 16); other features variable **3**

- 3 Interantennal process with dorsal flange (Figs 129, 131, 132); lateral mesoscutum areolate throughout (Fig. 130); parapsidal line and notaulus absent (Fig. 130); femoral depression foveate to weakly transversely striate (Fig. 129) ***Oreiselio zulu* Talamas & Polaszek**
- Interantennal process simple (Figs 35, 41, 77, 89, 107, 113, 119, 137) or with laterally divergent carinae (Figs 29, 47, 53, 59, 71, 125) but without dorsal flange; if dorsal flange present (Figs 63, 65, 99, 101) then lateral mesoscutum with broad smooth area (Fig. 100) or femoral depression entirely smooth (Fig. 63); parapsidal line and notaulus variable **4**
- 4 Apical spine on S6 visible in dorsal view, spine extending beyond apex of T6 (Figs 42, 44, 56, 66, 74, 84, 108, 122) **5**
- Apical spine on S6 not visible in dorsal view, not extending beyond the apex of T6, spine small or absent (Figs 30, 36, 114, 134) **13**
- 5 Ventral tooth of mandible distinctly longer and wider than dorsal tooth, length at least 3 times as long as dorsal tooth; width 2 times width of dorsal tooth (Figs 77, 78, 83, 125) **6**
- Ventral tooth of mandible slightly larger than dorsal tooth or teeth equal in size (Figs 11, 59, 65, 107, as in Fig. 71) **8**
- 6 Interantennal process extended dorsolaterally into a pair of well-developed, divergent carinae (Fig. 125); parapsidal lines inconspicuous amid mesoscutal sculpture (Fig. 124) ***Oreiselio turneri* Nixon**
- Interantennal process simple, not extending into carinae dorsally (Figs 77, 78, 83); parapsidal lines distinct (Figs 76, 82) **7**
- 7 Posterior margin of propodeal shelf between inner and outer propodeal projections concave (Fig. 84); preocellar pit present (as in Figs 15, 18); antennal scape yellow (Fig. 83); legs bright yellow (Figs 79, 81) ***Oreiselio megadontus* Talamas, sp. n.**
- Posterior margin of propodeal shelf between inner and outer propodeal projections nearly straight (Fig. 76); preocellar pit absent (as in Fig. 16); antennal scape brown (Figs 77, 78); legs pale brown becoming lighter apically (Fig. 73) ***Oreiselio majikununuensis* van Noort, sp. n.**
- 8 Mesopleural depression smooth (Fig. 63); ventral mesepisternum and ventral portion of metapleuron smooth (Fig. 63); interantennal process developed into a conspicuous dorsal process (Fig. 63); sculpture of T2–T3 highly reduced (Fig. 66) ***Oreiselio iommii* Talamas, sp. n.**
- Mesopleural depression longitudinally striate in posterior half, often with foveae (Figs 45, 57, 105, 123); ventral mesepisternum and ventral metapleuron with at least some reticulate sculpture (Figs 39, 45, 57, 105); interantennal process without conspicuous dorsal process (Figs 39, 57, 105); sculpture of T2–T3 reticulate rugose or longitudinally strigose (Figs 44, 56) **9**
- 9 Sublateral tergal carina on T2 present in at least apical half (Fig. 60); setae of head and dorsal mesosoma brown (Fig. 57, 59); wings slightly infuscate throughout (Figs 55, 60); submarginal ridge on T1 uninterrupted and



Figures 1-6.⁹⁶ 1, *Oreiselio badius* sp. n., head, posterolateral view, female (OSUC 202158); 2, *Oreiselio turneri* Nixon, head, posterolateral view, female (CASENT 2042526); 3, *Oreiselio turneri*, T1, ventrolateral view, female (OSUC 202160); 4, *Oreiselio rugosus* Sundholm, T1, ventrolateral view, female (OSUC 211421); 5, *Oreiselio zuzkae* sp. n., metapleural triangle, lateral view, female (OSUC 211413); 6, *Oreiselio alluaudi* (Risbec), metapleural triangle, lateral view, female (CASENT 2043457). Scale bars in millimeters.

- clearly separate from marginal carina (as in Fig. 54); ventral mandibular tooth slightly larger than dorsal tooth
-*Oreiselio gryphus* Talamas & Johnson, sp. n.
- Sublateral tergal carina on T2 absent (as in Fig. 86); if carina present then setae of head and dorsal mesosoma white or pale yellow (Figs 39, 41, 45, 47,



Figures 7-12.⁸⁷ 7, *Oreiselio cultrarius* sp. n., pronotum, ventrolateral view, female (OSUC 234309). 8, *Oreiselio badius* sp. n., pronotum, ventrolateral view, female (OSUC 171165); 9, *Oreiselio alluaudi* (Risbec), pronotum, ventrolateral view, female (CASENT 2042983); 10, *Oreiselio naevus* sp. n., pronotum, ventrolateral view, female (CASENT 2133408); 11, *Oreiselio coracinus* sp. n., mandibles, ventral view, female (OSUC 234362); 12, *Oreiselio rostratus* sp. n., mandibles, ventral view, female (CASENT 2043322). Scale bars in millimeters.

- 51, 53, 105, 107) and wings entirely hyaline (as in Figs 81, 82, 85); other characters variable..... **10**
- 10 Subapical margin of T6 strongly concave (Fig. 42); antennae light brown (Figs 16, 37); sculpture of dorsal frons effaced medially (Fig. 16).....
..... *Oreiselio badius* Talamas & Johnson, sp. n.

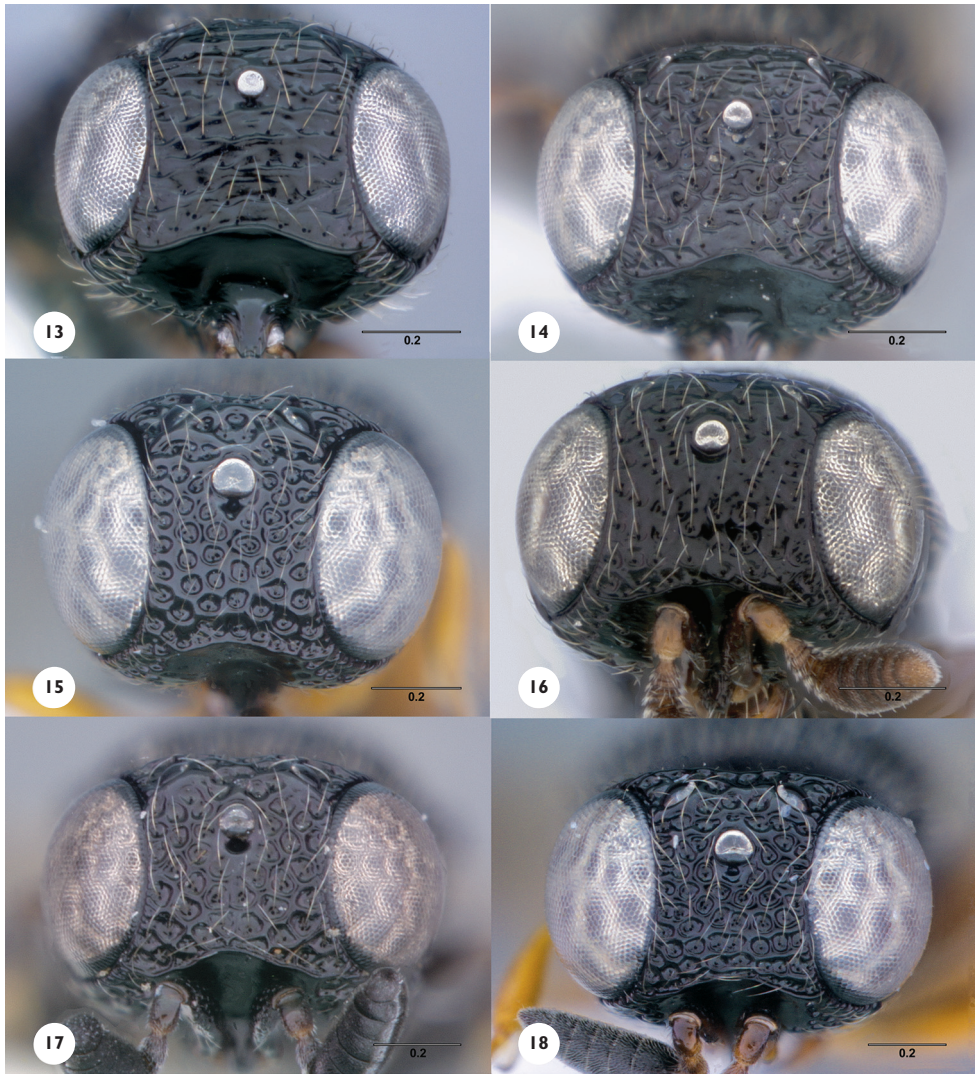
- Subapical margin of T6 straight or weakly emarginate (Figs 44, 108); antennae variable but not uniformly light brown (Figs 43, 49, 103); sculpture of dorsal frons coarse throughout (Fig. 17, as in Figs 13-15, 18) **11**
- 11 Sculpture of ventral gena posterior to genal carina smooth or with sparse fine setigerous punctures (Fig. 104); dorsal frons areolate or transversely rugose (Figs 13, 14); sculpture of mesoscutum areolate to longitudinally strigose, often effaced (Fig. 106); submarginal ridge on T1 rarely present and never extending the length of T1 (Fig. 4) ***Oreiscelio rugosus* Sundholm**
- Sculpture of ventral gena posterior to genal carina areolate or coarsely punctate (as in Figs 1, 2); dorsal frons foveate to areolate (Fig. 17, as in Fig. 15); mesoscutum areolate, often with pronounced longitudinal elements (Figs 46, 52); submarginal ridge on T1 usually present and extending the length of T1 (Fig. 54)..... **12**
- 12 Carinae on interantennal process weakly developed, not diverging laterally on surface of frons (Fig. 53); pronotal cervical sulcus deeply impressed with large pit at anterior end, sulcus always reaching posterior margin of pronotum and usually smoothly excavated (Fig. 7); metascutellar spines well separated from each other with distinct emargination between them; cells of paracoxal and metapleural sulci often large or irregular (Fig. 51)..... ***Oreiscelio cultrarius* Talamas, sp. n.**
- Divergent carinae on frons arising from interantennal process well-developed (Fig. 47); pronotal cervical sulcus often poorly defined or not reaching posterior margin of pronotum (as in Fig. 8); metascutellar spines variable; cells of paracoxal and metapleural sulci of average size (Fig. 45)..... ***Oreiscelio coracinus* Talamas & Johnson, sp. n.**
- 13 Width of T6 along anterior margin less than 3 times its medial length, subapical margin straight (Fig. 30); interantennal process with divergent carinae (Fig. 29)..... ***Oreiscelio aequalis* Talamas, sp. n.**
- Width of T6 along anterior margin more than 3 times its medial length (Figs 36, 98, 116, 128) or subapical margin convex (Fig. 114); interantennal process without divergent carinae (Figs 35, 101, 113, 119, 131) **14**
- 14 Posterior margin of mesoscutellum deeply notched (Figs 118, 130); mesoscutellum with distinct median longitudinal furrow reaching from the posterior margin to scutoscutellar sulcus, rarely with shallow median indentation (Figs 118, 130); ventral mandibular tooth equal to or larger than dorsal tooth in length and width (Figs 119, 131)..... **15**
- Posterior margin of mesoscutellum convex or broadly emarginate (Figs 34, 88, 100, 112); mesoscutellum convex or with a shallow median longitudinal indentation (Figs 34, 88, 100, 112); ventral mandibular tooth equal to or smaller than dorsal tooth in length and width (Figs 12, 35, 113) **16**
- 15 S3–S4 with fine setigerous punctures, but otherwise devoid of sculpture (Fig. 120); sculpture of lateral mesoscutum between parapsidal lines and lateral margin with narrow, elongate smooth area (Fig. 118) ***Oreiscelio sechellensis* Kieffer**

- S3–S4 with longitudinally reticulate sculpture throughout (Fig. 138); sculpture of lateral mesoscutum between parapsidal lines and lateral margin somewhat confused, but not smooth (Fig. 136) ***Oreiscelio zuzkae* Talamas & Johnson, sp. n.**
- 16 T2–T3 longitudinally striate, sometimes with rugulose interstices (Figs 98, 114)..... **17**
- T2–T3 evenly reticulate rugose (Fig. 36) **18**
- 17 Subapical margin of T6 convex in dorsal view (Fig. 114); S1 simple, if median keel present, then very small and not extending to posterior margin (Fig. 109)..... ***Oreiscelio scapularis* Talamas, sp. n.**
- Subapical margin of T6 straight or emarginate in dorsal view (Fig. 98); S1 with median keel extending throughout length of sclerite (Fig. 102)..... ***Oreiscelio rostratus* Talamas & Masner, sp. n.**
- 18 Preocellar pit present (Fig. 15) or indicated by a small round depression (as in Fig. 14); anterior pit of the pronotum large (Fig. 9); posterior margin of ventral pronotum with percurrent sulcus (Fig. 9); S1 with thin, straight median keel (Fig. 31); ventral cell of metapleural triangle with at most 3 very small setae (Fig. 6); lateral region of tergites rarely with faint corbiculate sculpture inside cells..... ***Oreiscelio alluaudi* (Risbec)**
- Preocellar pit absent (as in Fig. 16); anterior pit of the pronotum small (Fig. 10); posterior margin of ventral pronotum without percurrent sulcus (Fig. 10); S1 simple, without median keel (Fig. 86); ventral cell of metapleural triangle almost always with many small white setae (as in Fig. 5); lateral region of tergites usually with dense corbiculate microsculpture (Fig. 86)..... ***Oreiscelio naevus* Talamas & Johnson, sp. n.**

Males

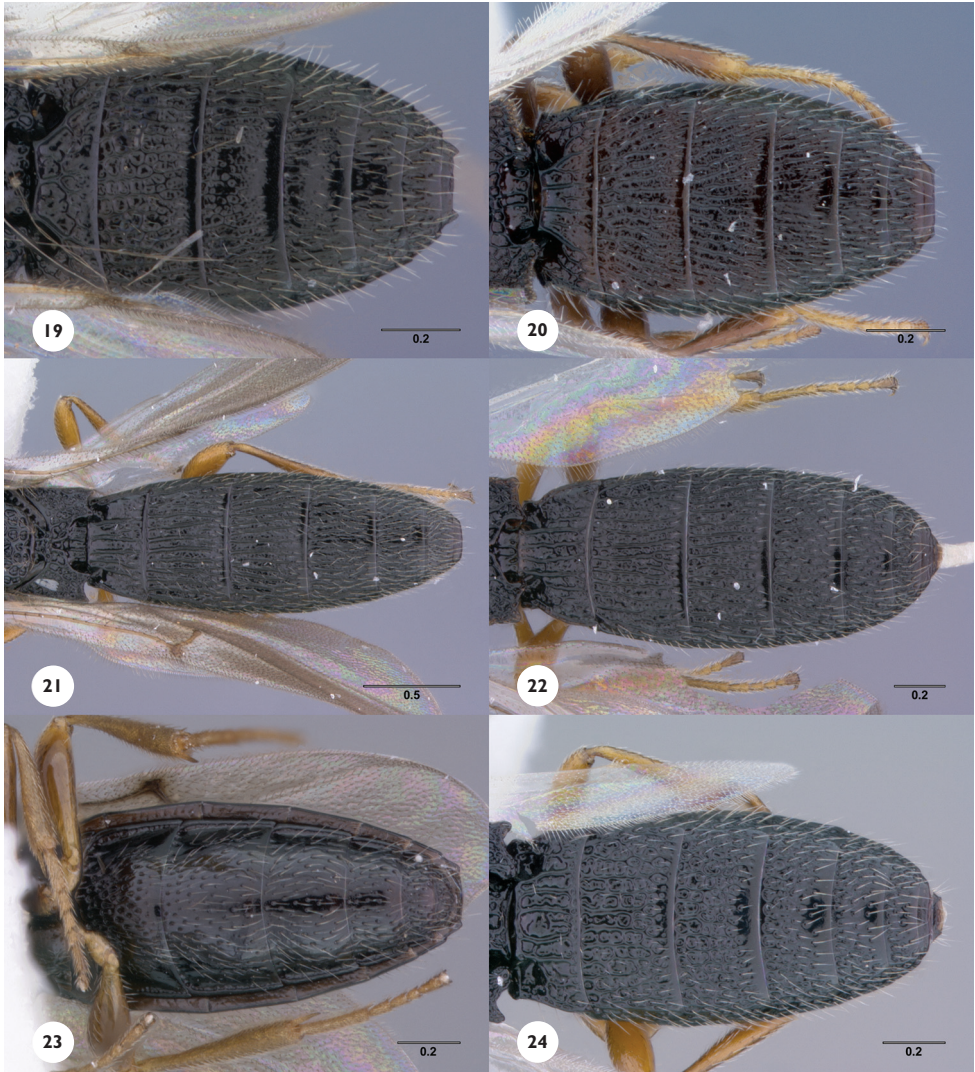
(unknown for *O. aequalis*, *O. cultrarius*, *O. gryphus*, *O. iomii*, *O. magnipennis*, *O. megadontus*, *O. majikununuensis*, *O. paradoxus* and *O. zuzkae*)

- 1 T2–T3 with prominent longitudinal striae (Figs 21, 22); T2 with well-defined sublateral tergal carina (as in Fig. 60); lateral mesoscutum with glabrous smooth area that extends posteriorly to scutoscutellar sulcus (Figs 100, 112); metasoma elongate, length at least 2.5 times width **2**
- T2–T3 with reticulate sculpture (Figs 19, 20, 24); T2 sometimes with sublateral tergal carina; lateral mesoscutum sometimes with smooth area containing fissures or colliculate microsculpture, smooth area sometimes extends posteriorly to scutoscutellar sulcus (Figs 34, 40, 88, 90); metasoma length variable **3**
- 2 Interantennal process developed dorsally into an oblong lobe, separated from lower portion by shallow notch (Fig. 99); width of T6 along apical margin more than 2.5 times its maximum length (Fig. 22); sculpture of T6 reticulate rugose (Fig. 22)..... ***Oreiscelio rostratus* Talamas & Masner, sp. n.**



Figures 13-18.⁹⁸ 13, *Oreiselio rugosus* Sundholm, upper frons, anterodorsal view, female (OSUC 234351); 14, *Oreiselio rugosus*, upper frons, anterodorsal view, female (OSUC 211420); 15, *Oreiselio al-luandi* (Risbec), upper frons, anterodorsal view, female (CASENT 2042636); 16, *Oreiselio badius* sp. n., upper frons, anterodorsal view, female (OSUC 202167); 17, *Oreiselio coracinus* sp. n., upper frons, anterodorsal view, female (OSUC 234341); 18, *Oreiselio zuzkae* sp. n., upper frons, anterodorsal view, female (OSUC 207588). Scale bars in millimeters.

- Interantennal process not developed dorsally into an oblong lobe (Fig. 111); width of T6 along apical margin less than 2 times its maximum length (Fig. 21); sculpture of T6 uniformly punctate (Fig. 21).... ***Oreiselio scapularis* Talamas, sp. n.**
- 3 Apex of T7 bispinose (Fig. 19); interantennal process dorsolaterally diverging into two distinct carinae along surface of frons (Figs 47, 125) **4**



Figures 19-24.⁸⁹ 19, *Oreiscelio turneri* Nixon, metasoma, dorsal view, male (OSUC 233669); 20, *Oreiscelio badius* sp. n., metasoma, dorsal view, male (OSUC 202168); 21, *Oreiscelio scapularis* sp. n., metasoma, dorsal view, male (CASENT 2043386); 22, *Oreiscelio rostratus* sp. n., metasoma, dorsal view, male (CASENT 2043510); 23, *Oreiscelio sechellensis* Kieffer, metasoma, ventral view, male (OSUC 234302); 24, *Oreiscelio alluaudi* (Risbec), metasoma, dorsal view, male (CASENT 2133421). Scale bars in millimeters.

- Apex of T7 straight, convex, or emarginate with small points laterally (Figs 20, 23, 24); interantennal process variable, if dorsolaterally divergent carinae present, then very faint (Figs 35, 41, 89, 107, 119) 5
- 4 Ventral mandibular tooth 2 times as large as dorsal tooth (Fig. 126); submarginal ridge on T1 usually irregular (Fig. 3) or absent ***Oreiscelio turneri* Nixon**

- Ventral mandibular tooth less than 2 times larger than dorsal tooth (as in Fig. 137) or teeth equal in size (Fig. 11); submarginal ridge on T1 smooth and well defined, rarely irregular (as in Fig. 54)
 ***Oreiscelio coracinus* Talamas & Johnson, sp. n.**
- 5 Posterior margin of mesoscutellum deeply notched (Fig. 118, as in Fig. 136); mesoscutellum with distinct median longitudinal furrow reaching from the posterior margin to scutoscutellar sulcus (Fig. 118, as in Fig. 130); T1 submarginal ridge clearly separated from marginal carina for the length of T1 (as in Fig. 54); posterior margin of T7 emarginate (Fig. 23); S3–S4 with fine setigerous punctures, but otherwise smooth (Fig. 23)
 ***Oreiscelio sechellensis* Kieffer**
- Posterior margin of mesoscutellum emarginate to convex (Figs 34, 88); mesoscutellum sometimes with a shallow indentation, but without a distinct longitudinal furrow reaching the anterior margin (Figs 34, 88); T1 submarginal ridge at most present in apical half of T1 (as in Fig. 4); posterior margin of T7 straight or slightly convex (Figs 20, 24); sculpture of S3–S4 variable..... **6**
- 6 Sculpture of ventral gena posterior to genal carina smooth, sometimes with sparse fine setigerous punctures (Fig. 104) ***Oreisceio rugosus* Sundholm**
- Sculpture of ventral gena posterior to genal carina areolate (as in Fig. 2) or with large setigerous punctures (Fig. 1) **7**
- 7 Apex of T7 with small rounded points laterally (Fig. 20); posterior margin of propodeal shelf between inner and outer propodeal projections nearly straight (Fig. 20); sculpture of dorsal frons effaced medially (Fig. 16)
 ***Oreiscelio badius* Talamas & Johnson, sp. n.**
- Apex of T7 without small rounded points laterally (Fig. 24); posterior margin of propodeal shelf between inner and outer propodeal projections concave (Fig. 24, as in Figs 21, 22); sculpture of dorsal frons uniform throughout (Fig. 15, as in Figs 17, 18)..... **8**
- 8 Ventral mesepisternum coarsely foveate; metasomal tergites laterally without dense corbiculate microsculpture; metapleural cell glabrous or with one or two setae (Fig. 6); S1 with thin, straight longitudinal medial keel in lateral view (Fig. 31); notaulus indicated by lines of deeper sculpture (Fig. 34); T2 with sublateral tergal carina (as in Fig. 60)
 ***Oreiscelio alluaudi* (Risbec)**
- Ventral mesepisternum mostly to entirely smooth; metasomal tergites laterally usually with dense microsculpture; metapleural cell setose (as in Fig. 5); S1 without longitudinal medial keel in lateral view (Fig. 86); notaulus absent or weakly indicated by lines of deeper sculpture (Fig. 88); T2 usually without sublateral tergal carina
 ***Oreiscelio naevus* Talamas & Johnson, sp. n.**

***Oreiscelio aequalis* Talamas, sp. n.**

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urn:lsid:biosci.ohio-state.edu:osuc_concepts:229879

Figures 25-30; Morphbank¹²

Description. General: Body length of female: 3.3 mm (n=1). Body color: head and mesosoma black; metasoma dark brown to black.

Antenna: Color of antennae in female: A1 black, A2–A6 pale brown, A7–A12 black. Seta on pedicel of antenna in female: present, reaching past apex of A3.

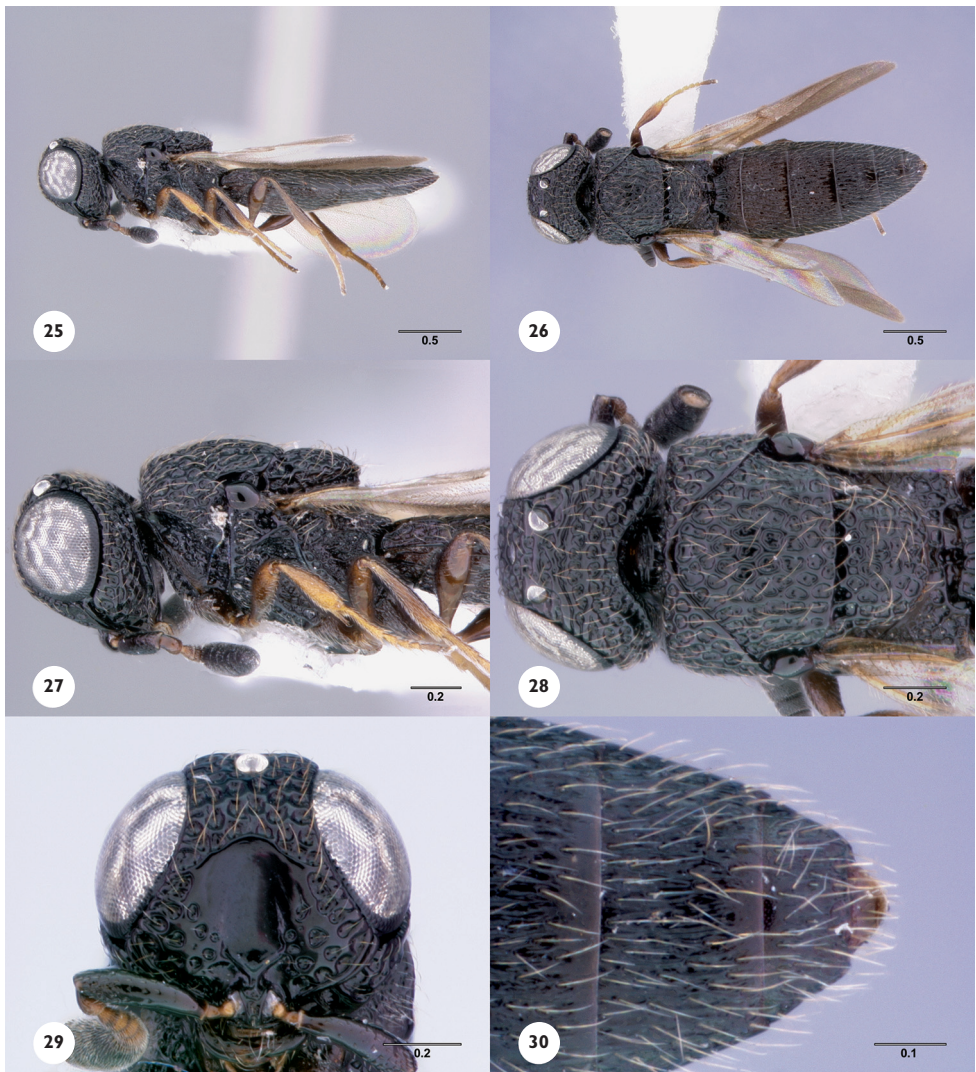
Head: Color of setae on the head: yellow. Sculpture of dorsal frons between frontal carina and median ocellus: areolate. Preocellar pit in females: present as a distinct pit. Transverse rugae at vertex: present. Sculpture of posterior vertex: areolate. Sculpture of occipital rim: areolate. Interantennal process: diverging into two carinae that extend laterally along surface of frons. Number of anteriorly projecting setae on anteclypeus: 6. Color of mandibles in female: basal half black; apical half dark brown. Mandibular teeth in female: ventral tooth larger, but less than 2 times as long as dorsal tooth. Sculpture of ventral gena anterior to genal carina: row of areolae. Sculpture of ventral gena posterior to genal carina: areolate. Shape of anteclypeus: striplike, straight to slightly convex.

Legs: Color of legs: brown, tarsi and distal portion of tibiae yellow.

Mesosoma: Sculpture of dorsal pronotum: areolate. Color of setae on the dorsal mesosoma: yellow. Sculpture of medial mesoscutum: areolate. Sculpture of lateral mesoscutum: same as medial mesoscutum with a subtle confusion of sculptural elements. Notaulus in female: absent. Parapsidal line: delimited. Sculpture of scutellum: areolate. Median furrow on scutellum: present as a weak indentation. Posterior margin of scutellum: emarginate. Outer projection of the propodeum: present as distinct corner or posteriorly projecting spine. Posterior margin of propodeal shelf between inner and outer propodeal projections in female: concave. Sculpture of ventral pronotum: foveate reticulate, becoming smooth at anterolateral corner. Anterior pronotal pit: large. Pronotal cervical sulcus: well defined by contiguous punctures. Mesepimeral sulcus: indicated by dorsoventral line of foveae, crenulate. Sculpture of femoral depression in female: transversely striate throughout, finely foveate throughout. Mesopleural carina: present as one or two carinae. Sculpture of ventral mesepisternum: foveate. Pilosity of metapleural triangle in female: present as many short fine white setae. Sculpture of ventral area of metapleuron: foveate reticulate.

Metasoma: Submarginal ridge on T1: percurrent, well-defined. Sublateral carina on T2: percurrent. Sculpture of T2–T3: longitudinally strigose with rugose interstices. Sculpture of T4: longitudinally strigose. Sculpture of T5: longitudinally strigose. Shape of subapical T6 in female in dorsal view: trapezoidal, basal width twice the apical width. Longitudinal medial keel on S1: absent. Sculpture of medial S2 in female: punctate reticulate. Sculpture of medial S3 in female: effaced to smooth. Sculpture of medial S4 in female: effaced to smooth. Sculpture of medial S5 in female: effaced to

smooth. Sculpture of lateral S3 in female: punctate crenulate. Sculpture of lateral S4 in female: punctate crenulate. Sculpture of lateral S5 in female: punctate crenulate. Sculpture of marginal depression of S2 in female: rugulose. Sculpture of marginal depression of S3 in female: mostly smooth, with scattered punctures or shallow rugulae. Sculpture of marginal depression of S4 in female: mostly smooth with scattered punctures or shallow rugulae. Sculpture of marginal depression of S5 in female: mostly smooth with scattered punctures. Apical spine on S6 in female: extending beyond apex of T6 and visible in dorsal view.



Figures 25-30.⁹⁰ *Oreiscelio aequalis*, sp. n., female holotype (OSUC 211416). 25, Lateral habitus; 26, Dorsal habitus; 27, Head and mesosoma, lateral view; 28, Head and mesosoma, dorsal view; 29, Head, anterior view; 30, T5 and T6, dorsal view. Scale bars in millimeters.

Diagnosis. *Oreiselio aequalis* is most similar in appearance to *O. gryphus* and *O. coracinus*, but may be easily identified by the distinctive shape of T6 in dorsal view (Fig. 30). Additionally, the width of the metasoma gradually narrows posteriorly, giving it a characteristic shape in dorsal view (Fig. 26).

Etymology. The epithet *aequalis*, meaning “equal”, refers to the apical spine on S6 which ends at the same point as the apex of T6.

Link to distribution map.¹³

Material examined. Holotype female: **CENTRAL AFRICAN REPUBLIC:** Dzanga-Ndoki National Park, 02°21.60'N 16°03.20'E, 350 m, 38.6 km (173°) S Lidjombo, Sangha-Mbaéré Préf. Écon., 21-27.V.2001, S. van Noort, yellow pan trap lowland rainforest CAR01–Y55, SAM–HYM–P029377 (OSUC 211416) (deposited in SAMC)¹⁴.

Oreiselio alluaudi (Risbec)

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urn:lsid:biosci.ohio-state.edu:osuc_concepts:5001

Figures 6, 9, 15, 24, 31-36; Morphbank¹⁵

Lepidoscelio alluaudi Risbec, 1950: 590. Original description.

Oreiselio alluadi: Masner, 1976: 17. Type information, generic transfer, spelling error.

Description. General: Body length of female: 3.2-3.8 mm (n=10). Body length of male: 3.0 mm (n=1). Body color: black.

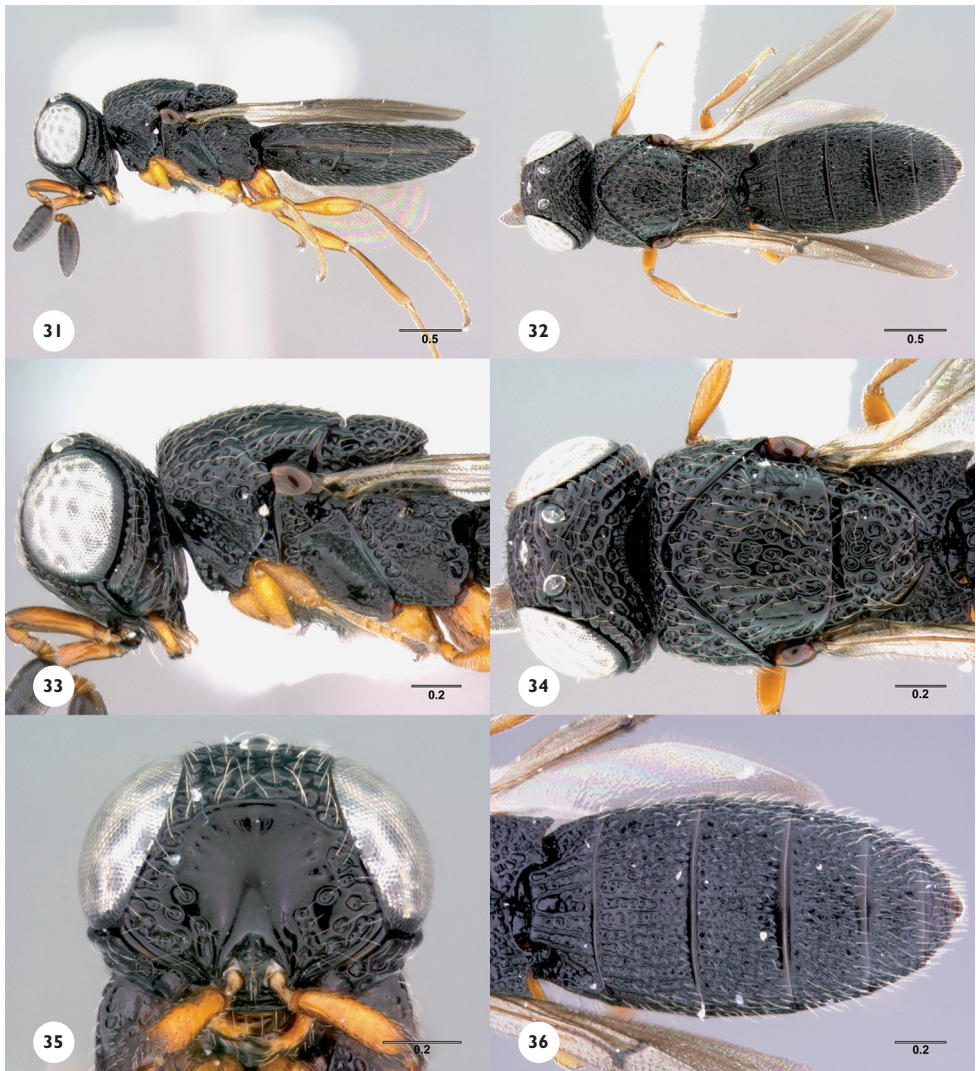
Antenna: Color of antennae in female: A1–A6 yellow; A7–A12 dark brown to black, A1–A6 brown; A7–A12 dark brown to black. Color of antennae in male: A1 brown; A2–A12 yellow. Seta on pedicel of antenna in female: present, reaching past apex of A3.

Head: Color of setae on the head: yellow. Sculpture of dorsal frons between frontal carina and median ocellus: coarsely foveate. Preocellar pit in females: indicated by a small round depression, present as a distinct pit. Transverse rugae at vertex: present. Sculpture of posterior vertex: coarsely foveate. Sculpture of occipital rim: areolate. Interantennal process: simple. Number of anteriorly projecting setae on anteclypeus: 6. Color of mandibles in male: yellow throughout, teeth brown. Color of mandibles in female: yellow throughout with teeth brown. Mandibular teeth in female: dorsal tooth larger. Sculpture of ventral gena anterior to genal carina: row of areolae, row of contiguous punctures. Sculpture of ventral gena posterior to genal carina: mostly smooth, with sparse large punctures, coarsely and irregularly punctate. Shape of anteclypeus: striplike, straight to slightly convex.

Legs: Color of legs: entirely yellow.

Mesosoma: Sculpture of dorsal pronotum: areolate with expanded ridges. Color of setae on the dorsal mesosoma: yellow. Sculpture of medial mesoscutum: coarsely foveate. Sculpture of lateral mesoscutum: with an elevated patch of smoother sculp-

ture, bounded by mesoscutal humeral sulcus laterally, extending to scutoscutellar sulcus posteriorly. Notaulus in female: present. Parapsidal line: delimited. Sculpture of scutellum: areolate. Median furrow on scutellum: absent. Posterior margin of scutellum: emarginate, convex. Outer projection of the propodeum: present as distinct corner or posteriorly projecting spine. Posterior margin of propodeal shelf between inner and outer propodeal projections in female: concave. Posterior margin



Figures 31-36.⁹¹ *Oreiscelio alluaudi* (Risbec). 31, Lateral habitus, female (CASENT 2042833); 32, Dorsal habitus, female (CASENT 2042833); 33, Head and mesosoma, lateral view, female (CASENT 2042833); 34, Head and mesosoma, dorsal view, female (CASENT 2042833); 35, Head, anterior view, female (CASENT 2042921); 36, Metasoma, dorsal view, female (CASENT 2042833). Scale bars in millimeters.

of propodeal shelf between inner and outer propodeal projections in male: concave. Sculpture of ventral pronotum: foveate reticulate, becoming smooth at anterolateral corner. Anterior pronotal pit: large. Pronotal cervical sulcus: well defined by contiguous punctures. Mesepimeral sulcus: indicated by dorsoventral line of foveae. Sculpture of femoral depression in female: anterior half smooth, posterior half finely foveate. Sculpture of femoral depression in male: finely foveate throughout, with weak transverse striae throughout. Mesopleural carina: indicated by one or two rows of punctures. Sculpture of ventral mesepisternum: foveate. Pilosity of metapleural triangle in female: glabrous or with at most 3 small setae. Pilosity of metapleural triangle in male: absent. Sculpture of ventral area of metapleuron: foveate reticulate, with slightly appressed ridges.

Metasoma: Submarginal ridge on T1: absent. Sublateral tergal carina on T2: absent. Sculpture of T2–T3: reticulate rugose. Sculpture of T4: reticulate rugose. Sculpture of T5: reticulate rugose. Shape of subapical T6 in female in dorsal view: short, width along anterior margin at least three times the length. Apex of T7 in male: slightly convex. Longitudinal medial keel on S1: present. Sculpture of medial S2 in female: punctate reticulate. Sculpture of medial S3 in female: effaced to smooth. Sculpture of medial S4 in female: effaced to smooth. Sculpture of medial S5 in female: effaced to smooth. Sculpture of lateral S3 in female: foveolate. Sculpture of lateral S4 in female: foveolate. Sculpture of lateral S5 in female: foveate. Sculpture of marginal depression of S2 in female: mostly smooth, with scattered punctures or shallow rugulae, finely punctate throughout. Sculpture of marginal depression of S3 in female: mostly smooth, with scattered punctures or shallow rugulae, finely punctate throughout. Sculpture of marginal depression of S4 in female: rugulose. Sculpture of marginal depression of S5 in female: rugulose. Apical spine on S6 in female: not extending beyond apex of T6 and not visible in dorsal view. Sculpture of medial S2 in male: punctate reticulate. Sculpture of medial S3 in male: smooth. Sculpture of lateral S3 in male: foveolate. Sculpture of lateral S4 in male: foveolate. Sculpture of medial S5 in male: smooth. Sculpture of lateral S5 in male: foveolate.

Diagnosis. *Oreiscelio alluaudi* is similar to *O. rostratus* and *O. naevus*. *Oreiscelio alluaudi* is the only species from Madagascar with a preocellar pit (Fig. 15) present in females, and this character allows it to be separated from females of both *O. rostratus* and *O. naevus*. It may also be distinguished from *O. rostratus* by the sculpture of the dorsal metasoma (Fig. 36). Males of *O. alluaudi* may be separated from those of *O. naevus* by the sculpture of the ventral mesepisternum which is coarsely foveate in the former and mostly to entirely smooth in the latter.

Link to distribution map.¹⁶

Material examined. Holotype female: **MADAGASCAR:** Diego-Suarez, Ch. Alluaud 1893, MNHN 0003 (MNHN)¹⁷. *Other material:* **MADAGASCAR:** 1 male, 10 females, CASENT 2042833, 2042920, 2042984, 2043457, 2133066, 2133421 (CASC); CASENT 2132558, 2043458, 2042983, 2042921, 2042636 (OSUC).

***Oreiscelio badius* Talamas & Johnson, sp. n.**

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urn:lsid:biosci.ohio-state.edu:osuc_concepts:232502

Figures 1, 8, 16, 20, 37-42; Morphbank¹⁸

Description. General: Body length of female: 2.2-2.4 mm (n=20). Body length of male: 2.2 mm (n=1). Body color: dark brown to black, metasoma often lighter than head and mesosoma.

Antenna: Color of antennae in female: pale brown throughout. Color of antennae in male: A1–A2 brown; A3–A12 variably becoming yellow apically, antennomeres often yellow ventrally. Seta on pedicel of antenna in female: present, reaching past apex of A3.

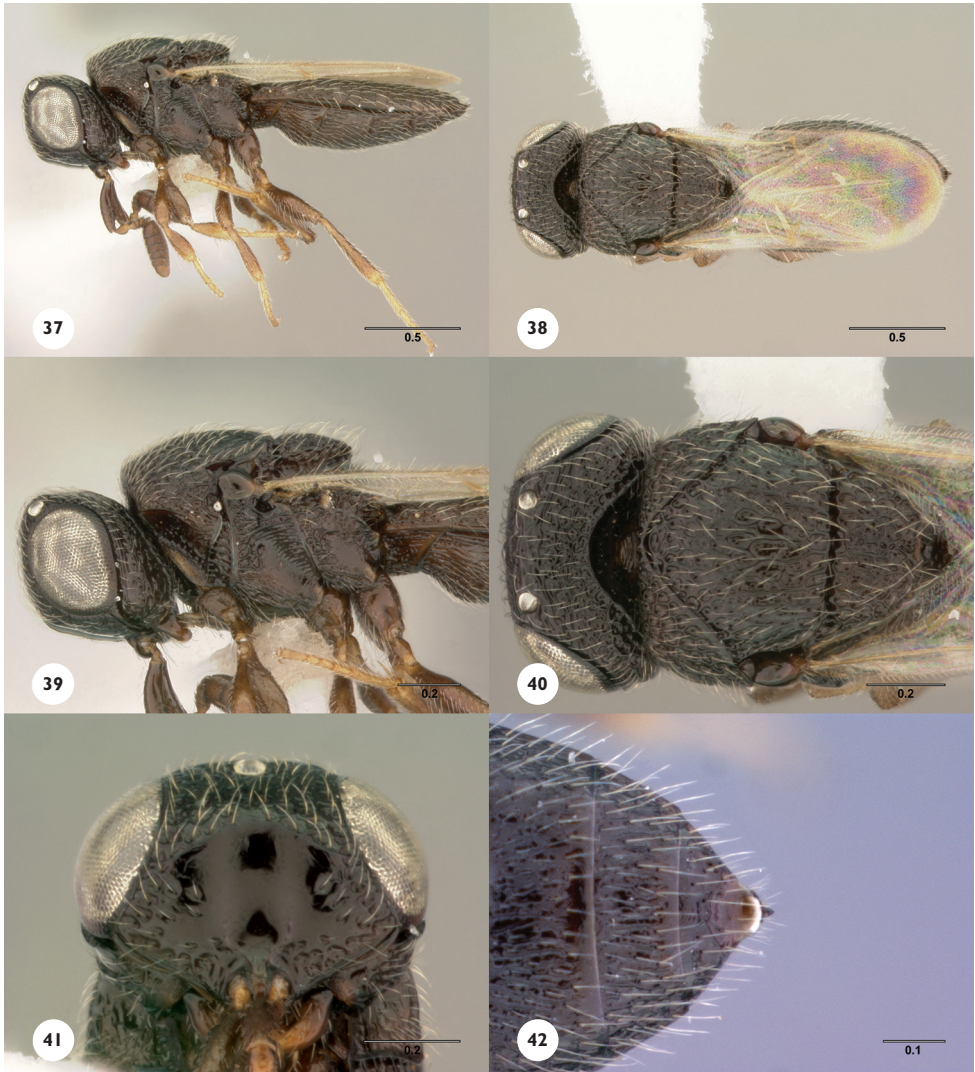
Head: Color of setae on the head: white. Sculpture of dorsal frons between frontal carina and median ocellus: areolate, areolate, effaced medially. Preocellar pit in females: absent, indicated by a small round depression. Transverse rugae at vertex: present. Sculpture of posterior vertex: areolate. Sculpture of occipital rim: areolate. Interantennal process: simple. Number of anteriorly projecting setae on anteclypeus: 6. Color of mandibles in male: basal half black; apical half pale brown. Color of mandibles in female: yellow throughout with teeth brown. Mandibular teeth in female: teeth of equal size, ventral tooth larger, but less than 2 times as long as dorsal tooth. Sculpture of ventral gena anterior to genal carina: row of areolae, dorsoventrally rugose. Sculpture of ventral gena posterior to genal carina: areolate, mostly smooth, with sparse large punctures. Shape of anteclypeus: striplike, straight to slightly convex.

Legs: Color of legs: brown, tarsi and distal portion of tibiae yellow, brown, distal portion of tibiae and tarsomeres 1-4 yellow, apical tarsomere brown.

Mesosoma: Sculpture of dorsal pronotum: areolate. Color of setae on the dorsal mesosoma: white. Sculpture of medial mesoscutum: areolate, areolate, with pronounced longitudinal ridges. Sculpture of lateral mesoscutum: same as medial mesoscutum with a subtle confusion of sculptural elements. Notaulus in female: absent. Parapsidal line: indistinguishable. Sculpture of scutellum: areolate. Median furrow on scutellum: absent, present as a weak indentation. Posterior margin of scutellum: emarginate, convex. Outer projection of the propodeum: present as distinct corner or posteriorly projecting spine. Posterior margin of propodeal shelf between inner and outer propodeal projections in female: concave. Posterior margin of propodeal shelf between inner and outer propodeal projections in male: nearly straight. Sculpture of ventral pronotum: foveate reticulate, becoming smooth at anterolateral corner, mostly smooth with longitudinal rugulae ventrally. Anterior pronotal pit: absent, small. Pronotal cervical sulcus: poorly defined, well defined by contiguous punctures. Mesepimeral sulcus: indicated by dorsoventral line of foveae, crenulate. Sculpture of femoral depression in female: anterior half smooth, posterior half longitudinally striate. Sculpture of femoral depression in male: smooth throughout, with weak transverse striae throughout. Mesopleural carina: present as one or two carinae, weakly defined by fine ridges. Sculpture of ventral mesepisternum: with smooth area surrounded by small foveae. Pilosity of metapleural triangle in female: present as many short fine

white setae. Pilosity of metapleural triangle in male: present as many short fine white setae. Sculpture of ventral area of metapleuron: smooth

Metasoma: Submarginal ridge on T1: indicated by an irregular ridge, absent. Sublateral tergal carina on T2: absent. Sculpture of T2–T3: reticulate rugose. Sculpture of T4: longitudinally strigose. Sculpture of T5: longitudinally strigose. Shape of subapical T6 in female in dorsal view: short, width along anterior margin at least three times the length. Apex of T7 in male: straight to slightly concave, with small points laterally. Longitudinal



Figures 37-42.⁹² *Oreiscelio badius* sp. n. 37, Lateral habitus, holotype female (OSUC 171169); 38, Dorsal habitus; holotype female (OSUC 171169); 39, Head and mesosoma, lateral view, holotype female (OSUC 171169); 40, Head and mesosoma, dorsal view; 41, Head, anterior view, holotype female (OSUC 171169); 42, T5 and T6, dorsal view, female (OSUC 164329).

medial keel on S1: absent. Sculpture of medial S2 in female: reticulate rugose. Sculpture of medial S3 in female: effaced to smooth. Sculpture of medial S4 in female: effaced to smooth. Sculpture of medial S5 in female: effaced to smooth. Sculpture of lateral S3 in female: reticulate rugose, longitudinally strigose. Sculpture of lateral S4 in female: reticulate rugose, longitudinally strigose. Sculpture of lateral S5 in female: reticulate rugose. Sculpture of marginal depression of S2 in female: rugulose. Sculpture of marginal depression of S3 in female: rugulose. Sculpture of marginal depression of S4 in female: rugulose. Sculpture of marginal depression of S5 in female: rugulose. Apical spine on S6 in female: extending beyond apex of T6 and visible in dorsal view. Sculpture of medial S2 in male: punctate reticulate. Sculpture of medial S3 in male: smooth. Sculpture of lateral S3 in male: longitudinally strigose. Sculpture of lateral S4 in male: rugulose. Sculpture of medial S5 in male: smooth. Sculpture of lateral S5 in male: longitudinally strigose.

Diagnosis. *Oreiselio badius* is similar to *O. rugosus*, *O. turneri*, *O. zulu* and *O. coracinus*. The concave carina that delimits the subapical portion of T6 (Fig. 42) serves well to identify this species. It may be reliably separated from *O. rugosus* by the coarse sculpture of the gena (Fig. 1), from *O. turneri* by the subequal size of the mandibular teeth, and from *O. coracinus* by the lack of an anterior pronotal pit (Fig. 8) and very faint or absent divergent carinae on the frons above the interantennal process (Fig. 41). *Oreiselio badius* can be separated from *O. zulu* by the presence of a dorsal flange on the interantennal process (Fig. 131, 132) in the latter.

Etymology. The epithet *badius*, meaning “brown”, refers to the color of this species.

Link to distribution map.¹⁹

Material examined. Holotype female: **BOTSWANA:** Serowe, Farmer’s Brigade, II.1989, malaise trap, P. Forchhammer, OSUC 171169 (deposited in USNM)²⁰. *Paratypes:* **BOTSWANA:** 1 male, 55 females, OSUC 164327-164340, 164342, 164344-164349, 164351, 202158, 202161, 202163, 202165-202168, 211427, 211430 (OSUC); OSUC 171165-171168, 171170, 171172, 211402-211412, 223911-223913 (USNM); OSUC 234275, 234332, 234335-234337 (CNCI).

***Oreiselio coracinus* Talamas & Johnson, sp. n.**

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urn:lsid:biosci.ohio-state.edu:osuc_concepts:225542

Figures 11, 17, 43-48; Morphbank²¹

Description. General: Body length of female: 2.3-3.1 mm (n=20). Body length of male: 2.3-2.9 mm (n=20). Body color: dark brown to black.

Antenna: Color of antennae in female: dark brown to black throughout. Color of antennae in male: A1–A2 brown; A3–A12 variably becoming yellow apically, antennomeres often yellow ventrally. Seta on pedicel of antenna in female: present, reaching past apex of A3.

Head: Color of setae on the head: white, brown, yellow. Sculpture of dorsal frons between frontal carina and median ocellus: areolate. Preocellar pit in females: absent,

indicated by a small round depression, present as a distinct pit. Transverse rugae at vertex: present. Sculpture of posterior vertex: areolate. Sculpture of occipital rim: areolate. Interantennal process: diverging into two carinae that extend laterally along surface of frons. Number of anteriorly projecting setae on anteclypeus: 6. Color of mandibles in male: black throughout, black throughout with brown teeth. Color of mandibles in female: basal half black; apical half dark brown, black throughout, basal half black; apical half pale brown. Mandibular teeth in female: teeth of equal size, ventral tooth larger, but less than 2 times as long as dorsal tooth. Sculpture of ventral gena anterior to genal carina: row of areolae. Sculpture of ventral gena posterior to genal carina: areolate, coarsely and irregularly punctate. Shape of anteclypeus: striplike, straight to slightly convex.

Legs: Color of legs: dark brown, tarsi and distal portion of tibiae light brown, brown, distal portion of tibiae and tarsomeres 1-4 yellow, apical tarsomere brown.

Mesosoma: Sculpture of dorsal pronotum: areolate. Color of setae on the dorsal mesosoma: white, brown, yellow. Sculpture of medial mesoscutum: areolate, areolate, with pronounced longitudinal ridges. Sculpture of lateral mesoscutum: same as medial mesoscutum with a subtle confusion of sculptural elements. Notaulus in female: absent. Parapsidal line: delimited, indistinguishable. Sculpture of scutellum: areolate. Median furrow on scutellum: absent, present as a weak indentation. Posterior margin of scutellum: emarginate. Outer projection of the propodeum: present as distinct corner or posteriorly projecting spine. Posterior margin of propodeal shelf between inner and outer propodeal projections in female: concave. Posterior margin of propodeal shelf between inner and outer propodeal projections in male: concave. Sculpture of ventral pronotum: foveate reticulate, becoming smooth at anterolateral corner. Anterior pronotal pit: unknown. Pronotal cervical sulcus: unknown. Mesepimeral sulcus: indicated by dorsoventral line of foveae, crenulate. Sculpture of femoral depression in female: smooth throughout, transversely striate throughout, anterior half smooth, posterior half finely foveate, finely foveate throughout. Sculpture of femoral depression in male: smooth throughout, finely foveate throughout, with weak transverse striae throughout. Mesopleural carina: present as one or two carinae. Sculpture of ventral mesepisternum: foveate, with smooth area surrounded by small foveae. Pilosity of metapleural triangle in female: present as many short fine white setae. Pilosity of metapleural triangle in male: present as many short fine white setae. Sculpture of ventral area of metapleuron: smooth, foveate reticulate, foveate reticulate, with slightly appressed ridges.

Metasoma: Submarginal ridge on T1: percurrent, well-defined. Sublateral tergal carina on T2: percurrent, absent. Sculpture of T2-T3: reticulate rugose. Sculpture of T4: longitudinally strigose, reticulate rugose. Sculpture of T5: longitudinally strigose. Shape of subapical T6 in female in dorsal view: short, width along anterior margin at least three times the length. Apex of T7 in male: bispinose. Longitudinal medial keel on S1: absent. Sculpture of medial S2 in female: punctate reticulate. Sculpture of medial S3 in female: longitudinally strigose, foveate, effaced to smooth. Sculpture of medial S4 in female: effaced to smooth. Sculpture of medial S5 in female: longitudinally strigose. Sculpture of lateral S3 in female: reticulate rugose, foveolate, rugulose. Sculpture of lateral S4 in female: reticulate rugose, longitudinally strigose. Sculpture

of lateral S5 in female: reticulate rugose, longitudinally strigose. Sculpture of marginal depression of S2 in female: mostly smooth, with scattered punctures or shallow rugulae, rugulose, finely punctate throughout. Sculpture of marginal depression of S3 in female: mostly smooth, with scattered punctures or shallow rugulae, finely punctate throughout. Sculpture of marginal depression of S4 in female: mostly smooth with scattered punctures or shallow rugulae, rugulose. Sculpture of marginal depression of S5 in female: rugulose. Apical spine on S6 in female: extending beyond apex of T6 and visible in dorsal view. Sculpture of medial S2 in male: punctate reticulate, foveolate. Sculpture of medial S3 in male: foveate. Sculpture of lateral S3 in male: smooth, foveolate, rugulose. Sculpture of lateral S4 in male: smooth, rugulose, foveolate. Sculpture of medial S5 in male: smooth, foveate. Sculpture of lateral S5 in male: foveolate, longitudinally strigose, reticulate rugose.

Diagnosis. This widespread species is variable in a number of characters, including body length, the size of the preocellar pit, and the presence of a submarginal ridge on T1. This species is colored dark brown to black. As in *O. turneri*, the northern specimens tend to be blacker than those of Zimbabwe, but those from South Africa are typically very dark. The specimens from Cameroon, Nigeria, Yemen and some from Malawi have the preocellar pit conspicuously large (Fig. 17). They are here treated as part of *O. coracinus* due to the congruence of other characters and the relatively small series that they comprise. This species is quite similar in appearance to *O. turneri*, and can be reliably separated by the subequal size of the mandibular teeth.

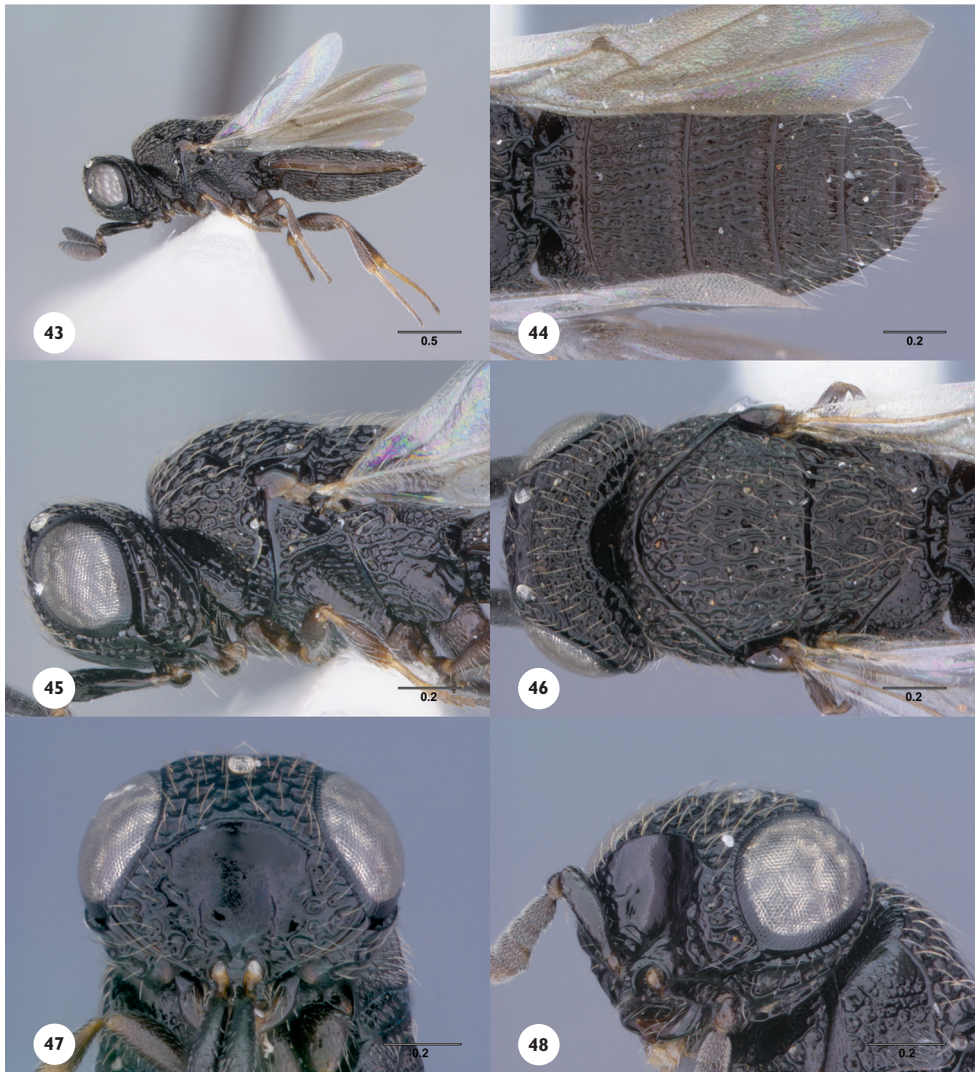
Etymology. The epithet *coracinus*, meaning “ravenlike”, refers to the color of this species.

Link to distribution map.²²

Material examined. Holotype, female: **ZIMBABWE:** Harare (Salisbury), V-1975 – VII-1975, A. Watsham, OSUC 234401 (deposited in CNCI)²³. Paratypes: (80 females, 44 males) **CAMEROON:** 8 females, OSUC 256822-256826, BMNH #790258 (OSUC 256827) (BMNH); OSUC 233772-233773 (CNCI). **KENYA:** 1 female, UCRC ENT 171074 (UCRC). **MALAWI:** 4 females, 1 male, OSUC 233687-233689, 234315, 234350 (CNCI). **NIGERIA:** 1 female, OSUC 234341 (CNCI). **SOUTH AFRICA:** 23 females, 21 males, OSUC 233712, 233717, 233719-233721, 233725, 233732-233733, 233735-233737, 233741-233742, 233745, 233749, 233751-233752, 233754, 233756, 233780-233782, 233784-233785, 233787-233789, 233791, 233793, 233796, 234306-234307, 234319-234321, 234323-234325, 234334, 234338 (CNCI); OSUC 58659 (OSUC); OSUC 174596, 174705, 233035 (SANC). **TANZANIA:** 2 females, 1 male, CASENT 2042525 (CASC); SAM-HYM-P019539 (OSUC 248305), SAM-HYM-P019903 (OSUC 248304) (SAMC). **UGANDA:** 1 female, OSUC 233711 (CNCI). **YEMEN:** 1 female, OSUC 234344 (CNCI). **ZIMBABWE:** 38 females, 21 males, BMNH #790260 (OSUC 256821) (BMNH); OSUC 233739-233740, 233755, 233767, 233769-233770, 234213-234214, 234218, 234233, 234240-234242, 234245, 234251-234252, 234254-234256, 234258-234268, 234276-234278, 234282-234287, 234333, 234339-234340, 234362, 234367, 234370, 234373-234375, 234379-234382, 234385, 234388, 234390,

234397, 234403 (CNCI); OSUC 58657 (OSUC). *Other material*: **CENTRAL AFRICAN REPUBLIC**: 1 female, SAM-HYM-P029375 (OSUC 248307) (SAMC).

Comments. One specimen from the Central African Republic shares the majority of its characters with *O. coracinus* but it has yellow antennomeres 2-6, and yellow femora, tibiae, and tarsomeres. We choose not to describe this as a new species due to the limited material and the possibility that the differences might be intraspecific. For



Figures 43-48.⁹³ *Oreiscelio coracinus*, sp. n. 43, Lateral habitus, female holotype (OSUC 234401); 44, Dorsal metasoma, female holotype (OSUC 234401); 45, Head and mesosoma, lateral view, female holotype (OSUC 234401); 46, Head and mesosoma dorsal view, female holotype (OSUC 234401); 47, Head, anterior view, female (OSUC 233791); 48, Head, ventrolateral view, male (OSUC 234339). Scale bars in millimeters.

this reason, this specimen is determined as *O. coracinus* but is excluded from the type series. Images of this specimen are available at the image database of The Ohio State University (purl.oclc.org/NET/hymenoptera/specimage).

***Oreiscelio cultrarius* Talamas, sp. n.**

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urn:lsid:biosci.ohio-state.edu:osuc_concepts:225543

Figures 7, 49-54; Morphbank²⁴

Description. General: Body length of female: 3-3.2 mm (n=5). Body color: head and mesosoma black; metasoma dark brown to black.

Antenna: Color of antennae in female: dark brown to black throughout, A1–A6 yellow; A7–A12 dark brown to black. Seta on pedicel of antenna in female: present, reaching past apex of A3.

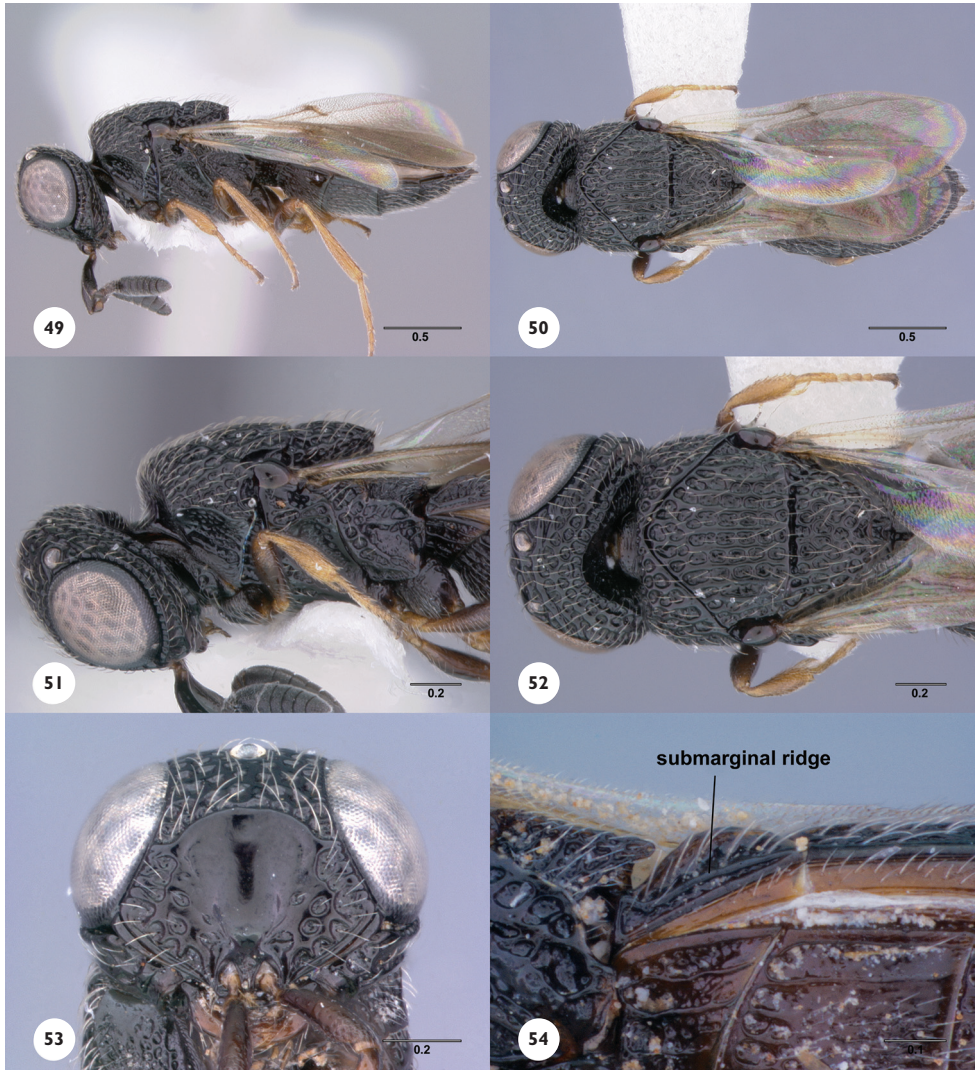
Head: Color of setae on the head: white. Sculpture of dorsal frons between frontal carina and median ocellus: coarsely foveate. Preocellar pit in females: indicated by a small round depression, present as a distinct pit. Transverse rugae at vertex: present. Sculpture of posterior vertex: coarsely foveate. Sculpture of occipital rim: areolate. Interantennal process: with semiparallel carinae dorsally that do not extend laterally onto frons. Number of anteriorly projecting setae on anteclypeus: 6. Color of mandibles in female: yellow throughout with teeth brown, dark brown throughout. Mandibular teeth in female: teeth of equal size, ventral tooth larger, but less than 2 times as long as dorsal tooth. Sculpture of ventral gena anterior to genal carina: row of shallow areolae with reduced ridges between cells. Sculpture of ventral gena posterior to genal carina: coarsely and irregularly punctate. Shape of anteclypeus: striplike, straight to slightly convex.

Legs: Color of legs: coxae brown, legs otherwise yellow, coxae dark brown, femora light brown, tibiae and tarsi yellow.

Mesosoma: Sculpture of dorsal pronotum: areolate. Color of setae on the dorsal mesosoma: white. Sculpture of medial mesoscutum: areolate. Sculpture of lateral mesoscutum: same as medial mesoscutum with a subtle confusion of sculptural elements. Notaulus in female: absent. Parapsidal line: delimited. Sculpture of scutellum: areolate. Median furrow on scutellum: absent, present as a weak indentation. Posterior margin of scutellum: emarginate. Outer projection of the propodeum: present as distinct corner or posteriorly projecting spine. Posterior margin of propodeal shelf between inner and outer propodeal projections in female: concave. Sculpture of ventral pronotum: foveate reticulate, becoming smooth at anterolateral corner. Anterior pronotal pit: large. Pronotal cervical sulcus: well defined by contiguous punctures. Mesepimeral sulcus: indicated by dorsoventral line of foveae. Sculpture of femoral depression in female: smooth throughout, finely foveate throughout. Mesopleural carina: present as one or two carinae, weakly defined by fine ridges. Sculpture of ventral mesepisternum: foveate. Pilosity of metapleural triangle in female: present as many short fine white se-

tae. Sculpture of ventral area of metapleuron: foveate reticulate, with slightly appressed ridges. Sculpture of dorsal propodeum (removed from use): with large cells medially.

Metasoma: Submarginal ridge on T1: percurrent, well-defined. Sublateral carina on T2: absent, present in anterior half. Sculpture of T2–T3: reticulate rugose. Sculpture of T4: longitudinally strigose. Sculpture of T5: longitudinally strigose. Shape of subapical T6 in female in dorsal view: short, width along anterior margin at least three times the length. Longitudinal medial keel on S1: absent. Sculpture of medial S2 in female:



Figures 49–54.⁹⁴ *Oreiscelio cultrarius*, sp. n. 49, Lateral habitus, female holotype (OSUC 233760); 50, Dorsal habitus, female (OSUC 233758); 51, Head and mesosoma, lateral view, female (OSUC 233758); 52, Head and mesosoma, dorsal view, female (OSUC 233758); 53, Head, anterior view, female (OSUC 234309); 54, T1, ventrolateral view, female (OSUC 234309). Scale bars in millimeters.

punctate reticulate. Sculpture of medial S3 in female: effaced to smooth. Sculpture of medial S4 in female: effaced to smooth. Sculpture of medial S5 in female: effaced to smooth. Sculpture of lateral S3 in female: foveolate, punctate crenulate. Sculpture of lateral S4 in female: longitudinally strigose, punctate crenulate. Sculpture of lateral S5 in female: reticulate rugose, longitudinally strigose. Sculpture of marginal depression of S2 in female: mostly smooth, with scattered punctures or shallow rugulae. Sculpture of marginal depression of S3 in female: mostly smooth, with scattered punctures or shallow rugulae. Sculpture of marginal depression of S4 in female: mostly smooth with scattered punctures or shallow rugulae, rugulose. Sculpture of marginal depression of S5 in female: rugulose, mostly smooth with scattered punctures. Apical spine on S6 in female: extending beyond apex of T6 and visible in dorsal view.

Diagnosis. *Oreiscelio cultrarius* is similar to *O. gryphus*, *O. majikununuensis*, and *O. coracinus*, and it is likely to be one of the more difficult species to identify. The grooved pronotal cervical sulcus (Fig. 7), large anterior pit of the pronotum (Fig. 7), and lack of laterally divergent carinae above the interantennal process (Fig. 53) serve well to separate this species from the others. *Oreiscelio cultrarius* has somewhat large spines on the metascutellum that are clearly separated from each other. This character is useful to confirm the identity of this species, but caution is urged given the variability present in this structure among other species of *Oreiscelio*.

Etymology. The epithet *cultrarius* meaning, “slayer of the sacrificial victim”, is a dramatic interpretation of the parasitoid life history.

Link to distribution map.²⁵

Material examined. Holotype female: **TANZANIA:** Dar es Salaam, University of Dar es Salaam, X–XI.1984, J. Middleton, OSUC 233760 (deposited in CNCI)²⁶. *Paratypes:* **TANZANIA:** 17 females, OSUC 207757, 207764-207775, 233758, 234308-234310 (CNCI).

Oreiscelio gryphus Talamas & Johnson, sp. n.

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urn:lsid:biosci.ohio-state.edu:osuc_concepts:225576

Figures 55-60; Morphbank²⁷

Description. General: Body length of female: 2.9-3.3 mm (n=5). Body color: black.

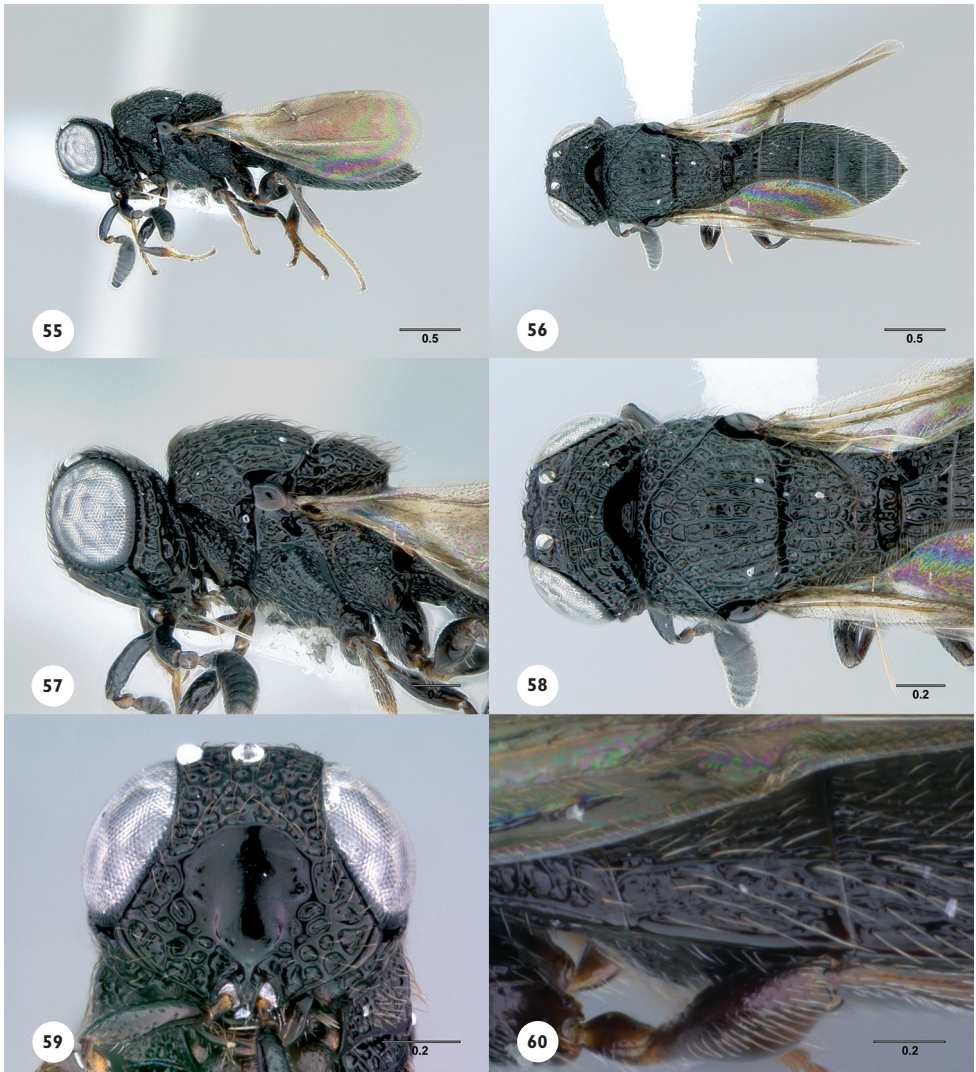
Antenna: Color of antennae in female: dark brown to black throughout. Seta on pedicel of antenna in female: present, reaching past apex of A3.

Head: Color of setae on the head: brown. Sculpture of dorsal frons between frontal carina and median ocellus: areolate. Preocellar pit in females: present as a distinct pit. Transverse rugae at vertex: present. Sculpture of posterior vertex: areolate. Sculpture of occipital rim: areolate. Interantennal process: diverging into two carinae that extend laterally along surface of frons. Number of anteriorly projecting setae on anteclypeus: 6. Color of mandibles in female: basal half black; apical half dark brown. Mandibular teeth in female: teeth of equal size, ventral tooth larger, but less than 2 times as long as

dorsal tooth. Sculpture of ventral gena anterior to genal carina: row of areolae. Sculpture of ventral gena posterior to genal carina: coarsely and irregularly punctate. Shape of anteclypeus: striplike, straight to slightly convex.

Legs: Color of legs: dark brown, tarsi and distal portion of tibiae light brown.

Mesosoma: Sculpture of dorsal pronotum: areolate. Color of setae on the dorsal mesosoma: brown. Sculpture of medial mesoscutum: areolate. Sculpture of lateral mes-



Figures 55-60.⁹⁵ *Oreiscelio gryphus*, sp. n. 55, Lateral habitus, female holotype (OSUC 207591); 56, Dorsal habitus, female holotype (OSUC 207591); 57, Head and mesosoma, lateral view, female holotype (OSUC 207591); 58, Head and mesosoma, dorsal view, female holotype (OSUC 207591); 59, Head, anterior view, female (OSUC 207590); 60, T1-T2, lateral view, female (OSUC 186302). Scale bars in millimeters.

oscutum: same as medial mesoscutum with a subtle confusion of sculptural elements. Notaulus in female: absent. Parapsidal line: indistinguishable. Sculpture of scutellum: areolate. Median furrow on scutellum: absent, present as a weak indentation. Posterior margin of scutellum: emarginate. Outer projection of the propodeum: present as distinct corner or posteriorly projecting spine. Posterior margin of propodeal shelf between inner and outer propodeal projections in female: concave. Sculpture of ventral pronotum: foveate reticulate, becoming smooth at anterolateral corner. Anterior pronotal pit: small. Pronotal cervical sulcus: well defined by contiguous punctures. Mesepimeral sulcus: indicated by dorsoventral line of foveae. Sculpture of femoral depression in female: finely foveate throughout. Mesopleural carina: present as one or two carinae. Sculpture of ventral mesepisternum: irregularly areolate. Pilosity of metapleural triangle in female: present as many short fine white setae. Sculpture of ventral area of metapleuron: foveate reticulate. Sculpture of dorsal propodeum (removed from use): with large cells medially.

Metasoma: Submarginal ridge on T1: percurrent, well-defined. Sublateral carina on T2: absent. Sculpture of T2–T3: reticulate rugose. Sculpture of T4: longitudinally strigose. Sculpture of T5: longitudinally strigose. Shape of subapical T6 in female in dorsal view: short, width along anterior margin at least three times the length. Longitudinal medial keel on S1: absent. Sculpture of medial S2 in female: punctate reticulate. Sculpture of medial S3 in female: effaced to smooth. Sculpture of medial S4 in female: effaced to smooth. Sculpture of medial S5 in female: effaced to smooth. Sculpture of lateral S3 in female: reticulate rugose. Sculpture of lateral S4 in female: reticulate rugose. Sculpture of lateral S5 in female: reticulate rugose. Sculpture of marginal depression of S2 in female: rugulose. Sculpture of marginal depression of S3 in female: mostly smooth, with scattered punctures or shallow rugulae, rugulose. Sculpture of marginal depression of S4 in female: rugulose. Sculpture of marginal depression of S5 in female: rugulose. Apical spine on S6 in female: extending beyond apex of T6 and visible in dorsal view.

Diagnosis. *Oreiselio gryphus* is most similar to specimens of *Oreiselio coracinus* from Cameroon and Nigeria. It may be separated from them by the presence of infusate wings and brown setae on the head and dorsal mesosoma (Figs 55, 57). Additionally, the frons of *O. coracinus* (Figs 47) has a more transverse shape in frontal view than that of *O. gryphus* (Fig. 59).

Etymology. The epithet *gryphus*, a fantastic creature, refers to the presence of many distinctive characters in this species.

Link to distribution map.²⁸

Material examined. Holotype female: **CENTRAL AFRICAN REPUBLIC:** Prefecture Sangha-Mbaéré, Parc National de Dzanga-Ndoki, 38.6 km 173°S Lidjombo, 2°21.60'N 16°03.20'E 350 m, 22-23.V.2001, S. van Noort, Malaise trap, CAR01–M186, lowland rainforest, SAM–HYM–P029365 (OSUC 207591) (deposited in SAMC)²⁹.

Paratypes: **CAMEROON:** 1 female, OSUC 233771 (CNCI). **CENTRAL AFRICAN REPUBLIC:** 6 females, SAM–HYM–P029361 (OSUC 176100), SAM–HYM–P029362 (OSUC 186128), SAM–HYM–P029363 (OSUC 186302), SAM–HYM–P029364 (OSUC 207589-207590), SAM–HYM–P029366 (OSUC 248306) (SAMC).

***Oreiselio iommii* Talamas, sp. n.**

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urn:lsid:biosci.ohio-state.edu:osuc_concepts:231611

Figures 61-66; Morphbank³⁰

Description. General: Body length of female: 2.42 mm (n=1). Body color: black.

Antenna: Color of antennae in female: dark brown to black throughout. Seta on pedicel of antenna in female: present, reaching past apex of A3.

Head: Color of setae on the head: yellow. Sculpture of dorsal frons between frontal carina and median ocellus: areolate. Preocellar pit in females: indicated by a small round depression. Transverse rugae at vertex: present. Sculpture of posterior vertex: areolate. Sculpture of occipital rim: areolate. Interantennal process: extended dorsally into medial flange, flange reaching from near apex of interantennal process to frons. Number of anteriorly projecting setae on anteclypeus: 6. Color of mandibles in female: basal half black; apical half dark brown. Mandibular teeth in female: teeth of equal size. Sculpture of ventral gena anterior to genal carina: row of shallow areolae with reduced ridges between cells. Sculpture of ventral gena posterior to genal carina: mostly smooth, with sparse small punctures. Shape of anteclypeus: striplike, straight to slightly convex.

Legs: Color of legs: dark brown, tarsi and distal portion of tibiae light brown.

Mesosoma: Sculpture of dorsal pronotum: shallowly areolate. Color of setae on the dorsal mesosoma: yellow. Sculpture of medial mesoscutum: shallowly areolate, becoming smooth posteriorly. Sculpture of lateral mesoscutum: smooth throughout. Notaulus in female: absent. Parapsidal line: delimited. Sculpture of scutellum: areolate. Median furrow on scutellum: absent. Posterior margin of scutellum: deeply notched. Outer projection of the propodeum: present as distinct corner or posteriorly projecting spine. Posterior margin of propodeal shelf between inner and outer propodeal projections in female: concave. Sculpture of ventral pronotum: obliterated. Anterior pronotal pit: absent. Pronotal cervical sulcus: poorly defined. Mesepimeral sulcus: indicated by a row of faint and shallow depressions. Sculpture of femoral depression in female: smooth throughout. Mesopleural carina: absent. Sculpture of ventral mesepisternum: smooth. Pilosity of metapleural triangle in female: present as many short fine white setae. Sculpture of ventral area of metapleuron: smooth.

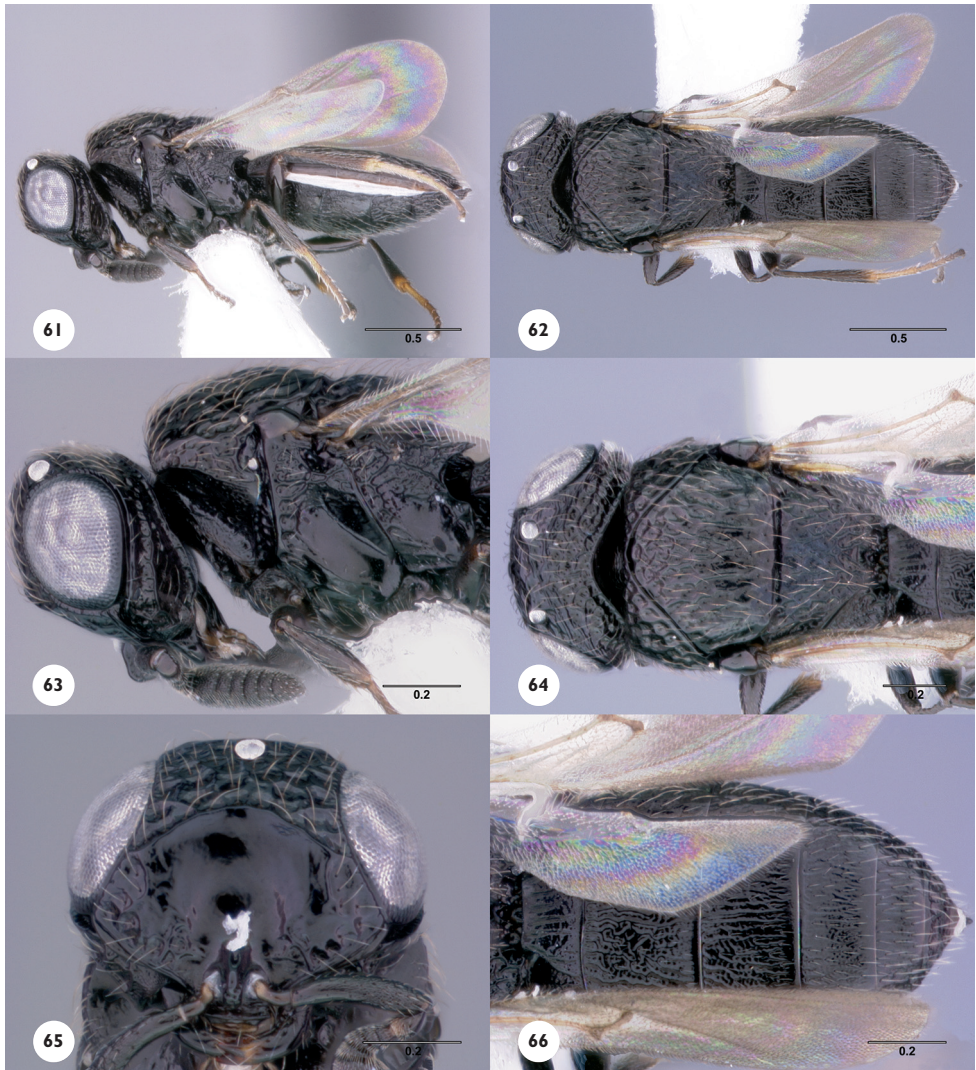
Metasoma: Submarginal ridge on T1: percurrent, well-defined. Sublateral carina on T2: present in anterior half. Sculpture of T2–T3: weakly rugulose. Sculpture of T4: weakly rugulose. Sculpture of T5: weakly rugulose. Shape of subapical T6 in female in dorsal view: short, width along anterior margin at least three times the length. Longitudinal medial keel on S1: absent. Sculpture of medial S2 in female: punctate reticulate. Sculpture of medial S3 in female: effaced to smooth. Sculpture of medial S4 in female: effaced to smooth. Sculpture of medial S5 in female: longitudinally strigose. Sculpture of lateral S3 in female: smooth. Sculpture of lateral S4 in female: rugulose. Sculpture of lateral S5 in female: longitudinally strigose. Sculpture of marginal depression of S2 in female: finely punctate throughout. Sculpture of marginal depression of S3 in

female: finely punctate throughout. Sculpture of marginal depression of S4 in female: rugulose. Sculpture of marginal depression of S5 in female: rugulose. Apical spine on S6 in female: extending beyond apex of T6 and visible in dorsal view.

Diagnosis. *Oreiscelio iommii* is easily recognized by the largely reduced surface sculpture, particularly on the dorsal metasoma, and the entirely smooth mesopleuron (Fig. 63).

Etymology. This species is named for guitarist Tony Iommi.

Link to distribution map.³¹



Figures 61-66.⁹⁶ *Oreiscelio iommii*, sp. n., female holotype (OSUC 233703). 61, Lateral habitus; 62, Dorsal habitus; 63, Head and mesosoma, lateral view; 64, Head and mesosoma dorsal view; 65, Head, anterior view; 66, Metasoma, dorsal view. Scale bars in millimeters.

Material examined. Holotype female: SOUTH AFRICA: Graskop, 24°56'36"S 30°50'28"E, 1434 m, grassland elfin forest, Mogodi Lodge, Mpumalanga Prov., 30.I–1.II.2006, J. George, SAM–HYM–P029374 (OSUC 233703) (deposited in SAMC)³².

***Oreiselio magnipennis* Talamas, sp. n.**

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urn:lsid:biosci.ohio-state.edu:osuc_concepts:231612

Figures 67–72; Morphbank³³

Description. General: Body length of female: 2.42 mm (n=1). Body color: black.

Antenna: Color of antennae in female: dark brown to black throughout. Seta on pedicel of antenna in female: present, reaching past apex of A3.

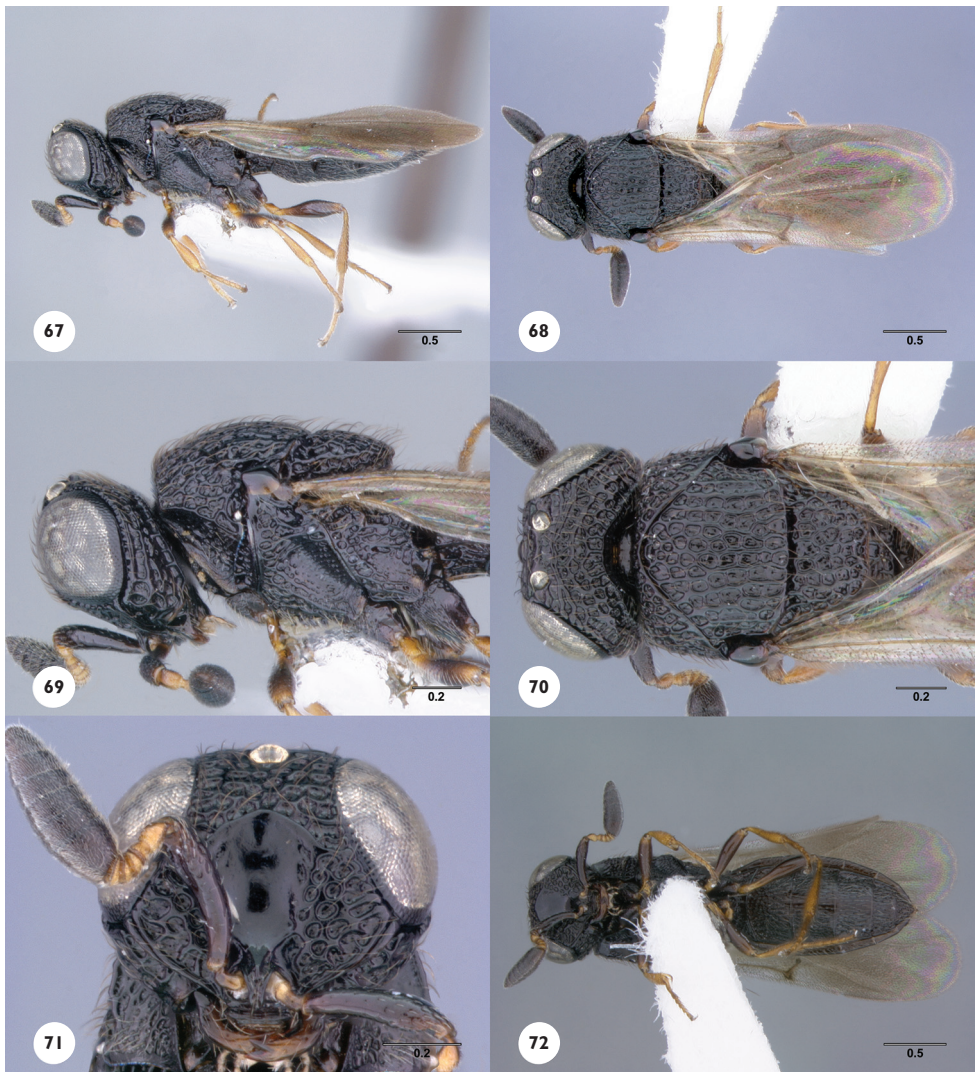
Head: Color of setae on the head: yellow. Sculpture of dorsal frons between frontal carina and median ocellus: areolate. Preocellar pit in females: indicated by a small round depression. Transverse rugae at vertex: present. Sculpture of posterior vertex: areolate. Sculpture of occipital rim: areolate. Interantennal process: extended dorsally into medial flange, flange reaching from near apex of interantennal process to frons. Number of anteriorly projecting setae on anteclypeus: 6. Color of mandibles in female: basal half black; apical half dark brown. Mandibular teeth in female: teeth of equal size. Sculpture of ventral gena anterior to genal carina: row of shallow areolae with reduced ridges between cells. Sculpture of ventral gena posterior to genal carina: mostly smooth, with sparse small punctures. Shape of anteclypeus: striplike, straight to slightly convex.

Legs: Color of legs: dark brown, tarsi and distal portion of tibiae light brown.

Mesosoma: Sculpture of dorsal pronotum: shallowly areolate. Color of setae on the dorsal mesosoma: yellow. Sculpture of medial mesoscutum: shallowly areolate, becoming smooth posteriorly. Sculpture of lateral mesoscutum: smooth throughout. Notaulus in female: absent. Parapsidal line: delimited. Sculpture of scutellum: areolate. Median furrow on scutellum: absent. Posterior margin of scutellum: deeply notched. Outer projection of the propodeum: present as distinct corner or posteriorly projecting spine. Posterior margin of propodeal shelf between inner and outer propodeal projections in female: concave. Sculpture of ventral pronotum: obliterated. Anterior pronotal pit: absent. Pronotal cervical sulcus: poorly defined. Mesepimeral sulcus: indicated by a row of faint and shallow depressions. Sculpture of femoral depression in female: smooth throughout. Mesopleural carina: absent. Sculpture of ventral mesepisternum: smooth. Pilosity of metapleural triangle in female: present as many short fine white setae. Sculpture of ventral area of metapleuron: smooth.

Metasoma: Submarginal ridge on T1: percurrent, well-defined. Sublateral carina on T2: present in anterior half. Sculpture of T2–T3: weakly rugulose. Sculpture of T4:

weakly rugulose. Sculpture of T5: weakly rugulose. Shape of subapical T6 in female in dorsal view: short, width along anterior margin at least three times the length. Longitudinal medial keel on S1: absent. Sculpture of medial S2 in female: punctate reticulate. Sculpture of medial S3 in female: effaced to smooth. Sculpture of medial S4 in female: effaced to smooth. Sculpture of medial S5 in female: longitudinally strigose. Sculpture of lateral S3 in female: smooth. Sculpture of lateral S4 in female: rugulose. Sculpture of lateral S5 in female: longitudinally strigose. Sculpture of marginal depression of S2 in female: finely punctate throughout. Sculpture of marginal depression of S3 in



Figures 67-72.⁹⁷ *Oreiscelio magnipennis*, sp. n., female holotype (OSUC 234222). 67, Lateral habitus; 68, Dorsal habitus; 69, Head and mesosoma, lateral view; 70, Head and mesosoma dorsal view; 71, Head, anterior view; 72, Ventral habitus. Scale bars in millimeters.

female: finely punctate throughout. Sculpture of marginal depression of S4 in female: rugulose. Sculpture of marginal depression of S5 in female: rugulose. Apical spine on S6 in female: extending beyond apex of T6 and visible in dorsal view.

Diagnosis. *Oreiselio magnipennis* is most similar to larger specimens of *O. coracinus* and *O. gryphus*. It is best identified by the length of its wings (Fig. 72) and the large preocellar pit (as Fig. 17). Some specimens of *O. rostratus* have the wings extending well beyond the apex of the metasoma, but this species has yellow legs (Fig. 97), lacks a preocellar pit and is found only in Madagascar. *Oreiselio magnipennis* has brown legs (Fig. 67) and its distribution is limited to continental Africa.

Etymology. The epithet *magnipennis*, meaning “large wing”, refers to the large size of the wings in this species.

Link to distribution map.³⁴

Material examined. Holotype female: **KENYA**: Western Prov., Kakamega Forest, 0°14.13'N 35°51.87'E, 20-27.XI.1999, R.Copland, Malaise trap, OSUC 234222 (deposited in CNCI)³⁵. *Paratypes*: **UGANDA**: 1 female, OSUC 234353 (CNCI).

Oreiselio majikununuensis van Noort, sp. n.

urn:lsid:zoobank.org:act:F4405ECF-2AD5-4B87-B7CD-AC9AA7D19371

urn:lsid:biosci.ohio-state.edu:osuc_concepts:225571

Figures 73-78; Morphbank³⁶

Description. General: Body color: dark brown to black.

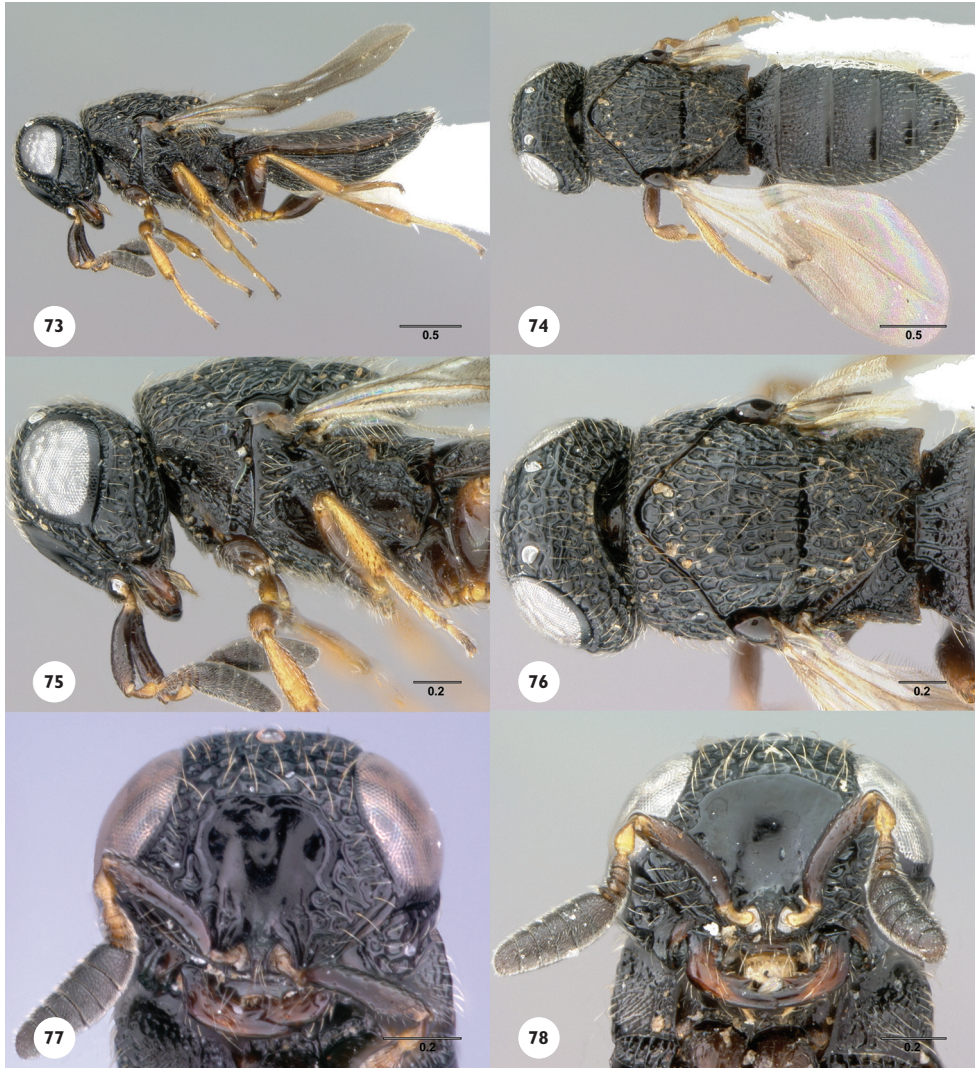
Antenna: Color of antennae in female: A1, A3–A6 dark brown; A2 yellow; A7–A12 black. Seta on pedicel of antenna in female: present, reaching to apex of A3.

Head: Color of setae on the head: yellow. Sculpture of dorsal frons between frontal carina and median ocellus: coarsely foveate, areolate. Preocellar pit in females: absent. Transverse rugae at vertex: absent. Sculpture of posterior vertex: areolate. Sculpture of occipital rim: areolate. Interantennal process: simple. Number of anteriorly projecting setae on anteclypeus: 8. Color of mandibles in female: brown throughout with teeth black. Mandibular teeth in female: ventral tooth at least twice as long and wide at base than dorsal tooth. Sculpture of ventral gena anterior to genal carina: row of shallow areolae with reduced ridges between cells. Sculpture of ventral gena posterior to genal carina: areolate, coarsely and irregularly punctate. Shape of anteclypeus: concave medially, with points laterally.

Legs: Color of legs: coxae and femora dark brown, trochanters, tibia and tarsi yellowish-brown.

Mesosoma: Sculpture of dorsal pronotum: areolate. Color of setae on the dorsal mesosoma: yellow. Sculpture of medial mesoscutum: areolate. Sculpture of lateral mesoscutum: same as medial mesoscutum with a subtle confusion of sculptural elements. Notaulus in female: absent. Parapsidal line: delimited. Sculpture of scutellum: areolate. Median furrow on scutellum: absent, present as a weak indentation. Posterior margin of scutellum: emarginate. Outer projection of the propodeum:

present as distinct corner or posteriorly projecting spine. Posterior margin of propodeal shelf between inner and outer propodeal projections in female: nearly straight, perpendicular to lateral margin of propodeal shelf. Sculpture of ventral pronotum: foveate reticulate, becoming smooth at anterolateral corner. Anterior pronotal pit: small, large. Pronotal cervical sulcus: poorly defined. Mesepimeral sulcus: indicated



Figures 73-78.⁹⁸ *Oreiscelio majikununuensis*, sp. n. 78, female holotype (SAM-HYM-P020051). 73, Lateral habitus, female holotype (SAM-HYM-P020051); 74, Dorsal habitus, female holotype (SAM-HYM-P020051); 75, Head and mesosoma, lateral view, female holotype (SAM-HYM-P020051); 76, Head and mesosoma dorsal view, female holotype (SAM-HYM-P020051); 77, Head, anterior view, female (OSUC 233761). 78, Head, anteroventral view, female holotype (SAM-HYM-P020051). Scale bars in millimeters

by dorsoventral line of foveae. Sculpture of femoral depression in female: anterior half smooth, posterior half finely foveate. Mesopleural carina: indicated by one or two rows of punctures. Sculpture of ventral mesepisternum: foveate, irregularly areolate. Pilosity of metapleural triangle in female: present as many short fine white setae. Sculpture of ventral area of metapleuron: smooth.

Metasoma: Submarginal ridge on T1: percurrent, well-defined. Sublateral carina on T2: percurrent. Sculpture of T2–T3: reticulate rugose. Sculpture of T4: reticulate rugose. Sculpture of T5: longitudinally strigose. Shape of subapical T6 in female in dorsal view: short, width along anterior margin at least three times the length. Longitudinal medial keel on S1: absent. Sculpture of medial S2 in female: punctate reticulate. Sculpture of medial S3 in female: foveate, effaced to smooth. Sculpture of medial S4 in female: effaced to smooth. Sculpture of medial S5 in female: effaced to smooth. Sculpture of lateral S3 in female: foveolate. Sculpture of lateral S4 in female: reticulate rugose, foveolate. Sculpture of lateral S5 in female: reticulate rugose. Sculpture of marginal depression of S2 in female: mostly smooth, with scattered punctures or shallow rugulae, smooth. Sculpture of marginal depression of S3 in female: mostly smooth, with scattered punctures or shallow rugulae. Sculpture of marginal depression of S4 in female: rugulose. Sculpture of marginal depression of S5 in female: rugulose. Apical spine on S6 in female: extending beyond apex of T6 and visible in dorsal view.

Diagnosis. *Oreiscelio majikununuensis* is most similar to *Oreiscelio cultrarius* in general appearance. The females may be separated from all other species of *Oreiscelio* by the straight posterior margin of the propodeum (Fig. 76). The long ventral mandibular tooth (Figs 77, 78) represents the largest size difference between mandibular teeth in *Oreiscelio*.

Etymology. The type specimen was collected in an isolated patch of Afromontane forest on a mountain called Maji Kununua, which is Swahili for “place of water”.

Link to distribution map.³⁷

Material examined. Holotype female: **TANZANIA:** Mkomazi Game Reserve, peak of Maji Kununua, 1600 m, 3°52.69’S 37°48.72’E, 25.IV.1996, S. van Noort, sweep, mk36, margins & undergrowth of wet montane forest, SAM–HYM–P020051 (OSUC 248286) (deposited in SAMC)³⁸. *Paratypes:* **TANZANIA:** 8 females, OSUC 207760–207763, 233759, 233761, 234311 (CNCI); SAM–HYM–P020111 (OSUC 248285) (SAMC).

Oreiscelio megadontus Talamas, sp. n.

urn:lsid:zoobank.org:act:AAFFD025-58DB-480A-84E7-013392F69E90

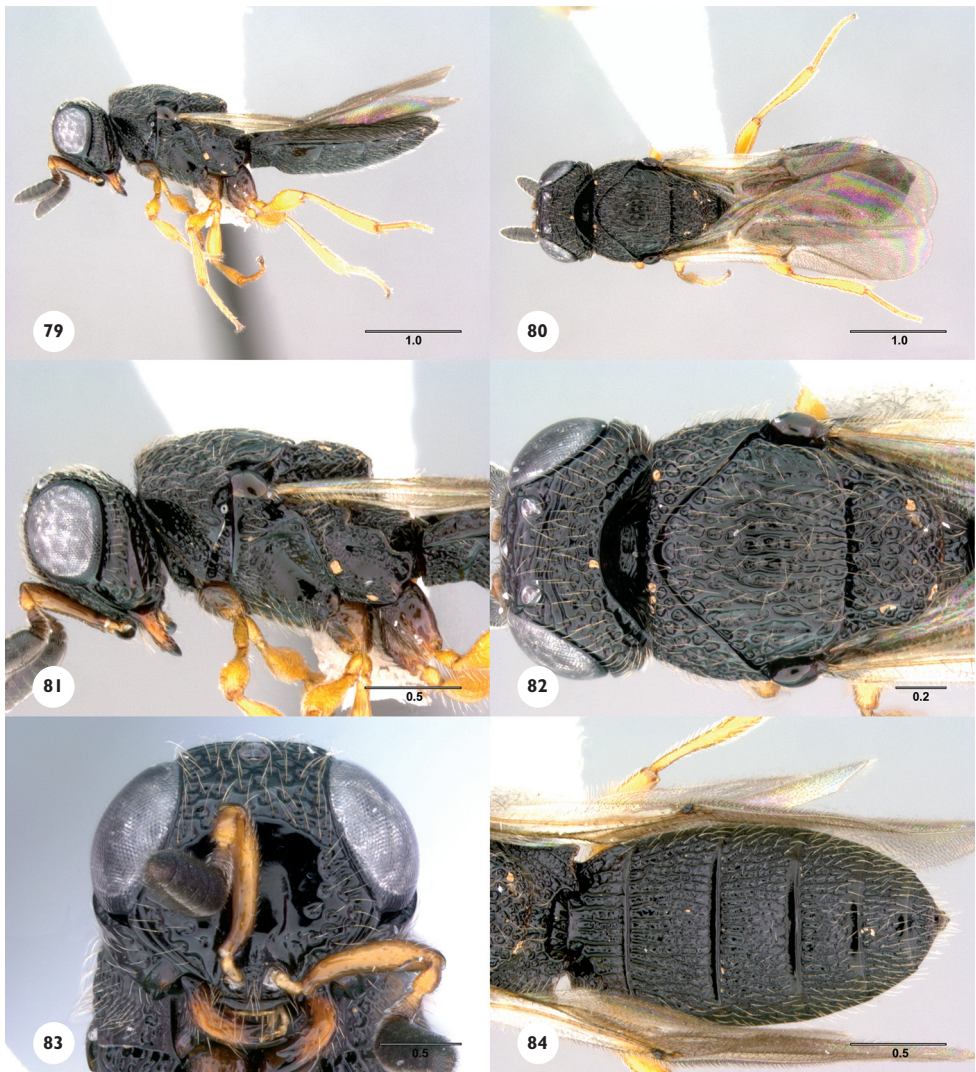
urn:lsid:biosci.ohio-state.edu:osuc_concepts:225544

Figures 79–84; Morphbank³⁹

Description. General: Body length of female: 4.1–4.1 mm (n=4.1). Body color: black.

Antenna: Color of antennae in female: A1–A6 yellow; A7–A12 dark brown to black. Seta on pedicel of antenna in female: present, reaching past apex of A3.

Head: Color of setae on the head: yellow. Sculpture of dorsal frons between frontal carina and median ocellus: coarsely foveate. Preocellar pit in females: present as a distinct pit. Transverse rugae at vertex: present. Sculpture of posterior vertex: coarsely foveate. Sculpture of occipital rim: areolate. Interantennal process: simple. Number of anteriorly projecting setae on anteclypeus: 8. Color of mandibles in female: yellow throughout with teeth brown. Mandibular teeth in female: ventral tooth at least twice as long and wide at base than dorsal tooth. Sculpture of ventral gena anterior to genal carina: row of shallow areolae with reduced ridges between cells. Sculpture of ventral



Figures 79-84.⁹⁹ *Oreiscelio megadontus*, sp. n., female holotype (OSUC 212512). 79, Lateral habitus; 80, Dorsal habitus; 81, Head and mesosoma, lateral view; 82, Head and mesosoma, dorsal view; 83, Head, anterior view; 84, Metasoma, dorsal view. Scale bars in millimeters.

gena posterior to genal carina: mostly smooth, with sparse small punctures. Shape of anteclypeus: striplike, straight to slightly convex.

Legs: Color of legs: coxae brown, legs otherwise yellow.

Mesosoma: Sculpture of dorsal pronotum: areolate. Color of setae on the dorsal mesosoma: yellow. Sculpture of medial mesoscutum: areolate, with pronounced longitudinal ridges. Sculpture of lateral mesoscutum: with small patch of smoother sculpture, formed by fusion of sculptural ridges, smooth patch not extending to scuto-scutellar sulcus. Notaulus in female: absent. Parapsidal line: delimited. Sculpture of scutellum: areolate. Median furrow on scutellum: absent. Posterior margin of scutellum: emarginate. Outer projection of the propodeum: present as distinct corner or posteriorly projecting spine. Posterior margin of propodeal shelf between inner and outer propodeal projections in female: concave. Sculpture of ventral pronotum: foveate reticulate, becoming smooth at anterolateral corner. Anterior pronotal pit: small. Pronotal cervical sulcus: well defined by contiguous punctures. Mesepimeral sulcus: indicated by dorsoventral line of foveae. Sculpture of femoral depression in female: smooth throughout. Mesopleural carina: indicated by one or two rows of punctures. Sculpture of ventral mesepisternum: with smooth area surrounded by small foveae. Pilosity of metapleural triangle in female: present as many short fine white setae. Sculpture of ventral area of metapleuron: smooth.

Metasoma: Submarginal ridge on T1: partially fused with marginal carina. Sublateral carina on T2: percurrent. Sculpture of T2–T3: reticulate rugose. Sculpture of T4: longitudinally strigose. Sculpture of T5: longitudinally strigose. Shape of subapical T6 in female in dorsal view: short, width along anterior margin at least three times the length. Longitudinal medial keel on S1: absent. Sculpture of medial S2 in female: punctate reticulate. Sculpture of medial S3 in female: effaced to smooth. Sculpture of medial S4 in female: effaced to smooth. Sculpture of medial S5 in female: reticulate rugose. Sculpture of lateral S3 in female: foveolate. Sculpture of lateral S4 in female: foveolate. Sculpture of lateral S5 in female: reticulate rugose. Sculpture of marginal depression of S2 in female: smooth. Sculpture of marginal depression of S3 in female: smooth. Sculpture of marginal depression of S4 in female: rugulose. Sculpture of marginal depression of S5 in female: rugulose. Apical spine on S6 in female: extending beyond apex of T6 and visible in dorsal view.

Diagnosis. *Oreiselio megadontus* is the largest known species of *Oreiselio*. *Oreiselio scapularis* is comparable in length but is more slender. It is a relatively dissimilar species and may be identified by the combination of the much larger mandibular tooth (Fig. 83), the emarginate posterior margin of the propodeal shelf between inner and outer propodeal projections (Fig. 84), and the bright yellow legs (Fig. 79).

Etymology. The epithet *megadontus* refers to the large size of the ventral mandibular tooth in this species.

Link to distribution map.⁴⁰

Material examined. Holotype female: **TANZANIA:** Tanga, Armani Hills, 23.VI–24.VII.2001, D. Quicke, OSUC 212512 (deposited in CNCI)⁴¹.

***Oreiscelio naevus* Talamas & Johnson, sp. n.**

urn:lsid:zoobank.org:act:AAB6FB76-5795-4210-8D02-6E693A04F53E

urn:lsid:biosci.ohio-state.edu:osuc_concepts:225545

Figures 10, 85-90; Morphbank⁴²

Description. General: Body length of female: 2.2-3.0 mm (n=20). Body length of male: 2.2-3.0 mm (n=20). Body color: black.

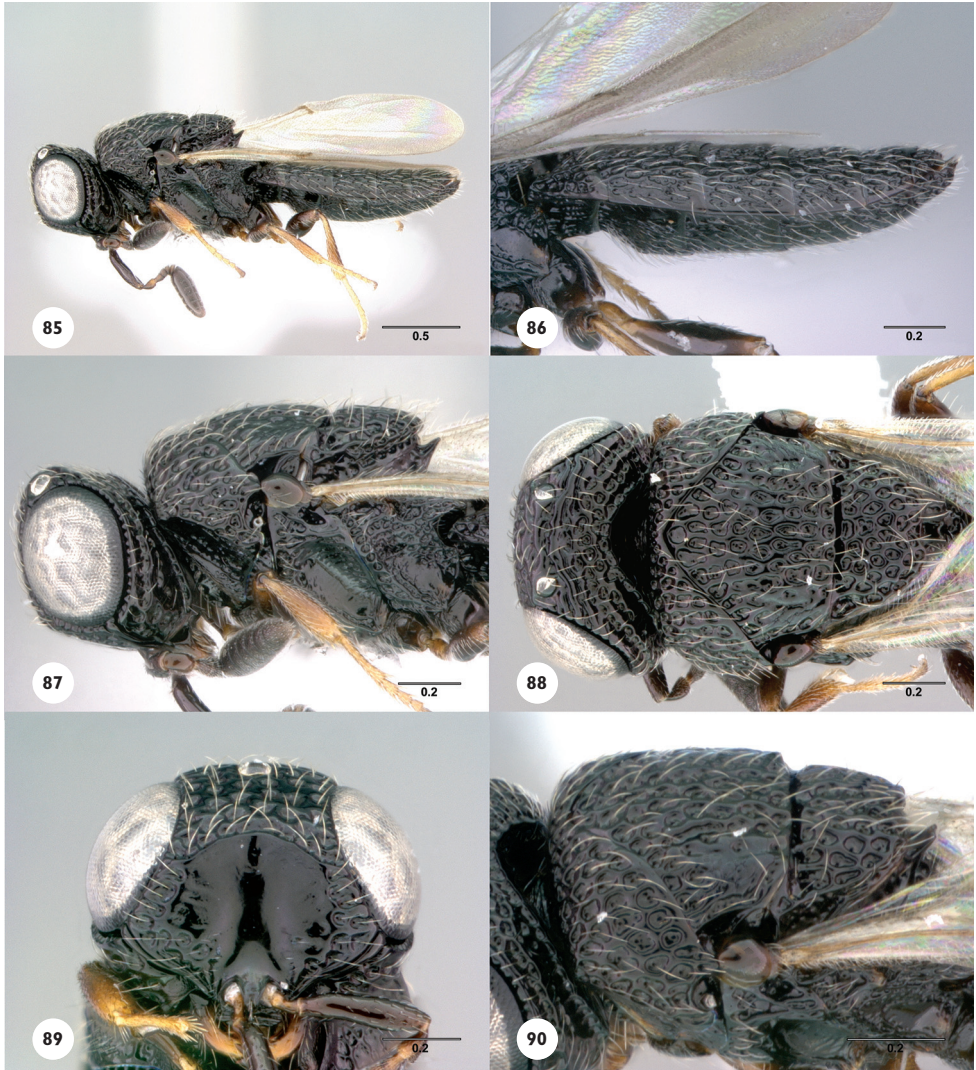
Antenna: Color of antennae in female: dark brown to black throughout. Color of antennae in male: A1–A2 brown; A3–A12 variably becoming yellow apically, antennomeres often yellow ventrally. Seta on pedicel of antenna in female: present, reaching past apex of A3.

Head: Color of setae on the head: white. Sculpture of dorsal frons between frontal carina and median ocellus: coarsely foveate, areolate. Preocellar pit in females: absent. Transverse rugae at vertex: present. Sculpture of posterior vertex: areolate, coarsely foveate. Sculpture of occipital rim: areolate. Interantennal process: simple. Number of anteriorly projecting setae on anteclypeus: 6. Color of mandibles in male: yellow throughout, teeth brown. Color of mandibles in female: yellow throughout with teeth brown. Mandibular teeth in female: dorsal tooth larger, teeth of equal size, ventral tooth larger, but less than 2 times as long as dorsal tooth. Sculpture of ventral gena anterior to genal carina: row of areolae. Sculpture of ventral gena posterior to genal carina: coarsely and irregularly punctate. Shape of anteclypeus: striplike, straight to slightly convex.

Legs: Color of legs: coxae dark brown, femora light brown, tibiae and tarsi yellow.

Mesosoma: Sculpture of dorsal pronotum: areolate. Color of setae on the dorsal mesosoma: white. Sculpture of medial mesoscutum: areolate. Sculpture of lateral mesoscutum: with an elevated patch of smoother sculpture, bounded by mesoscutal humeral sulcus laterally, extending to scutoscutellar sulcus posteriorly. Notaulus in female: present, absent. Parapsidal line: delimited. Sculpture of scutellum: areolate. Median furrow on scutellum: absent, present as a weak indentation. Posterior margin of scutellum: emarginate, convex. Outer projection of the propodeum: present as distinct corner or posteriorly projecting spine. Posterior margin of propodeal shelf between inner and outer propodeal projections in female: concave. Posterior margin of propodeal shelf between inner and outer propodeal projections in male: concave. Sculpture of ventral pronotum: foveate reticulate, becoming smooth at anterolateral corner, mostly smooth with longitudinal rugulae ventrally. Anterior pronotal pit: small. Pronotal cervical sulcus: well defined by contiguous punctures. Mesepimeral sulcus: indicated by dorsoventral line of foveae. Sculpture of femoral depression in female: smooth throughout, finely foveate throughout. Sculpture of femoral depression in male: with weak transverse striae throughout, anterior half smooth, posterior half finely foveate. Mesopleural carina: present as one or two carinae. Sculpture of ventral mesepisternum: smooth. Pilosity of metapleural triangle in female: present as many short fine white setae. Pilosity of metapleural triangle in male: present as many short fine white setae. Sculpture of ventral area of metapleuron: smooth.

Metasoma: Submarginal ridge on T1: absent. Sublateral tergal carina on T2: absent. Sculpture of T2–T3: reticulate rugose. Sculpture of T4: reticulate with finely rugulose interstices, reticulate rugose. Sculpture of T5: reticulate rugose. Shape of sub-apical T6 in female in dorsal view: short, width along anterior margin at least three times the length. Apex of T7 in male: slightly convex. Longitudinal medial keel on S1: absent. Sculpture of medial S2 in female: punctate. Sculpture of medial S3 in female:



Figures 85-90.¹⁰⁰ *Oreiscelio naevus*, sp. n. 85, 87-89, female holotype (CASENT 2042958). 85, Lateral habitus, female holotype (CASENT 2042958); 86, Metasoma, lateral view, female (CASENT 2042884); 87, Head and mesosoma, lateral view, female holotype (CASENT 2042958); 88, Head and mesosoma, dorsal view, female holotype (CASENT 2042958); 89, Head, anterior view, female holotype (CASENT 2042958); 90, Mesosoma, dorsolateral view, female (CASENT 2043702). Scale bars in millimeters.

effaced to smooth. Sculpture of medial S4 in female: effaced to smooth. Sculpture of medial S5 in female: effaced to smooth. Sculpture of lateral S3 in female: reticulate rugose, foveolate. Sculpture of lateral S4 in female: reticulate rugose, foveolate. Sculpture of lateral S5 in female: reticulate rugose, foveate. Sculpture of marginal depression of S2 in female: rugulose, finely punctate throughout. Sculpture of marginal depression of S3 in female: finely punctate throughout, rugulose. Sculpture of marginal depression of S4 in female: finely punctate throughout, rugulose. Sculpture of marginal depression of S5 in female: rugulose, finely punctate throughout. Apical spine on S6 in female: not extending beyond apex of T6 and not visible in dorsal view. Sculpture of medial S2 in male: punctate reticulate. Sculpture of medial S3 in male: smooth. Sculpture of lateral S3 in male: foveolate. Sculpture of lateral S4 in male: rugulose, foveolate, reticulate rugose. Sculpture of medial S5 in male: smooth, foveate. Sculpture of lateral S5 in male: foveolate, reticulate rugose.

Diagnosis. *Oreiselio naevus* is represented by a large series of specimens. Variability in the color of the legs, antennae, and mandibles loosely correlates with size: smaller specimens tend to be darker. This species is unlikely to be confused with *O. scapularis* or *O. rostratus*, both of which are elongate species. However, larger specimens often appear similar to *O. alluaudi*, and while the characters that separate them are numerous, they can be subtle. The preocellar pit is absent in females of *O. naevus* and is found very rarely in males as a small depression. Females of *O. alluaudi* always have a preocellar pit (Fig. 15), but it may be small and difficult to see. *Oreiselio naevus* has an anterior pit of the pronotum that is small (Fig. 10) and the posterior margin of the ventral pronotum lacks a percurrent sulcus (Fig. 10). *Oreiselio alluaudi* has a large, somewhat conspicuous, anterior pit of the pronotum (Fig. 9), and the sulcus along the posterior margin of the ventral pronotum extends around the antespircular patch (Fig. 9). *Oreiselio naevus* lacks a median keel on S1 (Fig. 86) and has a setose ventral cell of the metapleural triangle (as in Fig. 5). *Oreiselio alluaudi* has a thin, straight median keel on S1 (Fig. 31) and the ventral cell of metapleural triangle has at most 3 very small setae (Fig. 6).

Etymology. The epithet *naevus*, meaning “birthmark”, refers to the patch of smoother sculpture on the lateral mesoscutum.

Link to distribution map.⁴³

Material examined. Holotype female: **MADAGASCAR:** 22°37.60'S 45°21.49'E, Prov. Fianarantsoa nr Isalo NP, E of Interpretive Center, 20-27.V.02, Harin'Hala, Malaise trap, MA02-11B-29, CASENT 2042958 (deposited in CASC)⁴⁴. *Paratypes:* **MADAGASCAR:** 107 females, 63 males, CASENT 2042286, 2042637, 2042687, 2042879-2042886, 2042892, 2042900-2042902, 2042905, 2042907-2042908, 2042928-2042929, 2042934-2042935, 2042954-2042957, 2043002-2043003, 2043008-2043009, 2043011, 2043025, 2043147-2043148, 2043169, 2043186-2043188, 2043255-2043256, 2043351, 2043355, 2043455, 2043467, 2043472-2043473, 2043476-2043479, 2043496, 2043506, 2043532, 2043544, 2043550, 2043556, 2043562-2043563, 2043579, 2043593, 2043690, 2043701-2043706, 2043857, 2043952, 2043968-2043969, 2043972, 2043984-2043985, 2132000, 2132065, 2132104, 2132716, 2132742-2132744, 2132767, 2132793, 2132795,

2132811, 2132847, 2132849-2132850, 2133086, 2133129, 2133131, 2133206-2133209, 2133213-2133214, 2133225-2133229, 2133232, 2133242, 2133271-2133272, 2133277, 2133279-2133283, 2133290, 2133305, 2133349, 2133384-2133388, 2133406-2133408, 2133410-2133411, 2133438, 2133798, 2133930, 2134138, 2134140-2134142, 2134220, 2134240, 2134265, 2134278, 2134280, 2134468-2134469, 2134529, 2134545, 2134552, 2134689, 2134693, 2134696, 2134751, 2134868, 2135745-2135746, 2135935, 8106983-8106984, 8106989-8106990, 8106995-8106996, OSUC 207753 (CASC); CASENT 2043715-2043717, 2132017, 2132549, 2133793, 2134139, 8106982, 8106985, 8106991, 8106994, 8106998-8106999 (OSUC).

***Oreiscelio paradoxus* Talamas, sp. n.**

urn:lsid:zoobank.org:act:CAC66883-6C71-4A34-883A-973BDC9D8D65

urn:lsid:biosci.ohio-state.edu:osuc_concepts:231740

Figures 91-96; Morphbank⁴⁵

Description. General: Body length of female: 3-3 mm (n=2). Body color: black.

Antenna: Color of antennae in female: dark brown to black throughout. Seta on pedicel of antenna in female: present, not reaching apex of A3.

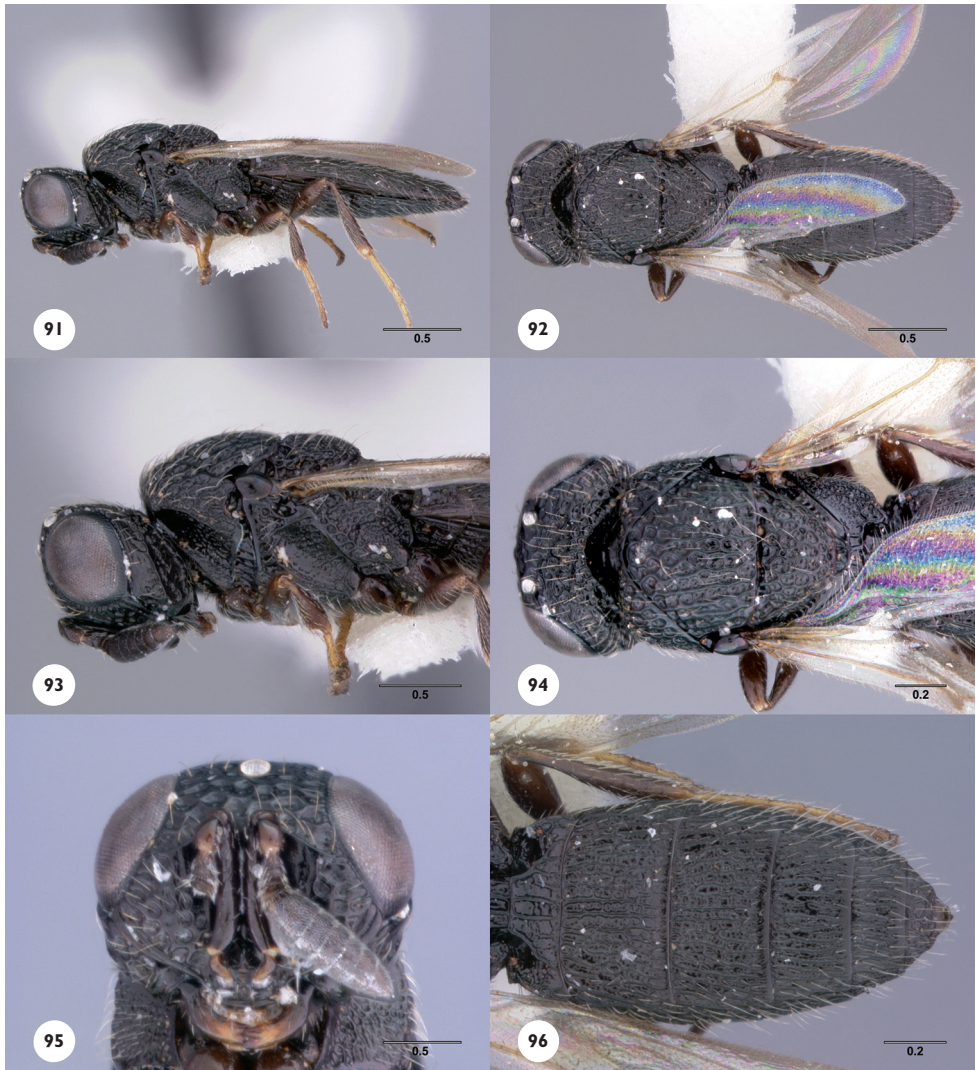
Head: Color of setae on the head: white. Sculpture of dorsal frons between frontal carina and median ocellus: areolate. Preocellar pit in females: present as a distinct pit. Transverse rugae at vertex: present. Sculpture of posterior vertex: coarsely foveate. Sculpture of occipital rim: areolate. Interantennal process: diverging into two carinae that extend laterally along surface of frons. Number of anteriorly projecting setae on anteclypeus: 6. Color of mandibles in female: basal half black; apical half pale brown. Mandibular teeth in female: teeth of equal size, ventral tooth larger, but less than 2x as long as dorsal tooth. Sculpture of ventral gena anterior to genal carina: row of shallow areolae with reduced ridges between cells. Sculpture of ventral gena posterior to genal carina: irregularly rugose. Shape of anteclypeus: striplike, straight to slightly convex.

Legs: Color of legs: dark brown, tarsi and distal portion of tibiae light brown, brown, tarsi and distal portion of tibiae yellow.

Mesosoma: Sculpture of dorsal pronotum: areolate. Color of setae on the dorsal mesosoma: white. Sculpture of medial mesoscutum: areolate, areolate, with pronounced longitudinal ridges. Sculpture of lateral mesoscutum: same as medial mesoscutum with a subtle confusion of sculptural elements. Notaulus in female: absent. Parapsidal line: delimited. Sculpture of scutellum: areolate. Median furrow on scutellum: absent. Posterior margin of scutellum: convex. Outer projection of the propodeum: rounded. Posterior margin of propodeal shelf between inner and outer propodeal projections in female: nearly straight, strongly oblique. Sculpture of ventral pronotum: foveate reticulate, becoming smooth at anterolateral corner. Anterior pronotal pit: small. Pronotal cervical sulcus: poorly defined. Mesepimeral sulcus: indicated by dorsoventral line of foveae. Sculpture of femoral depression in female: smooth throughout, transversely

striate throughout, finely foveate throughout. Mesopleural carina: weakly defined by fine ridges. Sculpture of ventral mesepisternum: smooth, with smooth area surrounded by small foveae. Pilosity of metapleural triangle in female: present as many short fine white setae. Sculpture of ventral area of metapleuron: foveate reticulate.

Metasoma: Submarginal ridge on T1: percurrent, well-defined. Sublateral carina on T2: percurrent. Sculpture of T2–T3: reticulate rugose. Sculpture of T4: longitudinally strigose. Sculpture of T5: longitudinally strigose. Shape of subapical T6 in female in dorsal view: short, width along anterior margin at least three times the length.



Figures 91-96.¹⁰¹ *Oreiscelio paradoxus*, sp. n., female holotype (OSUC 234365). 91, Lateral habitus; 92, Dorsal habitus; 93, Head and mesosoma, lateral view; 94, Head and mesosoma, dorsal view; 95, Head, anterior view; 96, Metasoma, dorsal view. Scale bars in millimeters.

Longitudinal medial keel on S1: absent. Sculpture of medial S2 in female: punctate reticulate. Sculpture of medial S3 in female: longitudinally strigose, effaced to smooth. Sculpture of medial S4 in female: longitudinally strigose, effaced to smooth. Sculpture of medial S5 in female: longitudinally strigose, effaced to smooth. Sculpture of lateral S3 in female: punctate crenulate. Sculpture of lateral S4 in female: longitudinally strigose. Sculpture of lateral S5 in female: longitudinally strigose. Sculpture of marginal depression of S2 in female: mostly smooth, with scattered punctures or shallow rugulae. Sculpture of marginal depression of S3 in female: mostly smooth, with scattered punctures or shallow rugulae, smooth. Sculpture of marginal depression of S4 in female: mostly smooth with scattered punctures or shallow rugulae. Sculpture of marginal depression of S5 in female: rugulose. Apical spine on S6 in female: extending beyond apex of T6 and visible in dorsal view.

Diagnosis. *Oreiscelio paradoxus* is easily recognized by the reduced outer propodeal projection (Fig. 92, 94) and the posteriorly depressed mesoscutellum (Figs 91, 93).

Etymology. The epithet *paradoxus* refers to the placement of this species in *Oreiscelio* despite its lack of a developed outer propodeal projection.

Link to distribution map.⁴⁶

Material examined. Holotype female: **ZIMBABWE:** Salisbury, I–III.1975, A.Watsham, OSUC 234365 (deposited in CNCI)⁴⁷. *Paratypes:* **UGANDA:** 1 female, OSUC 233710 (CNCI).

***Oreiscelio rostratus* Talamas & Masner, sp. n.**

urn:lsid:zoobank.org:act:537F38A8-0137-4FE7-8EEA-A9A2C0A08E07

urn:lsid:biosci.ohio-state.edu:osuc_concepts:225546

Figures 12, 22, 97-102; Morphbank⁴⁸

Description. General: Body length of female: 3.3-3.7 mm (n=20). Body length of male: 3.4-3.9 mm (n=5). Body color: black.

Antenna: Color of antennae in female: dark brown to black throughout, A1–A6 yellow; A7–A12 dark brown to black. Color of antennae in male: A1–A2 brown; A3–A12 variably becoming yellow apically, antennomeres often yellow ventrally. Seta on pedicel of antenna in female: present, reaching past apex of A3.

Head: Color of setae on the head: yellow. Sculpture of dorsal frons between frontal carina and median ocellus: coarsely foveate, areolate. Preocellar pit in females: absent. Transverse rugae at vertex: present. Sculpture of posterior vertex: areolate, coarsely foveate. Sculpture of occipital rim: areolate. Interantennal process: extended dorsally into medial flange, flange reaching from near apex of interantennal process to frons. Number of anteriorly projecting setae on anteclypeus: 6. Color of mandibles in male: yellow throughout, teeth brown. Color of mandibles in female: yellow throughout with teeth brown. Mandibular teeth in female: dorsal tooth larger. Sculpture of ventral gena anterior to genal carina: row of contiguous punctures, row of well separated punctures. Sculpture of ventral gena posterior to genal carina: mostly smooth, with

sparse large punctures, coarsely and irregularly punctate. Shape of anteclypeus: strip-like, straight to slightly convex.

Legs: Color of legs: entirely yellow.

Mesosoma: Sculpture of dorsal pronotum: areolate, areolate with expanded ridges. Color of setae on the dorsal mesosoma: yellow. Sculpture of medial mesoscutum: coarsely foveate. Sculpture of lateral mesoscutum: with an elevated patch of smoother sculpture, bounded by mesoscutal humeral sulcus laterally, extending to scutoscutellar sulcus posteriorly. Notaulus in female: present. Parapsidal line: delimited. Sculpture of scutellum: coarsely foveate. Median furrow on scutellum: absent. Posterior margin of scutellum: convex. Outer projection of the propodeum: present as distinct corner or posteriorly projecting spine. Posterior margin of propodeal shelf between inner and outer propodeal projections in female: concave. Posterior margin of propodeal shelf between inner and outer propodeal projections in male: concave. Sculpture of ventral pronotum: mostly smooth with small foveolae around antespircular patch. Anterior pronotal pit: large. Pronotal cervical sulcus: well defined by contiguous punctures. Mesepimeral sulcus: indicated by dorsoventral line of foveae. Sculpture of femoral depression in female: smooth throughout. Sculpture of femoral depression in male: smooth throughout. Mesopleural carina: indicated by one or two rows of punctures. Sculpture of ventral mesepisternum: with smooth area surrounded by small foveae. Pilosity of metapleural triangle in female: glabrous or with at most 3 small setae. Pilosity of metapleural triangle in male: absent, present as many short fine white setae. Sculpture of ventral area of metapleuron: smooth, foveate reticulate, with slightly appressed ridges.

Metasoma: Submarginal ridge on T1: absent. Sublateral tergal carina on T2: percurrent. Sculpture of T2–T3: longitudinally striate. Sculpture of T4: longitudinally strigose. Sculpture of T5: reticulate rugose. Shape of subapical T6 in female in dorsal view: short, width along anterior margin at least three times the length. Apex of T7 in male: slightly convex. Longitudinal medial keel on S1: present. Sculpture of medial S2 in female: punctate reticulate. Sculpture of medial S3 in female: effaced to smooth. Sculpture of medial S4 in female: effaced to smooth. Sculpture of medial S5 in female: effaced to smooth. Sculpture of lateral S3 in female: reticulate rugose, foveolate. Sculpture of lateral S4 in female: foveolate. Sculpture of lateral S5 in female: reticulate rugose, foveate. Sculpture of marginal depression of S2 in female: rugulose, smooth. Sculpture of marginal depression of S3 in female: smooth, rugulose. Sculpture of marginal depression of S4 in female: rugulose. Sculpture of marginal depression of S5 in female: rugulose. Apical spine on S6 in female: not extending beyond apex of T6 and not visible in dorsal view. Sculpture of medial S2 in male: punctate reticulate, reticulate rugose. Sculpture of medial S3 in male: smooth, longitudinally reticulate. Sculpture of lateral S3 in male: reticulate rugose, foveolate. Sculpture of lateral S4 in male: foveolate, reticulate rugose. Sculpture of medial S5 in male: smooth. Sculpture of lateral S5 in male: foveolate, reticulate rugose.

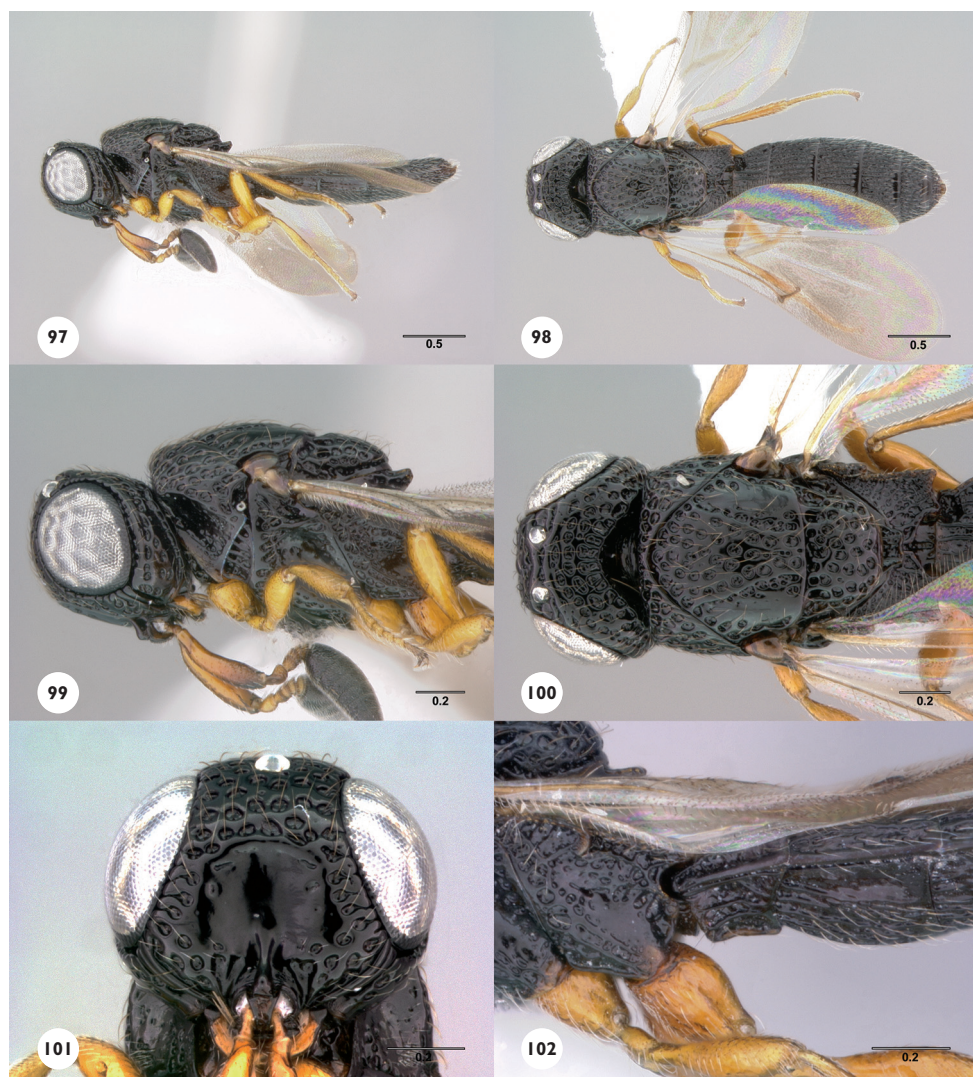
Diagnosis. *Oreiscelio rostratus* is most similar to *O. scapularis* and *O. alluaudi*. It can be distinguished from *O. scapularis* by the shape of T6 (Figs 98) and from *O. alluaudi* by the lack of a preocellar pit. The flange above the interantennal process usually

serves well to identify this species from other Madagascan species but exhibits sufficient variability that it should always be used in conjunction with other characters.

Etymology. The epithet *rostratus*, meaning “beaked”, refers to the dorsal flange of the interantennal process in this species.

Link to distribution map.⁴⁹

Material examined. Holotype female: **MADAGASCAR:** 12°30'52”S 49°10'53”E, Prov. d’Antsiranana, Parc Nat. Montagne d’Ambre, 960 m, 19.III–5.IV.2001,



Figures 97–102.¹⁰² *Oreiscelio rostratus*, sp. n. 97, Lateral habitus, female holotype (CASENT 2043721); 98, Dorsal habitus, female holotype (CASENT 2043721); 99, Head and mesosoma, lateral view, female holotype (CASENT 2043721); 100, Head and mesosoma, dorsal view, female holotype (CASENT 2043721); 101, Head, anterior view, female holotype (CASENT 2043721). 102, S1, lateral view, female (CASENT 2118438). Scale bars in millimeters.

Harin'Hala, Malaise, MA-01-01A-09, CASENT 2043721 (deposited in CASC)⁵⁰.
Paratypes: **MADAGASCAR**: 60 females, 7 males, CASENT 2042648, 2042839, 2043322, 2043485, 2043509, 2043511, 2043524, 2043537-2043539, 2043707-2043714, 2043943, 2118434-2118442, 2132107, 2132109-2132111, 2132447, 2132727-2132728, 2132731, 2132739, 2132741, 2132798, 2132845, 2133288, 2133374, 2133401-2133402, 2133414, 2133433, 2134308-2134309 (CASC); OSUC 234288-234294, 234327 (CNCI); CASENT 2043199, 2043510, 2043718-2043720, 2132028, 2132087, 2132108, 2132657, 2134079, 2134192 (OSUC).

Oreiselio rugosus Sundholm

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urn:lsid:biosci.ohio-state.edu:osuc_concepts:5002

Figures 4, 13-14, 103-108; Morphbank⁵¹

Oreiselio rugosus Sundholm, 1970: 375. Original description.

Description. General: Body length of female: 2.1-2.7 mm (n=20). Body length of male: 2.3-2.5 mm (n=4). Body color: head and mesosoma black; metasoma dark brown to black.

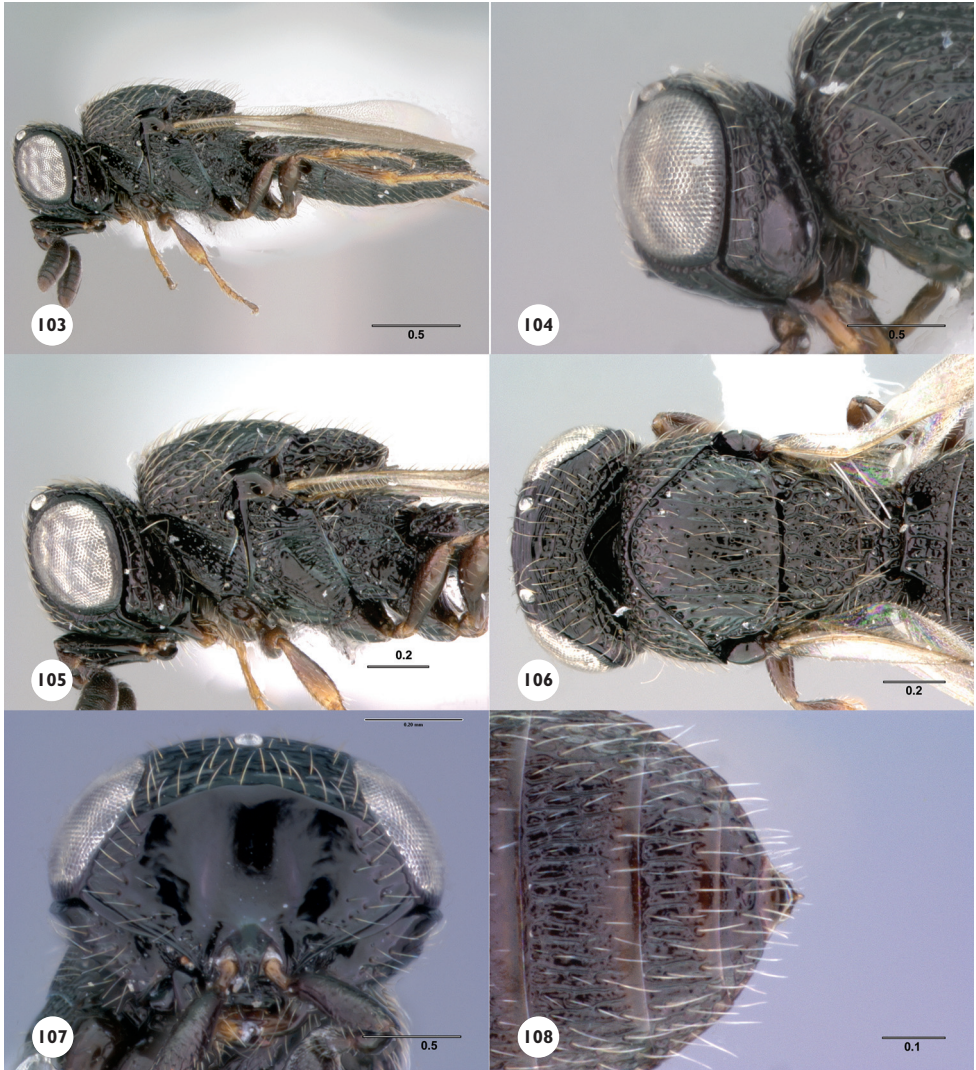
Antenna: Color of antennae in female: dark brown to black throughout. Color of antennae in male: brown. Seta on pedicel of antenna in female: present, reaching past apex of A3.

Head: Color of setae on the head: yellow. Sculpture of dorsal frons between frontal carina and median ocellus: areolate, transversely rugose. Preocellar pit in females: indicated by a small round depression, present as a distinct pit. Transverse rugae at vertex: present. Sculpture of posterior vertex: areolate, transversely strigose. Sculpture of occipital rim: areolate. Interantennal process: simple. Number of anteriorly projecting setae on anteclypeus: 6. Color of mandibles in male: basal half black; apical half pale brown. Color of mandibles in female: basal half black; apical half dark brown, basal half black; apical half pale brown, brown throughout, basal half black; apical half yellow. Mandibular teeth in female: teeth of equal size. Sculpture of ventral gena anterior to genal carina: row of shallow areolae with reduced ridges between cells. Sculpture of ventral gena posterior to genal carina: smooth. Shape of anteclypeus: striplike, straight to slightly convex.

Legs: Color of legs: brown, distal portion of tibiae and tarsomeres 1-4 yellow, apical tarsomere brown.

Mesosoma: Sculpture of dorsal pronotum: areolate. Color of setae on the dorsal mesosoma: yellow. Sculpture of medial mesoscutum: areolate, areolate, with pronounced longitudinal ridges, longitudinally strigose throughout, partially to mostly effaced. Sculpture of lateral mesoscutum: same as medial mesoscutum with a subtle confusion of sculptural elements, smooth throughout, with small patch of smoother sculpture, formed by fusion of sculptural ridges, smooth patch not extending to scuto-scutellar sulcus. Notaulus in female: absent. Parapsidal line: delimited, indistinguish-

able. Sculpture of scutellum: areolate. Median furrow on scutellum: absent, present as a weak indentation. Posterior margin of scutellum: emarginate, convex. Outer projection of the propodeum: present as distinct corner or posteriorly projecting spine. Posterior margin of propodeal shelf between inner and outer propodeal projections in female: concave. Posterior margin of propodeal shelf between inner and outer propodeal projections in male: concave. Sculpture of ventral pronotum: foveate reticulate,



Figures 103-108.¹⁰³ *Oreiscelio rugosus* Sundholm. 103, 105, 106, female (OSUC 202157). 103, Lateral habitus, female (OSUC 202157); 104, Head, posterolateral view, female (OSUC 202156); 105, Head and mesosoma, lateral view, female (OSUC 202157); 106, Head and mesosoma, dorsal view, female (OSUC 202157); 107, Head, anterior view, female (OSUC 234351); 108, T6, dorsal view, female (OSUC 211421). Scale bars in millimeters.

becoming smooth at anterolateral corner, obliterated, mostly smooth with longitudinal rugulae ventrally. Anterior pronotal pit: absent, small. Pronotal cervical sulcus: poorly defined, well defined by contiguous punctures. Mesepimeral sulcus: indicated by dorsoventral line of foveae, crenulate. Sculpture of femoral depression in female: anterior half smooth, posterior half longitudinally striate. Sculpture of femoral depression in male: with weak transverse striae throughout, anterior half smooth, posterior half longitudinally striate. Mesopleural carina: present as one or two carinae, weakly defined by fine ridges. Sculpture of ventral mesepisternum: with smooth area surrounded by small foveae. Pilosity of metapleural triangle in female: present as many short fine white setae. Pilosity of metapleural triangle in male: present as many short fine white setae. Sculpture of ventral area of metapleuron: smooth, foveate reticulate, with slightly appressed ridges.

Metasoma: Submarginal ridge on T1: percurrent, well-defined, indicated by an irregular ridge, absent, partially fused with marginal carina. Sublateral tergal carina on T2: absent, present in anterior half. Sculpture of T2–T3: reticulate rugose. Sculpture of T4: longitudinally strigose, reticulate rugose. Sculpture of T5: longitudinally strigose. Shape of subapical T6 in female in dorsal view: short, width along anterior margin at least three times the length. Apex of T7 in male: slightly convex. Longitudinal medial keel on S1: absent. Sculpture of medial S2 in female: foveolate. Sculpture of medial S3 in female: effaced to smooth. Sculpture of medial S4 in female: effaced to smooth. Sculpture of medial S5 in female: longitudinally strigose, effaced to smooth. Sculpture of lateral S3 in female: reticulate rugose, smooth. Sculpture of lateral S4 in female: reticulate rugose, smooth. Sculpture of lateral S5 in female: reticulate rugose. Sculpture of marginal depression of S2 in female: rugulose, smooth. Sculpture of marginal depression of S3 in female: smooth, rugulose. Sculpture of marginal depression of S4 in female: rugulose. Sculpture of marginal depression of S5 in female: rugulose. Apical spine on S6 in female: extending beyond apex of T6 and visible in dorsal view. Sculpture of medial S2 in male: punctate reticulate. Sculpture of medial S3 in male: smooth. Sculpture of lateral S3 in male: smooth, rugulose. Sculpture of lateral S4 in male: rugulose. Sculpture of medial S5 in male: smooth, longitudinally strigose. Sculpture of lateral S5 in male: longitudinally strigose, rugulose.

Diagnosis. *Oreiscelio rugosus* exhibits a large degree of variability in surface sculpture: the dorsal mesoscutum varies between areolate, longitudinally strigose, and mostly effaced; the dorsal frons is areolate to transversely rugose (Figs 13, 14); and the posterior vertex ranges from areolate to transversely rugose. This species is most similar to *O. badius* but has a more transverse shape of the frons in frontal view (Figs 107) and a preocellar pit (Figs 13, 14). The smooth area on the ventral gena anterior to the genal carina is a particularly useful character to identify this species (Fig. 104).

Link to distribution map.⁵²

Material examined. Holotype female: **SOUTH AFRICA:** Cape Province, Cape Peninsula, Hout Bay. Skoorsteenkop. 250-500 ft. ZMLU Type No. 1:906 (ZMLU)⁵³. *Other material:* **SOUTH AFRICA:** 66 females, 13 males, BMNH #790255 (OSUC 256819), BMNH #790257 (OSUC 256820), BMNH #790233 (OSUC 253200)

(BMNH); OSUC 233673, 233696, 233705-233706, 234272-234273, 234348, 234351-234352, 234356-234361 (CNCI); SAM-HYM-P005682 (OSUC 248299), SAM-HYM-P005682 (OSUC 248300), SAM-HYM-P005683 (OSUC 248301-248302), SAM-HYM-P005684 (OSUC 248303), SAM-HYM-P025413 (OSUC 248279), SAM-HYM-P025414 (OSUC 248278), SAM-HYM-P025415 (OSUC 248277), SAM-HYM-P025416 (OSUC 248245-248247), SAM-HYM-P025417 (OSUC 248248), SAM-HYM-P025418 (OSUC 248249-248251), SAM-HYM-P025419 (OSUC 248252-248255), SAM-HYM-P025420 (OSUC 248256), SAM-HYM-P025421 (OSUC 248257-248258), SAM-HYM-P025422 (OSUC 248259-248260), SAM-HYM-P025423 (OSUC 248261-248271), SAM-HYM-P025424 (OSUC 248272), SAM-HYM-P025425 (OSUC 248273-248276), SAM-HYM-P029338 (OSUC 179125), SAM-HYM-P029339 (OSUC 202155-202156), SAM-HYM-P029340 (OSUC 202157), SAM-HYM-P029341 (OSUC 211420), SAM-HYM-P029342 (OSUC 211421), SAM-HYM-P029343 (OSUC 211422), SAM-HYM-P029344 (OSUC 211423), SAM-HYM-P029345 (OSUC 211424), SAM-HYM-P029346 (OSUC 211425), SAM-HYM-P029347 (OSUC 211432), SAM-HYM-P029348 (OSUC 211598), SAM-HYM-P029349 (OSUC 211599), SAM-HYM-P029350 (OSUC 211600), SAM-HYM-P029351 (OSUC 232018-232019) (SAMC); UCRC ENT 171073 (UCRC).

***Oreiscelio scapularis* Talamas, sp. n.**

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urn:lsid:biosci.ohio-state.edu:osuc_concepts:227004

Figures 21, 109-114; Morphbank⁵⁴

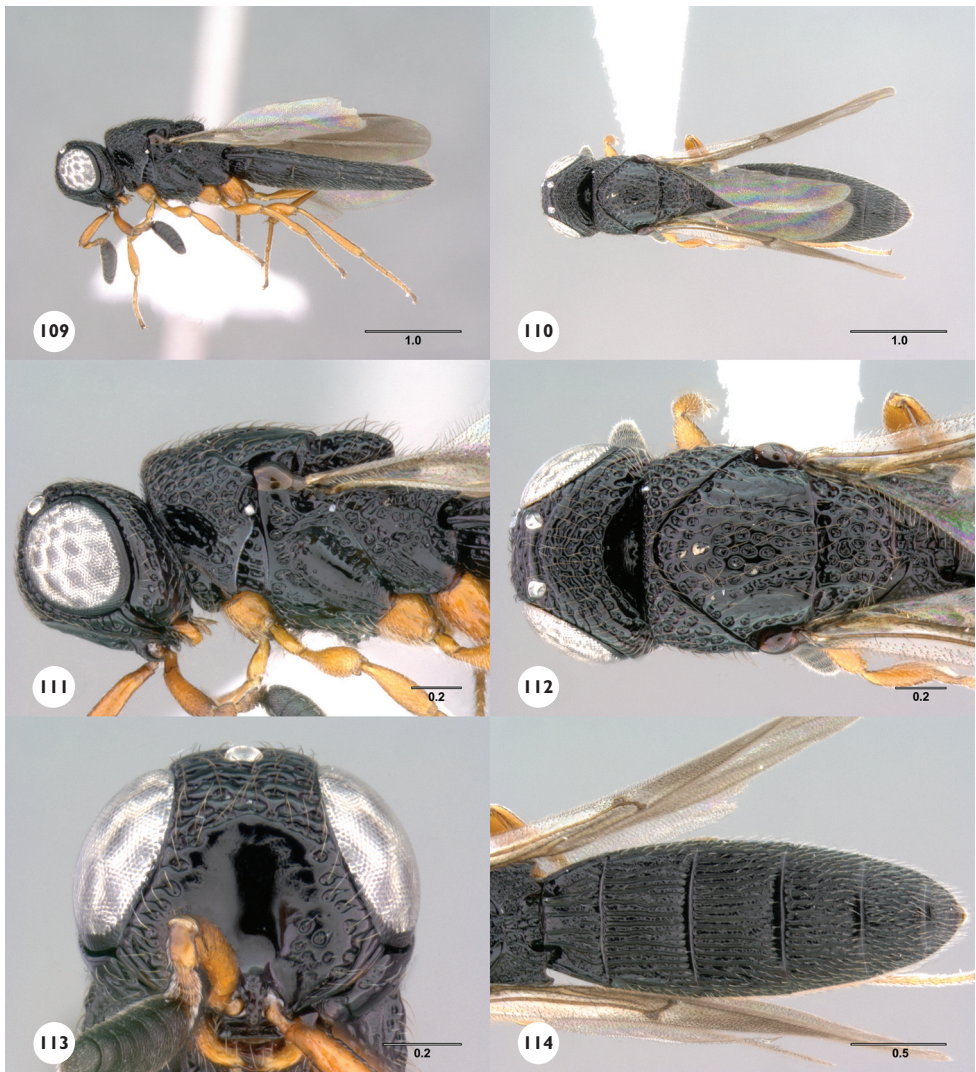
Description. General: Body length of female: 3.1-4.1 mm (n=15). Body length of male: 3.6-3.8 mm (n=6). Body color: black.

Antenna: Color of antennae in female: A1-A6 yellow; A7-A12 dark brown to black. Color of antennae in male: A1-A2 brown; A3-A12 variably becoming yellow apically, antennomeres often yellow ventrally. Seta on pedicel of antenna in female: present, reaching past apex of A3.

Head: Color of setae on the head: yellow. Sculpture of dorsal frons between frontal carina and median ocellus: coarsely foveate, foveate with contiguous cells. Preocellar pit in females: absent. Transverse rugae at vertex: present. Sculpture of posterior vertex: coarsely foveate. Sculpture of occipital rim: coarsely foveate, cells often contiguous.. Interantennal process: simple. Number of anteriorly projecting setae on anteclypeus: 6. Color of mandibles in male: yellow throughout, teeth brown. Color of mandibles in female: yellow throughout with teeth brown. Mandibular teeth in female: dorsal tooth larger. Sculpture of ventral gena anterior to genal carina: row of contiguous punctures, row of well separated punctures. Sculpture of ventral gena posterior to genal carina: mostly smooth, with sparse large punctures, coarsely and irregularly punctate. Shape of anteclypeus: striplike, straight to slightly convex.

Legs: Color of legs: entirely yellow.

Mesosoma: Sculpture of dorsal pronotum: areolate with expanded ridges. Color of setae on the dorsal mesosoma: yellow. Sculpture of medial mesoscutum: coarsely foveate. Sculpture of lateral mesoscutum: with an elevated patch of smoother sculpture, bounded by mesoscutal humeral sulcus laterally, extending to scutoscutellar sulcus posteriorly. Notaulus in female: present. Parapsidal line: delimited. Sculpture of scutellum: coarsely foveate. Median furrow on scutellum: absent. Posterior margin of scutellum: convex. Outer projection of the propodeum: present as distinct corner or



Figures 109-114.¹⁰⁴ *Oreiscelio scapularis*, sp. n., female holotype (CASENT 2042840). 109, Lateral habitus; 110, Dorsal habitus; 111, Head and mesosoma, lateral view; 112, Head and mesosoma, dorsal view; 113, Head, anterior view; 114, Metasoma, dorsal view. Scale bars in millimeters.

posteriorly projecting spine. Posterior margin of propodeal shelf between inner and outer propodeal projections in female: concave. Posterior margin of propodeal shelf between inner and outer propodeal projections in male: concave. Sculpture of ventral pronotum: foveate reticulate, becoming smooth at anterolateral corner. Anterior pronotal pit: large. Pronotal cervical sulcus: well defined by contiguous punctures. Mesepimeral sulcus: indicated by dorsoventral line of foveae. Sculpture of femoral depression in female: smooth throughout. Sculpture of femoral depression in male: smooth medially, bounded by small foveae. Mesopleural carina: indicated by one or two rows of punctures. Sculpture of ventral mesepisternum: with smooth area surrounded by small foveae. Pilosity of metapleural triangle in female: glabrous or with at most 3 small setae. Pilosity of metapleural triangle in male: absent. Sculpture of ventral area of metapleuron: smooth.

Metasoma: Submarginal ridge on T1: absent. Sublateral tergal carina on T2: percurrent. Sculpture of T2–T3: longitudinally striate. Sculpture of T4: longitudinally striate. Sculpture of T5: longitudinally strigose. Shape of subapical T6 in female in dorsal view: semicircular, width along anterior margin twice the length.. Apex of T7 in male: slightly convex. Longitudinal medial keel on S1: absent. Sculpture of medial S2 in female: unknown. Sculpture of medial S3 in female: longitudinally strigose, effaced to smooth. Sculpture of medial S4 in female: longitudinally strigose, effaced to smooth. Sculpture of medial S5 in female: longitudinally strigose, effaced to smooth. Sculpture of lateral S3 in female: longitudinally strigose. Sculpture of lateral S4 in female: longitudinally strigose. Sculpture of lateral S5 in female: longitudinally strigose. Sculpture of marginal depression of S2 in female: smooth. Sculpture of marginal depression of S3 in female: smooth. Sculpture of marginal depression of S4 in female: mostly smooth with scattered punctures or shallow rugulae, rugulose. Sculpture of marginal depression of S5 in female: rugulose. Apical spine on S6 in female: not extending beyond apex of T6 and not visible in dorsal view. Sculpture of medial S2 in male: longitudinally strigose. Sculpture of medial S3 in male: smooth, weakly longitudinally strigose. Sculpture of lateral S3 in male: longitudinally strigose. Sculpture of lateral S4 in male: longitudinally strigose. Sculpture of medial S5 in male: smooth, longitudinally strigose. Sculpture of lateral S5 in male: longitudinally strigose.

Diagnosis. *Oreiselio scapularis* is most similar to *O. rostratus*. It may be separated from all other species of *Oreiselio* on the basis of the shape of T6 alone (Figs 21, 114).

Etymology. The epithet *scapularis* refers to the large smooth areas of the lateral mesoscutum.

Link to distribution map.⁵⁵

Material examined. Holotype female: **MADAGASCAR:** 21°15.99'S 47°25.21'E, Prov. Fianarantsoa 1020 m, PN Ranomafana, BelleVue at Talatakely, 4-16.V.2003, Malaise trap, Harin'Hala, MA02-09C60, CASC 2042840 (deposited in CASC)⁵⁶. *Paratypes:* **MADAGASCAR:** 6 males, 19 females, CASENT 2042208, 2042647, 2042649, 2042837, 2042870, 2043374, 2043384, 2043386, 2043536, 2043993, 2132079, 2132082, 2132713, 2132736, 2133372, 2133415, 2133424 (CASC); CASENT 2043381, 2043385, 2043388, 2133264, 2133931, 2134080, 2134083, 2134087 (OSUC).

***Oreiselio sechellensis* Kieffer**

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urn:lsid:biosci.ohio-state.edu:osuc_concepts:5003

Figures 23, 115-120; Morphbank⁵⁷

Oreiselio sechellensis Kieffer, 1910a: 293 (original description); Masner, 1965: 86 (type information).

Scelio (*Oreiselio*) *seychellensis* (Kieffer): Kieffer, 1910b: 73 (subgeneric assignment).

Oriselio seychellensis: Kieffer, 1912: 58 (redescribed as new); Kieffer, 1926: 346 (description).

Description. General: Body length of female: 3.1-3.4 mm (n=9). Body length of male: 3.0 mm (n=1). Body color: black.

Antenna: Color of antennae in female: A1–A6 pale brown; A7–A12 dark brown. Color of antennae in male: A1–A2 brown; A3–A12 yellow. Seta on pedicel of antenna in female: present, not reaching apex of A3.

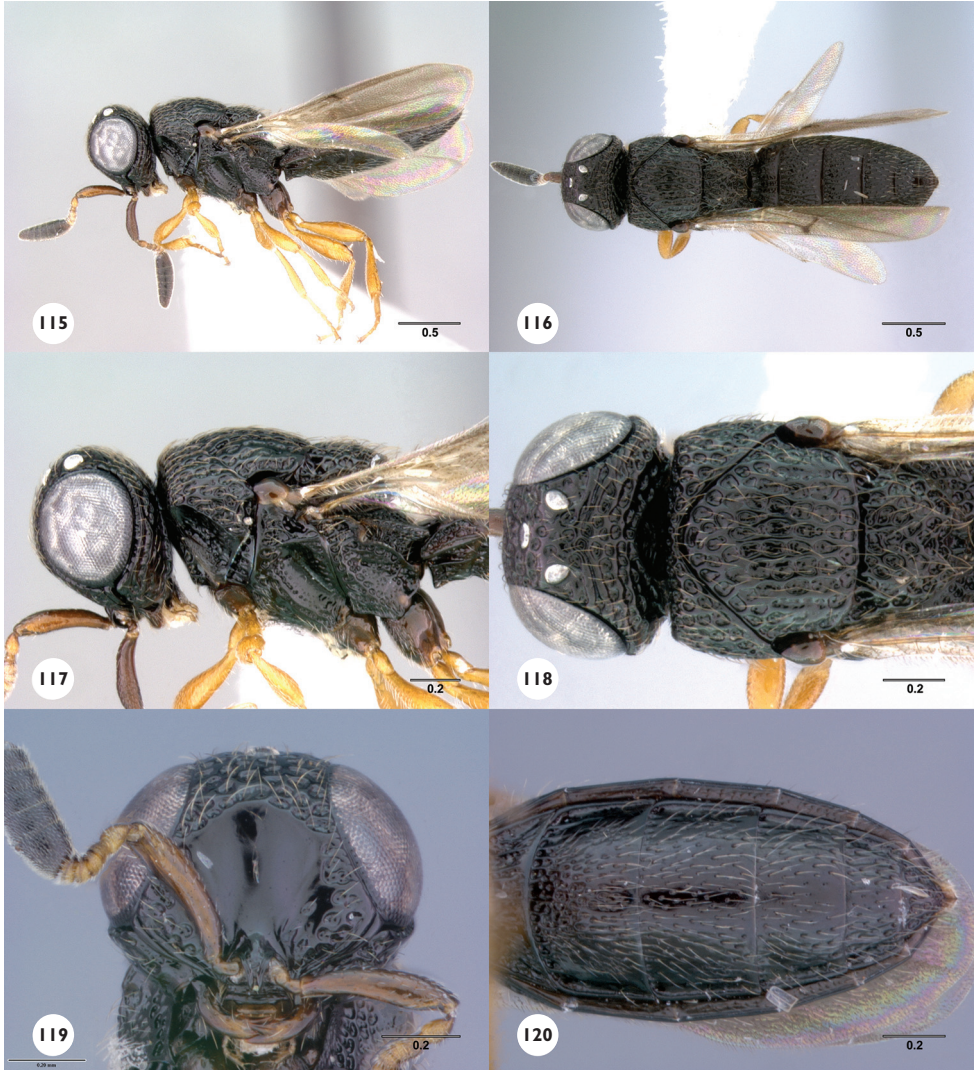
Head: Color of setae on the head: yellow. Sculpture of dorsal frons between frontal carina and median ocellus: coarsely foveate. Preocellar pit in females: indicated by a small round depression. Transverse rugae at vertex: present. Sculpture of posterior vertex: coarsely foveate. Sculpture of occipital rim: areolate. Interantennal process: simple. Number of anteriorly projecting setae on anteclypeus: 6. Color of mandibles in male: basal half black, apical half brown. Color of mandibles in female: brown throughout. Mandibular teeth in female: teeth of equal size. Sculpture of ventral gena anterior to genal carina: row of shallow areolae with reduced ridges between cells. Sculpture of ventral gena posterior to genal carina: mostly smooth, with sparse large punctures. Shape of anteclypeus: striplike, straight to slightly convex.

Legs: Color of legs: coxae brown, legs otherwise yellow.

Mesosoma: Sculpture of dorsal pronotum: areolate. Color of setae on the dorsal mesosoma: yellow. Sculpture of medial mesoscutum: areolate. Sculpture of lateral mesoscutum: with small patch of smoother sculpture, formed by fusion of sculptural ridges, smooth patch not extending to scutoscutellar sulcus. Notaulus in female: absent. Parapsidal line: delimited. Sculpture of scutellum: areolate. Median furrow on scutellum: present as a weak indentation, present as a distinct furrow reaching from posterior to anterior margin. Posterior margin of scutellum: deeply notched. Outer projection of the propodeum: present as distinct corner or posteriorly projecting spine. Posterior margin of propodeal shelf between inner and outer propodeal projections in female: concave. Posterior margin of propodeal shelf between inner and outer propodeal projections in male: concave. Sculpture of ventral pronotum: foveate reticulate, becoming smooth at anterolateral corner. Anterior pronotal pit: absent. Pronotal cervical sulcus: well defined by contiguous punctures. Mesepimeral sulcus: indicated by dorsoventral line of foveae. Sculpture of femoral depression in female: smooth throughout. Sculpture of femoral depression in male: anterior half smooth, posterior half finely foveate. Mesopleural carina: indicated by one or two rows of punctures, present as one or two

carinae. Sculpture of ventral mesepisternum: with smooth area surrounded by small foveae. Pilosity of metapleural triangle in female: present as many short fine white setae. Pilosity of metapleural triangle in male: present as many short fine white setae. Sculpture of ventral area of metapleuron: foveate reticulate, foveate reticulate, with slightly appressed ridges.

Metasoma: Submarginal ridge on T1: percurrent, well-defined. Sublateral tergal carina on T2: absent. Sculpture of T2–T3: reticulate rugose. Sculpture of T4: longi-



Figures 115-120.¹⁰⁵ *Oreiscelio sechellensis* Kieffer. 115, Lateral habitus, female (OSUC 207594); 116, Dorsal habitus, female (OSUC 207594); 117, Head and mesosoma, lateral view, female (OSUC 207594); 118, Head and mesosoma, dorsal view, female (OSUC 207594); 119, Head, anterior view, female (OSUC 234298); 120, Metasoma, ventral view, female (OSUC 234301). Scale bars in millimeters.

tudinally strigose, reticulate rugose. Sculpture of T5: longitudinally strigose, reticulate rugose. Shape of subapical T6 in female in dorsal view: short, width along anterior margin at least three times the length. Apex of T7 in male: straight to slightly concave, with small points laterally. Longitudinal medial keel on S1: absent. Sculpture of medial S2 in female: punctate. Sculpture of medial S3 in female: effaced to smooth. Sculpture of medial S4 in female: effaced to smooth. Sculpture of medial S5 in female: effaced to smooth. Sculpture of lateral S3 in female: smooth. Sculpture of lateral S4 in female: smooth. Sculpture of lateral S5 in female: reticulate rugose, punctate crenulate. Sculpture of marginal depression of S2 in female: smooth. Sculpture of marginal depression of S3 in female: mostly smooth, with scattered punctures or shallow rugulae. Sculpture of marginal depression of S4 in female: rugulose. Sculpture of marginal depression of S5 in female: rugulose, mostly smooth with scattered punctures. Apical spine on S6 in female: not extending beyond apex of T6 and not visible in dorsal view. Sculpture of medial S2 in male: punctate. Sculpture of medial S3 in male: smooth. Sculpture of lateral S3 in male: smooth. Sculpture of lateral S4 in male: smooth. Sculpture of medial S5 in male: smooth. Sculpture of lateral S5 in male: smooth.

Diagnosis. *Oreiscelio sechellensis* is similar to *Oreiscelio zuzkae*, from which it differs most obviously in the sculpture of the sternites; the sternites of *O. sechellensis* are largely smooth (Figs 23, 120) while those of *O. zuzkae* are longitudinally reticulate (Fig. 138). The only other species with similarly reduced sculpture of the ventral metasoma is *Oreiscelio rugosus*. Females of *O. rugosus* have a spine on S6 that is visible in dorsal view (Fig. 108) whereas females of *O. sechellensis* do not (Fig. 118).

Link to distribution map.⁵⁸

Material examined. Holotype female: **SEYCHELLES:** Percy Sladen Trust Expedition. 1930-170. B.M. TYPE HYM. 9.507 (BMNH)⁵⁹. *Paratypes:* **SEYCHELLES:** 7 females, BMNH #790246 (OSUC 253194-253199), BMNH #790247 (OSUC 253194) (BMNH) *Other material:* **SEYCHELLES:** 1 male, 9 females, OSUC 207594, 234295-234392 (CNCI).

Comments. *Oreiscelio sechellensis* was originally described from only female specimens; one male is included in this revision.

***Oreiscelio turneri* Nixon**

urn:lsid:zoobank.org:act:250A31B0-7E2A-43E7-86AA-E4FAEB8CA689

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Figures 2-3, 19, 121-126; Morphbank⁶⁰

Oreiscelio turneri Nixon, 1933: 294 (original description).

Oreiscelio turneri: Masner, 1965: 86 (type information).

Description. General: Body length of female: 2.3-2.9 mm (n=20). Body length of male: 2.2-2.7 mm (n=20). Body color: dark brown to black, metasoma often lighter than head and mesosoma.

Antenna: Color of antennae in female: dark brown to black throughout, A1 black, A2–A6 pale brown, A7–A12 black, A1 dark brown, A2–A6 yellow, A7–A12 dark brown, A1 brown, A2–A6 yellow, A7–A12 brown, A1 brown, A2 pale brown, A3–A12 brown. Color of antennae in male: A1–A2 brown; A3–A12 variably becoming yellow apically, antennomeres often yellow ventrally, brown. Seta on pedicel of antenna in female: present, reaching to apex of A3.

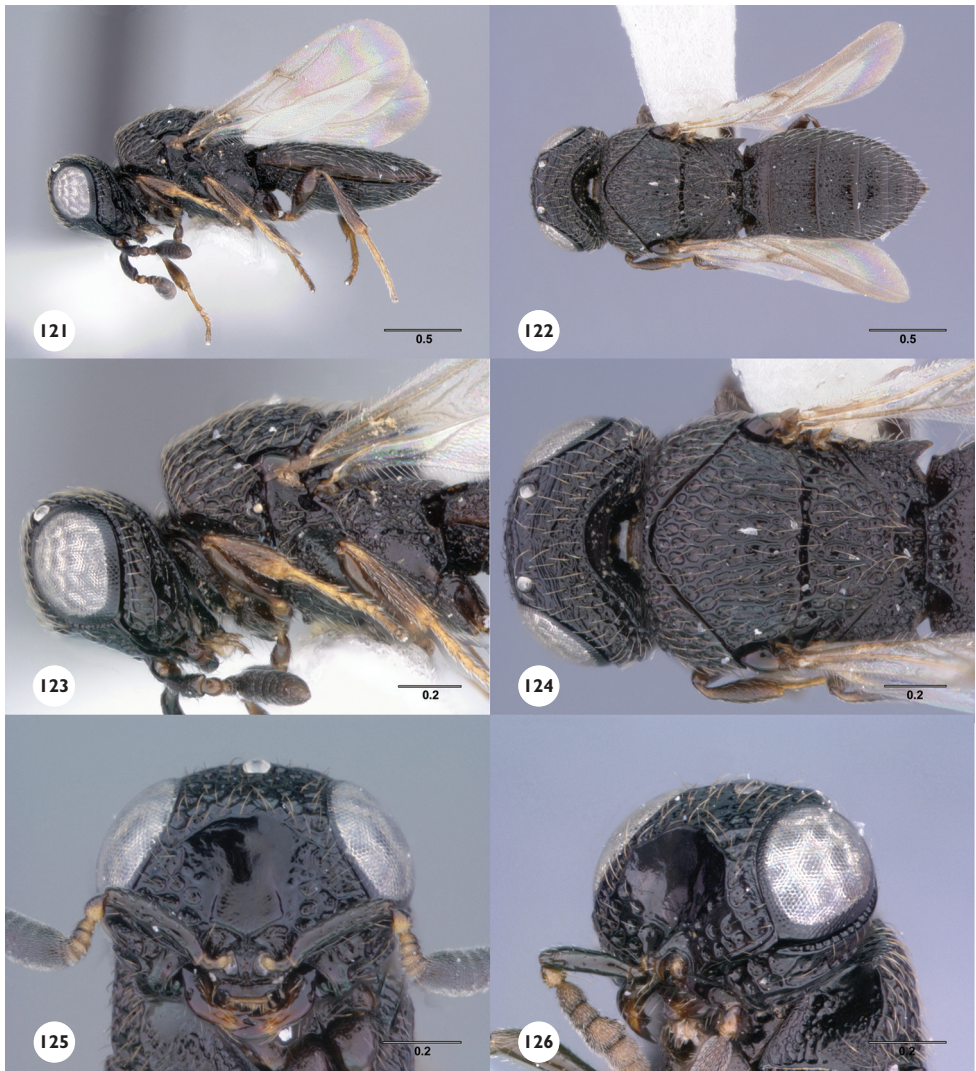
Head: Color of setae on the head: yellow. Sculpture of dorsal frons between frontal carina and median ocellus: areolate. Preocellar pit in females: absent, indicated by a small round depression. Transverse rugae at vertex: present. Sculpture of posterior vertex: areolate. Sculpture of occipital rim: areolate. Interantennal process: diverging into two carinae that extend laterally along surface of frons. Number of anteriorly projecting setae on anteclypeus: 6. Color of mandibles in male: basal half black, apical half brown, teeth dark brown to black. Color of mandibles in female: basal half black; apical half dark brown, brown throughout, pale brown with teeth dark brown. Mandibular teeth in female: ventral tooth at least twice as long and wide at base than dorsal tooth. Sculpture of ventral gena anterior to genal carina: row of shallow areolae with reduced ridges between cells, row of contiguous punctures. Sculpture of ventral gena posterior to genal carina: areolate, coarsely and irregularly punctate. Shape of anteclypeus: striplike, straight to slightly convex.

Legs: Color of legs: brown, tarsi and distal portion of tibiae yellow.

Mesosoma: Sculpture of dorsal pronotum: areolate. Color of setae on the dorsal mesosoma: yellow. Sculpture of medial mesoscutum: areolate, areolate, with pronounced longitudinal ridges. Sculpture of lateral mesoscutum: same as medial mesoscutum with a subtle confusion of sculptural elements. Notaulus in female: absent. Parapsidal line: indistinguishable. Sculpture of scutellum: areolate. Median furrow on scutellum: absent, present as a weak indentation. Posterior margin of scutellum: emarginate. Outer projection of the propodeum: present as distinct corner or posteriorly projecting spine. Posterior margin of propodeal shelf between inner and outer propodeal projections in female: concave. Posterior margin of propodeal shelf between inner and outer propodeal projections in male: concave. Sculpture of ventral pronotum: foveate reticulate, becoming smooth at anterolateral corner. Anterior pronotal pit: absent, small. Pronotal cervical sulcus: poorly defined. Mesepimeral sulcus: indicated by dorsoventral line of foveae, crenulate. Sculpture of femoral depression in female: smooth throughout, transversely striate throughout, anterior half smooth, posterior half finely foveate. Sculpture of femoral depression in male: smooth throughout, finely foveate throughout, with weak transverse striae throughout, anterior half smooth, posterior half finely foveate. Mesopleural carina: present as one or two carinae. Sculpture of ventral mesepisternum: foveate, with smooth area surrounded by small foveae. Pilosity of metapleural triangle in female: present as many short fine white setae. Pilosity of metapleural triangle in male: present as many short fine white setae. Sculpture of ventral area of metapleuron: smooth, foveate reticulate, foveate reticulate, with slightly appressed ridges.

Metasoma: Submarginal ridge on T1: percurrent, well-defined, indicated by an irregular ridge, absent. Sublateral carina on T2: absent, present in anterior half. Sculp-

ture of T2–T3: reticulate rugose. Sculpture of T4: longitudinally strigose, reticulate rugose. Sculpture of T5: longitudinally strigose, reticulate rugose. Shape of subapical T6 in female in dorsal view: short, width along anterior margin at least three times the length. Apex of T7 in male: bispinose. Longitudinal medial keel on S1: absent, present. Sculpture of medial S2 in female: reticulate rugose. Sculpture of medial S3 in female: effaced to smooth. Sculpture of medial S4 in female: effaced to smooth. Sculpture of



Figures 121-126.¹⁰⁶ *Oreiscelio turneri* Nixon 121-124, female (OSUC 233753). 121, Lateral habitus, female (OSUC 233753); 122, Dorsal habitus, female (OSUC 233753); 123, Head and mesosoma, lateral, female (OSUC 233753); 124, Head and mesosoma dorsal view, female (OSUC 233753); 125, Head, anterior view, female (OSUC 234679); 126, Head, ventrolateral view, male (OSUC 233698). Scale bars in millimeters.

medial S5 in female: effaced to smooth. Sculpture of lateral S3 in female: punctate crenulate, rugulose. Sculpture of lateral S4 in female: longitudinally strigose, rugulose, punctate crenulate. Sculpture of lateral S5 in female: reticulate rugose. Sculpture of marginal depression of S2 in female: rugulose. Sculpture of marginal depression of S3 in female: smooth. Sculpture of marginal depression of S4 in female: mostly smooth with scattered punctures or shallow rugulae. Sculpture of marginal depression of S5 in female: rugulose. Apical spine on S6 in female: extending beyond apex of T6 and visible in dorsal view. Sculpture of medial S2 in male: punctate reticulate, foveolate. Sculpture of medial S3 in male: smooth, foveate. Sculpture of lateral S3 in male: longitudinally strigose, foveolate. Sculpture of lateral S4 in male: rugulose, longitudinally strigose, foveolate. Sculpture of medial S5 in male: smooth, foveate. Sculpture of lateral S5 in male: foveolate, longitudinally strigose, reticulate rugose, rugulose.

Diagnosis. *Oreiselio turneri* is most similar in general appearance to *Oreiselio coracinus* and *Oreiselio badius*. *Oreiselio turneri* is separated from both of these species by the much larger ventral mandibular tooth (Figs 41, 42). The specimens from Kenya, Tanzania, and Uganda tend to be smaller and darker in color than those found in Zimbabwe and South Africa.

Link to distribution map.⁶¹

Material examined. Holotype, female: **SOUTH AFRICA:** Eastern Cape Prov., Pondoland, Port Saint John's, V-1924, none specified, R. E. Turner, B.M. TYPE HYM. 9.508 (deposited in BMNH). *Paratypes:* **SOUTH AFRICA:** 5 females, 14 male, BMNH #790248 (OSUC 253192), OSUC 253176-253191 (BMNH); SAM-HYM-P002817 (OSUC 248308), SAM-HYM-P002818 (OSUC 248309) (SAMC). *Other material:* (159 females, 54 males) **BOTSWANA:** 18 females, 1 male, OSUC 234274, 234279 (CNCI); OSUC 164241-164243, 164265-164266, 164341, 164343, 164350, 202159-202160, 202162, 202164, 211428-211429 (OSUC); OSUC 171171, 207690, 211401 (USNM). **KENYA:** 23 females, 7 males, BMNH #790256 (OSUC 253167) (BMNH); CASENT 2042593-2042595 (CASC); OSUC 233669-233671, 233674-233684, 233686, 233697-233702, 233707-233708, 234223, 234354-234355 (CNCI). **NAMIBIA:** 3 females, 3 males, BMNH #790251 (OSUC 253162), BMNH #790252 (OSUC 253161), OSUC 253160, OSUC 253168-253170 (BMNH). **MALAWI:** 3 females, OSUC 234316-234317, 234349 (CNCI). **MOZAMBIQUE:** 3 females, OSUC 233690-233692 (CNCI). **SOMALIA:** 1 female, 1 male, OSUC 211438, 234280 (CNCI). **SOUTH AFRICA:** 63 females, 14 males, BMNH #790253 (OSUC 253165), BMNH #790254 (OSUC 253159), OSUC 253163, OSUC 253166 (BMNH); OSUC 211437, 233685, 233693-233695, 233704, 233713-233716, 233718, 233722, 233724, 233726-233731, 233734, 233743-233744, 233746-233748, 233750, 233753, 233757, 233764-233766, 233768, 233774-233779, 233783, 233786, 233790, 233792, 233794-233795, 233803, 234304-234305, 234312-234314, 234318, 234322 (CNCI); OSUC 141976-141977, 170287, 176102-176103, 176351, 202169-202171, 211426, 58658 (OSUC); OSUC 174690, 174701, 174703-174704, 233031-233034 (SANC); UCRC ENT 171071-171072 (UCRC). **TANZANIA:** 7 females, 1 male,

CASENT 2042524, 2042526-2042527 (CASC); SAM-HYM-P016081 (OSUC 248290), SAM-HYM-P016400 (OSUC 248287), SAM-HYM-P016635 (OSUC 248292), SAM-HYM-P018349 (OSUC 248291), SAM-HYM-P019145 (OSUC 248289) (SAMC). **ZAMBIA**: 2 females, BMNH #790259 (OSUC 253174-253175) (BMNH). **ZIMBABWE**: 36 females, 27 males, BMNH #790249 (OSUC 253172), OSUC 253164, OSUC 253171, OSUC 253173 (BMNH); OSUC 233738, 234204-234212, 234215, 234224-234232, 234234-234239, 234243-234244, 234246-234250, 234363-234364, 234366, 234368-234369, 234371-234372, 234376-234378, 234383-234384, 234386-234387, 234389, 234391-234396, 234398-234400, 234402 (CNCI); OSUC 233030 (SANC).

***Oreiscelio zulu* Talamas & Polaszek, sp. n.**

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Figures 127-132; Morphbank⁶²

Description. General. Body length of female: 2.4-2.5 mm (n=3). Body color: black.

Antenna: Color of antennae in female: dark brown to black throughout. Seta on pedicel of antenna in female: present, reaching past apex of A3.

Head: Color of setae on the head: white. Sculpture of dorsal frons between frontal carina and median ocellus: areolate. Preocellar pit in females: absent. Transverse rugae at vertex: present. Sculpture of posterior vertex: areolate. Sculpture of occipital rim: areolate. Interantennal process: extended dorsally into medial flange, flange reaching from near apex of interantennal process to frons. Number of anteriorly projecting setae on anteclypeus: 6. Color of mandibles in female: basal half black; apical half pale brown. Mandibular teeth in female: teeth of equal size. Sculpture of ventral gena anterior to genal carina: row of shallow areolae with reduced ridges between cells. Sculpture of ventral gena posterior to genal carina: areolate, irregularly rugose.

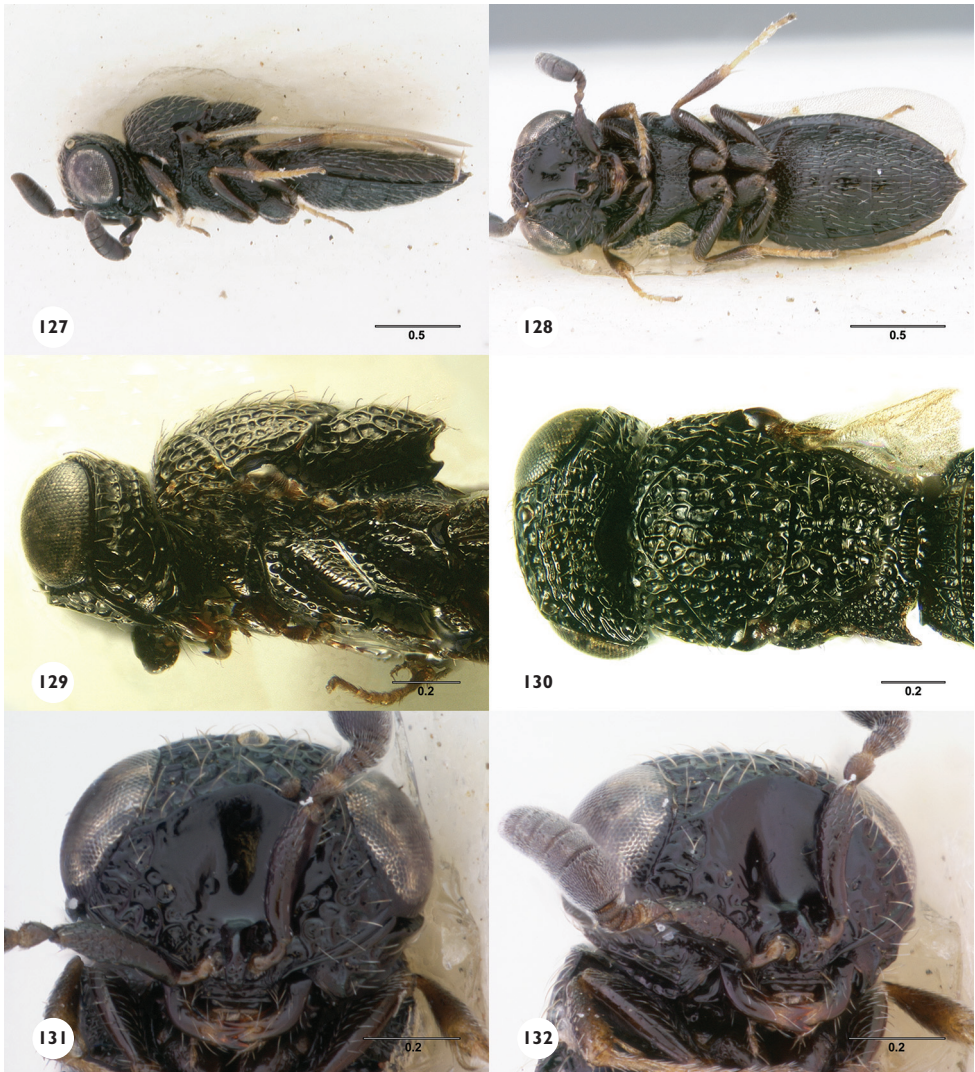
Legs: Shape of anteclypeus: striplike, straight to slightly convex.

Color of legs: coxae and femora dark brown, trochanters, tibia and tarsi yellowish-brown.

Mesosoma: Sculpture of dorsal pronotum: areolate. Color of setae on the dorsal mesosoma: white. Sculpture of medial mesoscutum: areolate. Sculpture of lateral mesoscutum: same as medial mesoscutum with a subtle confusion of sculptural elements, areolate. Notaulus in female: absent. Parapsidal line: indistinguishable. Sculpture of scutellum: areolate. Median furrow on scutellum: present as a weak indentation. Posterior margin of scutellum: deeply notched. Outer projection of the propodeum: present as distinct corner or posteriorly projecting spine. Posterior margin of propodeal shelf between inner and outer propodeal projections in female: concave. Sculpture of ventral pronotum: foveate reticulate, becoming smooth at anterolateral corner. Anterior pronotal pit: small. Pronotal cervical sulcus: well defined by contiguous punctures. Mesepimeral sulcus: crenulate. Sculpture of femoral depression in female: transversely striate

throughout, finely foveate throughout. Mesopleural carina: present as one or two carinae. Sculpture of ventral mesepisternum: with smooth area surrounded by small foveae. Pilosity of metapleural triangle in female: present as many short fine white setae. Sculpture of ventral area of metapleuron: foveate reticulate, with slightly appressed ridges.

Metasoma: Submarginal ridge on T1: absent. Sublateral carina on T2: percurrent. Sculpture of T2–T3: reticulate rugose. Sculpture of T4: reticulate rugose. Sculpture of T5: reticulate rugose. Shape of subapical T6 in female in dorsal view: short, width along



Figures 127-132.¹⁰⁷ *Oreiscelio zulu*, sp. n. 127-128, 131-132, female holotype (OSUC 174708). 127, Lateral habitus, female (OSUC 174708); 128, Ventral habitus, female, (OSUC 174708); 129, Head and mesosoma, lateral view, female (OSUC 256829); 130, Head and mesosoma, dorsal view, female (OSUC 256829); 131, Head, anterior view, female (OSUC 174708); 132 Head, anterolateral view, female (OSUC 174708). Scale bars in millimeters.

anterior margin at least three times the length. Longitudinal medial keel on S1: absent. Sculpture of medial S2 in female: punctate reticulate. Sculpture of medial S3 in female: foveate, effaced to smooth. Sculpture of medial S4 in female: effaced to smooth. Sculpture of medial S5 in female: longitudinally strigose. Sculpture of lateral S3 in female: punctate crenulate. Sculpture of lateral S4 in female: punctate crenulate. Sculpture of lateral S5 in female: punctate crenulate. Sculpture of marginal depression of S2 in female: rugulose. Sculpture of marginal depression of S3 in female: rugulose. Sculpture of marginal depression of S4 in female: rugulose. Sculpture of marginal depression of S5 in female: rugulose. Apical spine on S6 in female: not extending beyond apex of T6 and not visible in dorsal view, extending beyond apex of T6 and visible in dorsal view.

Diagnosis. *Oreiselio zulu* appears to be limited in distribution to the eastern part of South Africa. It is similar in habitus to *O. turneri*, *O. coracinus*, and *O. badius* but lacks divergent carinae on the frons above the interantennal process and instead bears a dorsal flange. Among the continental species the dorsally enlarged interantennal process is similar to that of *O. iommii*, which is easily distinguishable from *O. zulu* by its entirely smooth mesopleuron.

Etymology. *Oreiselio zulu* is named for the Zulu people that inhabit the eastern region of South Africa where this species is found.

Link to distribution map.⁶³

Material examined. Holotype, female: **SOUTH AFRICA:** South Africa, Kwa-Zulu-Natal Prov., Mbazwana, IV-1977, G. L. Prinsloo, OSUC 174708 (deposited in SANC). *Paratypes:* **SOUTH AFRICA:** 2 females, BMNH #790250 (OSUC 256828), BMNH #790252 (OSUC 256829).

***Oreiselio zuzkae* Talamas & Johnson, sp. n.**

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urn:lsid:biosci.ohio-state.edu:osuc_concepts:225573

Figures 5, 18, 133-138; Morphbank⁶⁴

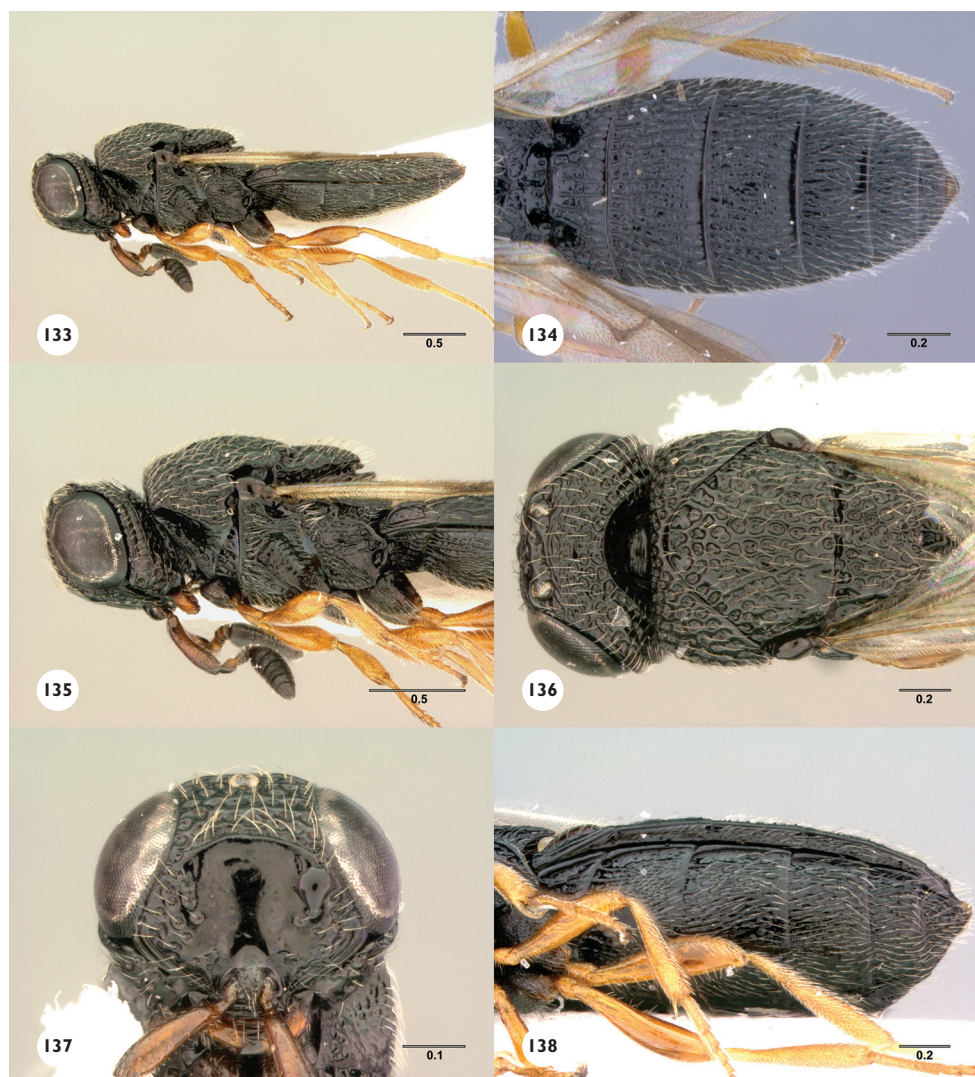
Description. General: Body length of female: 3.3-3.9 mm (n=14). Body color: black.

Antenna: Color of antennae in female: A1–A6 yellow; A7–A12 dark brown to black. Seta on pedicel of antenna in female: present, not reaching apex of A3.

Head: Color of setae on the head: white. Sculpture of dorsal frons between frontal carina and median ocellus: areolate. Preocellar pit in females: absent, indicated by a small round depression, present as a distinct pit. Transverse rugae at vertex: present. Sculpture of posterior vertex: areolate. Sculpture of occipital rim: areolate. Interantennal process: simple. Number of anteriorly projecting setae on anteclypeus: 6. Color of mandibles in female: yellow throughout with teeth brown. Mandibular teeth in female: ventral tooth larger, but less than 2x as long as dorsal tooth. Sculpture of ventral gena anterior to genal carina: row of shallow areolae with reduced ridges between cells. Sculpture of ventral gena posterior to genal carina: coarsely and irregularly punctate, irregularly rugose. Shape of anteclypeus: striplike, straight to slightly convex.

Legs: Color of legs: coxae brown, legs otherwise yellow.

Mesosoma: Sculpture of dorsal pronotum: areolate. Color of setae on the dorsal mesosoma: white, yellow. Sculpture of medial mesoscutum: areolate. Sculpture of lateral mesoscutum: same as medial mesoscutum with a subtle confusion of sculptural elements. Notaulus in female: present. Parapsidal line: delimited. Sculpture of scutellum: areolate. Median furrow on scutellum: present as a distinct furrow reaching from



Figures 133-138.¹⁰⁸ *Oreiscelio zuzkae*, sp. n. 133, 135-138, female (CASENT 2042528). 133, Lateral habitus, female (CASENT 2042528); 134, Metasoma, dorsal view, female (OSUC 207588); 135, Head and mesosoma, lateral view, female (CASENT 2042528); 136, Head and mesosoma, dorsal view, female (CASENT 2042528); 137, Head, anterior view, female (CASENT 2042528); 138 Metasoma, ventral view, female (CASENT 2042528). Scale bars in millimeters.

posterior to anterior margin. Posterior margin of scutellum: deeply notched. Outer projection of the propodeum: present as distinct corner or posteriorly projecting spine. Posterior margin of propodeal shelf between inner and outer propodeal projections in female: concave. Sculpture of ventral pronotum: foveate reticulate, becoming smooth at anterolateral corner. Anterior pronotal pit: large. Pronotal cervical sulcus: well defined by contiguous punctures. Mesepimeral sulcus: indicated by dorsoventral line of foveae, crenulate. Sculpture of femoral depression in female: transversely striate throughout, anterior half smooth, posterior half finely foveate, finely foveate throughout. Mesopleural carina: present as one or two carinae. Sculpture of ventral mesepisternum: foveate, with smooth area surrounded by small foveae. Pilosity of metapleural triangle in female: present as many short fine white setae. Sculpture of ventral area of metapleuron: smooth, foveate reticulate, foveate reticulate, with slightly appressed ridges.

Metasoma: Submarginal ridge on T1: percurrent, well-defined, indicated by an irregular ridge. Sublateral carina on T2: present in anterior half. Sculpture of T2–T3: reticulate rugose, longitudinally strigose with rugose interstices. Sculpture of T4: longitudinally strigose, longitudinally striate. Sculpture of T5: longitudinally strigose. Shape of subapical T6 in female in dorsal view: short, width along anterior margin at least three times the length. Longitudinal medial keel on S1: absent. Sculpture of medial S2 in female: reticulate rugose. Sculpture of medial S3 in female: foveate, effaced to smooth. Sculpture of medial S4 in female: effaced to smooth. Sculpture of medial S5 in female: longitudinally strigose. Sculpture of lateral S3 in female: reticulate rugose, foveolate. Sculpture of lateral S4 in female: reticulate rugose, foveolate. Sculpture of lateral S5 in female: reticulate rugose, longitudinally strigose. Sculpture of marginal depression of S2 in female: mostly smooth, with scattered punctures or shallow rugulae, rugulose. Sculpture of marginal depression of S3 in female: mostly smooth, with scattered punctures or shallow rugulae. Sculpture of marginal depression of S4 in female: mostly smooth with scattered punctures or shallow rugulae. Sculpture of marginal depression of S5 in female: rugulose, mostly smooth with scattered punctures. Apical spine on S6 in female: not extending beyond apex of T6 and not visible in dorsal view.

Diagnosis. *Oreiselio zuzkae* is a widespread species, extending from Guinea east to Tanzania and south to South Africa. It is not particularly similar to any other continental species and may be separated from them by its medially furrowed mesoscutellum (Fig. 136), lack of a spine on S6 (Fig. 134) and the simple interantennal process (Fig. 137). It shares the most characters with *O. sechellensis* from which it can be separated by the longitudinally reticulate sculpture of the sternites (Fig. 138).

Etymology. This species is named for conceptual artist Zuzana Muranicová.

Link to distribution map.⁶⁵

Material examined. Holotype, female: **TANZANIA:** Tanga Reg., 10km WNW Mabokweni, 4°59.6'S 38°59.0'E, 16.I-18.I.2003, M. A. Prentice, CASENT 2042528 (deposited in CASC)⁶⁶. *Paratypes:* (75 females) **BENIN:** 4 females, OSUC 233797-233800 (CNCI). **CENTRAL AFRICAN REPUBLIC:** 25 females, OSUC 234345-234347 (CNCI); OSUC 179100-179102, 180837-180839, 186296, 188471, 207582, 207588 (OSUC); SAM-HYM-P029309 (OSUC 248280), SAM-HYM-P029310

(OSUC 248283), SAM-HYM-P029311 (OSUC 248284), SAM-HYM-P029312 (OSUC 248281), SAM-HYM-P029337 (OSUC 248282), SAM-HYM-P029367 (OSUC 186466), SAM-HYM-P029368 (OSUC 211413), SAM-HYM-P029369 (OSUC 211417), SAM-HYM-P029370 (OSUC 211418), SAM-HYM-P029371 (OSUC 211419), SAM-HYM-P029372 (OSUC 211436), SAM-HYM-P029373 (OSUC 211825) (SAMC). **DEMOCRATIC REPUBLIC OF THE CONGO:** 1 female, OSUC 233709 (CNCI). **GUINEA:** 1 female, OSUC 234343 (CNCI). **IVORY COAST:** 7 females, OSUC 233762-233763, 234281, 234328-234331 (CNCI). **NIGERIA:** 26 females, BMNH #790232 (OSUC 253149-253158), BMNH #790235 (OSUC 253148), OSUC 253140-OSUC 253147 (BMNH); OSUC 234216-234217, 234219-234221, 234253, 234326 (CNCI). **SOUTH AFRICA:** 8 females, OSUC 233801-233802, 234269-234271, 234342 (CNCI); OSUC 180836 (OSUC); OSUC 174702 (SANC). **TANZANIA:** 2 females, OSUC 207758-207759 (CNCI). **ZIMBABWE:** 1 female, OSUC 234257 (CNCI).

Acknowledgments

Thanks to A. Bennett, M. Buffington, R. Danielsson, D. Notton, T. Nuhn, G. Prinsloo, W. Pulawski, D. Yanega, and R. Zuparko for the loan of material for this study and to L. Musetti, J. Cora, and S. Hemly for assistance with specimen handling, software, and databasing. Field work in Madagascar and processing of collections was supported in part by the National Science Foundation under Grant No. DEB-0072713 to B.L. Fisher and C.E. Griswold and DEB-0344731 to B.L. Fisher and P.S. Ward. This material is based upon work supported in part by the National Science Foundation under grant No. DEB-0614764 to N.F. Johnson and A.D. Austin.

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A new species of *Ischyomius* from Venezuela (Coleoptera, Tenebrionoidea, Pythidae) with a revised key to world species

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Abstract

A new species – *Ischyomius escalonai* – is described from Venezuela (type locality: Lara, Yacumbú National Park, El Blanquito). Males of *I. escalonai* have distinctive genitalia with very short accessory lobes, and both sexes have simple elytral apices, without the spine that is present in almost all other species of the genus. The type specimens of *I. escalonai* were collected in association with dry leaves of Bird of Paradise (*Strelitzia* sp.) plants. A revised key to species of *Ischyomius* is provided.

Keywords

beetles, new species, Neotropical, Pythidae, Venezuela

Introduction

As outlined by Pollock (1998, 2007), the genus *Ischyomius* has been, until recently, an enigma within the superfamily Tenebrionoidea. After historical placements in Tenebrionidae, Melandryidae, Tetratomidae and Tricentenotomidae, the genus now has a solid placement within Pythidae. A preliminary study of the putative larva of *Ischyomius* further confirms its placement in Pythidae (Pollock, unpublished). Pollock (1998) tentatively placed the genus near the monotypic *Sphalma* Horn, based on shared possession of concealed antennal insertions, very large mandibular mola, and lateral pronotal carinae.

The description of species of *Ischyomius* has a “bimodal” distribution; after description of the first four species from 1878 to 1916 (Chevrolat 1878; Champion 1916), it was another 90 years until the next two species were described (Pollock 1998). Then, based on recently collected material, a seventh species – *I. hovorei* – was described by Pollock (2007). With the present description of *I. escalonai*, sp. n., the diversity of *Ischyomius* is now comparable to that of *Pytho* Latreille, the latter of which has 9 described species. It seems likely that additional new species will be discovered, thus making it the most diverse genus in the family. All other pythid genera comprise one or two species only.

***Ischyomius escalonai* Pollock, sp. n.**

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(Figs. 1-4)

Type series. Holotype male, labeled: “VENEZUELA, Lara, P.N. Yacambú, El Blanquito, 1400 m 26.VI.2005; Hermes Escalona, collector” / “coll. on bird of paradise (*Strelitzia*) dry leaves” / “HOLOTYPE *Ischyomius* ♂ *escalonai*, sp. n. D. A. Pollock 2007”. Allotype female, same labels as holotype (with “ALLOTYPE” instead of “HOLOTYPE” on third label). Two paratypes, one male, one female, with same labels as Holotype (with “PARATYPE” instead of “HOLOTYPE” on third label). Holotype, allotype and female paratype deposited in Museo del Instituto de Zoología Agrícola “Francisco Fernández Yépez”, UCV, Maracay, Venezuela (Luis J. Joly, curator). Male paratype deposited in collection of author.

Derivation of specific epithet. I am very pleased to name this new species after friend and colleague Hermes Escalona, a fellow specialist on the “salpingid group” of tenebrionoid families, and who also collected all known specimens of this species.

Diagnosis. This new species of *Ischyomius* may be separated from the rest of the genus by the following combination of characters: posterior pronotal bead indistinct; lateral pronotal bead not attaining anterior bead; color uniformly light to medium brown; abdominal ventrites with short but obvious setation; elytral apices rounded, without spine (Fig. 3) aedeagus relatively short and stout, accessory lobes very short, inserted midlength on the tegmen (Fig. 4); known only from Venezuela.

Description. With generic characteristics of *Ischyomius* (see Pollock 1998: 246-250), plus the following: total length (TL) 9.9-11.5 mm; greatest elytral width (GEW) 2.8-3.2 mm; body (Fig. 1) elongate (TL / GEW = 3.5-3.8) color uniformly light to medium brown dorsally, without obvious color contrasts, ventrally, thorax and abdominal ventrites slightly darker than legs and elytral epipleuron; eyes moderately protuberant; antennae relatively long, antennomeres filiform, slightly widened from antennomere 5; male lacking pit on mentum; entire dorsal surface of body with shallow, sparse punctation, without any obvious microsculpture; pronotum wider than long (GPW / PL = 1.19-1.21); posterior pronotal bead indistinct; lateral pronotal carinae distinct, smooth, without tubercles, prolonged anteriorly

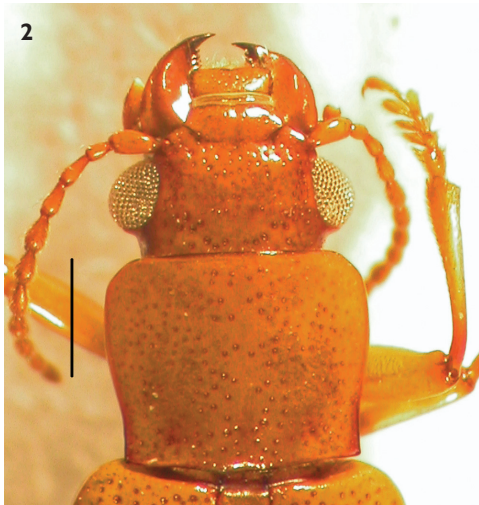
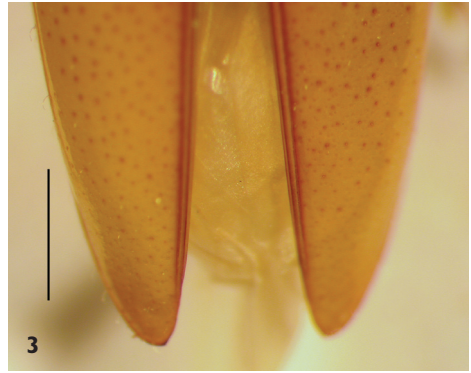


Fig. 1. Dorsal habitus of *Ischyomius escalonai* sp. n., male paratype. TL = 11 mm.

Fig. 2. *Ischyomius escalonai* sp. n., male, detail of forebody. Scale bar = 1 mm.

Fig. 3. *Ischyomius escalonai* sp. n., male, detail of elytral apices. Scale bar = 1 mm.

Fig. 4. *Ischyomius escalonai* sp. n., aedeagus, dorsal view. Scale bar = 0.5 mm.

to, and in contact with, anterior pronotal bead; lateral pronotal margins parallel-sided basally, then relatively abruptly widened, greatest width anterior of midlength (Fig. 2); anterolateral angles of pronotum rounded, not angulate; disc of pronotum moderately convex with indistinct posterolateral depressions; elytra convex, slightly flattened dorsally, without distinct setation; outer apical elytral spine absent (Fig. 3); thoracic sterna and abdominal ventrites with distinct, almost isodiametric microsculpture; abdominal ventrites relatively coarsely punctate, with short but evident setation; aedeagus (Fig. 4) stout, apicale slightly shorter than basale; apicale broad, tapered distally; accessory lobes narrow, very short, not extended to end of apicale, inserted about midlength of apicale.

Distribution. The four type specimens were collected from a single locality, in Yacambú National Park, Lara State, in easternmost Venezuela.

Natural history. All four specimens were collected by beating withered leaves of “Bird of Paradise” plants (*Strelitzia* sp.) (Hermes Escalona, pers. comm.). Very little is known about any other species of *Ischyomius*, although they seem to be associated with dead or dying vegetation of Musaceae or Palmae (Champion 1916; Pollock 1998). Although the genus *Strelitzia* is native to South Africa, and therefore was introduced to the Venezuelan type locality, the family Strelitziaceae is closely related to Musaceae (which are also introduced), in the “banana and ginger” group of plants (Kress and Hahn 1997). It seems probable that *I. escalonai* will be found in association with Musaceae, also.

Discussion. The description of *I. escalonai* brings the total known species in *Ischyomius* to eight. The first couplet of Pollock’s (1998) key divided the species into two groups: those that have a distinct, posterior pronotal bead and distinct vestiture on abdominal ventrites and those without posterior bead and lacking ventral abdominal vestiture. Each of the four type specimens of *I. escalonai* are intermediate between these two groups, *i.e.* without the pronotal bead, but with short, but distinct ventral abdominal vestiture. Therefore, the original key of Pollock (1998), revised by Pollock (2007) for inclusion of *I. hovorei*, must be amended, as follows. References to figures for species other than *I. escalonai* refer to figures in Pollock (1998).

- | | | |
|------|---|-----------------------------------|
| 1 | Pronotum with distinct bead along entire posterior margin (in most specimens)..... | 2 |
| 1' | Pronotum without posterior bead, or present laterally only..... | 4 |
| 2(1) | Antennomeres filiform; elytral apex with conspicuous, outer spine (Fig. 1A-D, F)..... | 3 |
| 2' | Antennomeres short, subserrate; elytral apex without conspicuous, outer spine (Fig. 1E) | <i>I. bicolor</i> Champion |
| 3(2) | Antennomeres 2-10 piceous to black, contrasting in color to antennomeres 1 and 11; lateral margins of pronotum with several long setae; body testa- | |

- ceous, with median, longitudinal dark vitta extended from frons to elytral apex (Fig. 1D).....***I. championi* Pollock**
- 3' Antennomeres 1-11 concolorous, rufous; lateral margins of pronotum without long setae; body testaceous to rufous with elytral infuscation, around scutellum and rectangular to diamond-shaped, transverse dark area slightly posterior of elytral midlength (Fig. 1F)***I. nevermanni* Pollock**
- 4(1') Anterolateral angles of pronotum produced, square to slightly acute (Fig. 1C)..... ***I. denticollis* Champion**
- 4' Anterolateral angles of pronotum not produced, more or less rounded **5**
- 5(4') Lateral pronotal bead attaining anterior pronotal margin, continuous with anterior bead (Fig. 4B)..... **6**
- 5' Lateral pronotal bead not attaining anterior pronotal margin (Fig. 4D) **7**
- 6(5) Apex of elytron with distinct outer spine (Fig. 1A); abdominal ventrites without obvious setation (setae, if present, hidden within punctation); accessory lobes of aedeagus long, greater than half length of apicale, extended to apex of apicale (Fig. 7D)***I. singularis* Chevrolat**
- 6' Apex of elytron smooth, without outer spine (Fig. 3); abdominal ventrites with short but obvious setation; accessory lobes of aedeagus short, distinctly less than half length of apicale, not extended to apex of apicale (Fig. 4)
.....***I. escalonai* Pollock, sp. n.**
- 7(5') Body color uniform, from testaceous to rufous***I. chevrolati* Champion**
- 7' Body color orange-red except for elytral apices, femora and tibiae piceous to nearly black..... ***I. hovorei* Pollock**

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Acanthocephalans of the nominotypical subgenus of *Plagiorhynchus* (Plagiorhynchidae) from charadriiform birds in the collection of the Natural History Museum, London, with a key to the species of the subgenus

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Abstract

Specimens of three species of the nominotypical subgenus of *Plagiorhynchus* Lühe, 1911 (Acanthocephala, Plagiorhynchidae) are deposited in the Parasitic Worms Collection of the Natural History Museum, London. Two of these species are from birds collected in the United Kingdom: *Plagiorhynchus* (*Plagiorhynchus*) *crassicollis* (Villot, 1875) from *Charadrius hiaticula* L. and *P. (P.) odhneri* Lundström, 1942 from *C. hiaticula* and *Haematopus ostralegus* L. The third species, *P. (P.) charadrii* (Yamaguti, 1939), is from *Charadrius alexandrinus nihonensis* Deignan in the Pescadore Islands (near Taiwan). Since the morphology of the three species is poorly known, these specimens are described and figured and any variation is commented upon. A key to the species of the subgenus *Plagiorhynchus* is presented.

Keywords

Acanthocephala, *Plagiorhynchus*, charadriiform birds, morphology, United Kingdom, Pescadore Islands, identification key

Introduction

Currently, 11 species of the nominotypical subgenus of *Plagiorhynchus* Lühe, 1911 (Acanthocephala, Plagiorhynchidae) are considered valid (Lisitsina 1992; Golvan 1994; Smales 2002). They are mainly parasitic in birds of the order Charadriiformes. The majority of the species are known on the basis of a few records only. Therefore,

data on their variability are scarce. The aim of the present paper is to describe *Plagiorhynchus* (*Plagiorhynchus*) spp. from charadriiform birds deposited in the Parasitic Worms Collection of the Natural History Museum, London, in order to provide new data on their morphology, geographical distribution and host-range. In addition, an amended identification key to the species of the subgenus is presented.

Materials and methods

This study is based on acanthocephalans from the Parasitic Worms Collection of the Department of Zoology, Natural History Museum, London. In most cases, information on the fixation methods used is not available. The majority of the specimens have been stored in 80% ethanol. For the purposes of the present study, they were cleared in glycerine and water (25-100%) or dimethylphthalate and studied as temporary mounts. Other specimens have been preserved as whole-mounts in Canada balsam.

The descriptions are based on specimens from a single host specimen and thus one locality. Measurements are given in millimetres, unless otherwise indicated, as a range, with any individual measurements outside the normal range in parentheses.

The general distribution of host-species is given in accordance with Encyclopaedia Britannica Online (2009).

Results

Plagiorhynchus (*Plagiorhynchus*) *crassicollis* (Villot, 1875) Lühe, 1911

Syn. *Plagiorhynchus lanceolatus* (von Linstow, 1876) Lühe, 1911

Material studied. BMNH 1928.2.17.91, from small intestine of *Charadrius hiaticula* L., Great Britain (detailed locality data not known), whole-mount of 2 specimens (1 slide) (material listed by Baylis, 1928); BMNH 1936.8.17.124-140, from small intestine of *C. hiaticula*, Weymouth, Dorset, England, wet material (material listed by Baylis 1939).

Description (Fig. 1)

Based on 10 male and 12 female specimens from *Charadrius dubius*, Weymouth, Dorset, England (BMNH 1936.8.17.124-140).

General. Trunk elliptical, almost ovoid, narrowing posteriorly. Transverse vessels of lacunar system form dense reticulum of large polygons. Proboscis cylindrical, situated at angle to axis of trunk. Proboscis armament consists of 19-20 longitudinal rows of 13-14 (12) hooks; first 8 (9) hooks longest, next 2 smaller and last 3 hooks smallest; all hooks with posteriorly directed roots. Neck short (partly or completely withdrawn in some specimens), trapezoidal. Proboscis receptacle double-walled. Lemnisci band-shaped (bifurcate in single specimen), longer than proboscis receptacle.

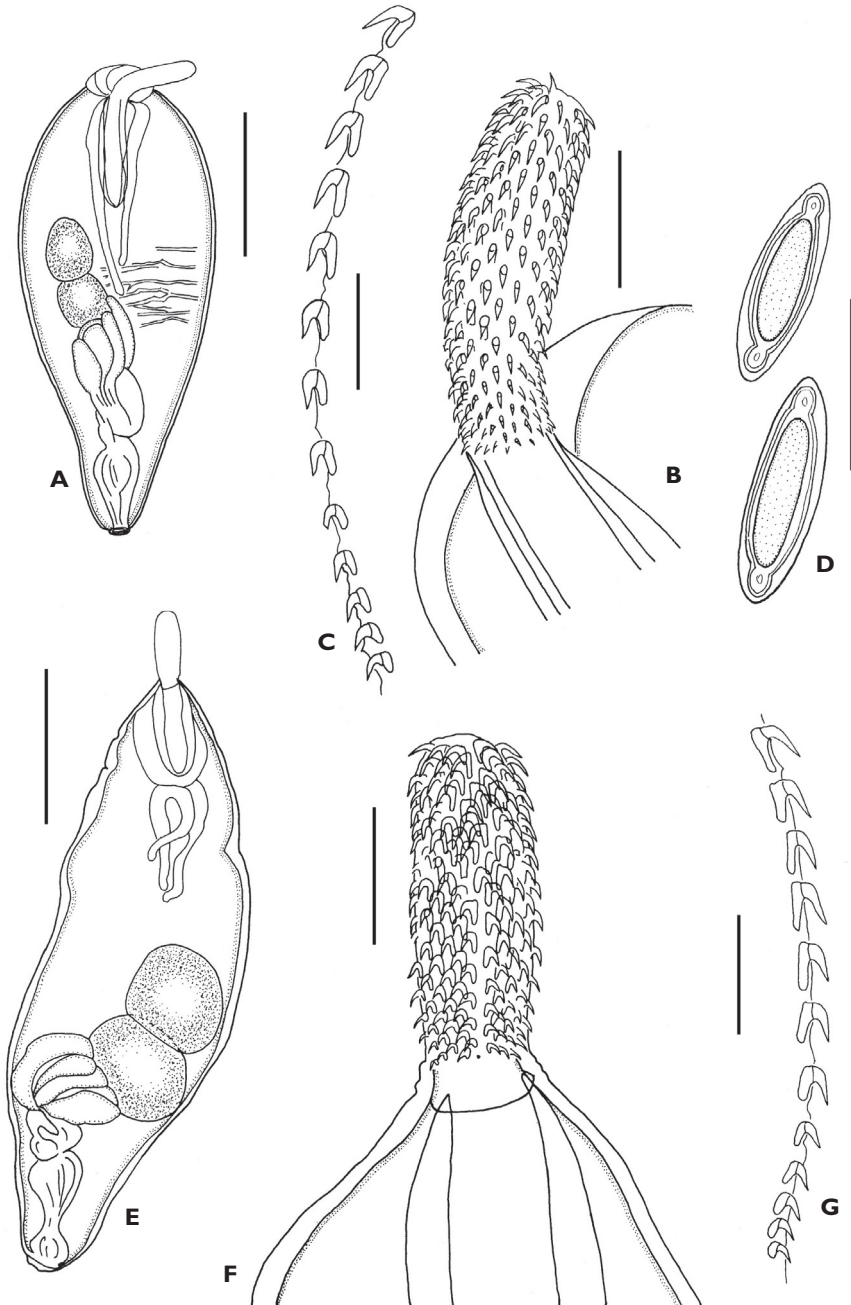


Fig. 1. *Plagiorhynchus* (*Plagiorhynchus*) *crassicollis* (Villot, 1875). **A-D** (material from Dorset): **A.** Male, general view. **B.** Male, anterior end of trunk. **C.** Male, longitudinal row of hooks (lateral view). **D.** Eggs. **E-G** (material from unknown locality, in Great Britain): **E.** Male, general view. **F.** Male, anterior end of trunk. **G.** Male, longitudinal row of hooks (lateral view). *Scale-bars:* A, E, 1.0 mm; B, F, 0.2 mm; C, D, G, 0.1 mm.

Male. Trunk 2.4-5.2 long, 1.0-1.64 wide. Proboscis (completely everted in only 2 specimens) 0.56-0.62 long, 0.16 wide. Length of first 8 hooks – blade 32-42 μm , root 32-44 μm ; length of next 2 hooks – blade 29 μm , root 25-32 μm ; length of last 3 hooks – 25-27 (29) μm , root 13-22 μm . Neck (in 2 specimens) $c.0.1$ long. Proboscis receptacle 0.70-0.95 long and 0.16-0.25 wide. Lemnisci 1.0-2.6 long, 0.09-0.15 wide. Testes oval to spherical, 0.30-0.80 long, 0.23-0.41 wide, situated in tandem and slightly overlapping one another, in middle region of trunk. Cement glands 6 in number, of different lengths, 0.30-0.95 long, situated immediately posterior to hind testis. Duct of cement glands 0.35-0.65 long. Genital bursa (everted in single specimen) 0.25 long, 0.30 wide.

Female. Trunk 2.64-7.0 long, 1.21-2.9 wide. Proboscis (completely everted in only 2 specimens) 0.66-0.7 long, 0.17-0.19 wide. Length of first 8 (9) hooks – blade 37-44 (49) μm , root 34-54 μm ; length of next 2 hooks – blade 34-39 μm , root 27-39 μm ; length of last 3 hooks blade – 17-29 μm , root 15-27 μm . Neck 0.15-0.17 long. Proboscis receptacle 0.72-1.1 long, 0.24-0.27 wide. Lemnisci 1.0-1.9 long, 0.1-0.13 wide. Female genital tract $c.1.2-1.45$ long. Vagina provided with 2 sphincters. Genital pore slightly subterminal, at 0.06-0.12 from posterior end of trunk. Fully-developed eggs were observed in 4 specimens (5.1-7.0 long). Eggs elongate-oval, shuttle-shaped, with polar prolongations, 91-134 (135) \times 25-42 μm .

Additional data. (based on 2 male specimens from *C. hiaticula*, BMNH 1928.2.17.91). Trunk 4.0-4.7 in length, 1.4-1.55 wide. Proboscis 0.48-0.5 long. Proboscis armament consists of 20 longitudinal rows of 11-12 hooks in each row. Measurements and morphology of hooks are similar to material from Dorset. Neck very short (40-63 μm long). Testes spherical, 0.60-0.65 long, 0.75-0.87 wide. Cement glands 0.55-1.0 long.

Remarks. There are only a few descriptions of this species (Lühe 1911; Petrochenko 1958; Belopol'skaya 1983; del Valle and Coy Otero 1990). Only female specimens were described by Petrochenko (1958) from *Phalaropus lobatus* (L.) [= *P. hyperboreus* (L.)] in Kazakhstan. Compared to previous descriptions of the same species (Lühe 1911; Belopol'skaya 1983), the specimens from Kazakhstan differ in the shape and the length of the trunk (elongate-cylindrical and 17 mm long versus oval and $c.7$ mm long), the shape of the proboscis (oval versus cylindrical) and the number of longitudinal rows of hooks (16 longitudinal rows of hooks versus 18-20). In addition, there are differences in the dimensions of the eggs: 84 \times 16 μm (Petrochenko 1958) versus 110 \times 49 μm (Lühe 1911). Consequently, it seems likely that the specimens from Kazakhstan described by Petrochenko (1958) belong to another species.

Del Valle and Coy Otero (1990) reported *P. crassicollis* from *Charadrius wilsonia wilsonia* Ord in Cuba. According to their description, the armature of the proboscis consists of 18 longitudinal rows of 10-11 hooks per row. However, judging by the drawing of the proboscis (figure 1c in del Valle and Coy Otero 1990), the number of hooks per row is at least 18.

Comparing the morphometric data of the present specimens with the descriptions of Lühe (1911) and Belopol'skaya (1983), there are several differences. The maximum

number of hooks per longitudinal row in the specimens studied is greater, i.e. 11-14 versus 11-12 (Lühe 1911) or 13 (Belopol'skaya 1983). The male specimens among our material (see 'Additional data' above) are in close accordance with the description of Lühe (1911); however, they have a smaller proboscis, i.e. 0.48-0.50 versus 0.60 mm. A difference in the females relates to the size of eggs, which are larger in our specimens, i.e. 91-134 × 25-42 µm compared to 110 × 49 µm (Lühe 1911) and 88-102 × 27-34 µm (del Valle and Coy Otero 1990).

One immature female from the same host specimen (Dorset material) possesses a longer proboscis (0.76 mm) and a greater number of hooks per row (15-16). According to these characters, we consider it as belonging to *Plagiorhynchus odhneri* Lundström, 1942 (see 'Additional data' for *P. odhneri*).

P. (P.) crassicollis was previously reported from *Charadrius hiaticula* (= *Aegialitis hiaticula*) in the United Kingdom (Baylis 1928, 1939), once apparently in a mixed infection with *P. odhneri* (see below). It is mainly a parasite of charadriiform birds throughout the western Palaearctic [(Germany, France, Sweden, Switzerland, Ukraine, Russia (the White and Baltic Sea coasts)] (Lühe 1911; Belopol'skaya 1983; Hansson 1997; Reimer 2002; Gibson 2004). There are also occasional records from the Nearctic [Greenland (Hansson 1997)] and Neotropical [Cuba (del Valle and Coy Otero 1990)] Regions.

***Plagiorhynchus (Plagiorhynchus) odhneri* Lundström, 1942**

Material studied. [All labelled as *P. crassicollis*.] BMNH 1946.5.14.121-122, from small intestine of *Charadrius hiaticula*, Orkney Islands, Scotland, wet material (3 specimens); BMNH 1936.8.17.124-140 (1 immature female), from small intestine of *C. hiaticula*, Weymouth, Dorset, England, wet material; BMNH 1951.12.12.34, from small intestine of *Haematopus ostralegus* Linnaeus, Holy Island (adjacent to Isle of Arran), Scotland, wet material (1 specimen).

Description (Fig. 2)

Based on 1 male and 1 female specimen and 1 metasoma (female) from BMNH 1946.5.14.121-122.

Male. Length of trunk (deformed) 4.0. Proboscis cylindrical, situated at angle to trunk axis, 0.68 long, 0.15 wide. Proboscis armament consists of 20 longitudinal rows of 16-17 hooks per row. Length of first 9 (10) hooks – blade 32-42 µm, root 34-37 µm; length of next 3 hooks – blade 25-27 µm, root 25-34 µm; length of last 3 hooks – blade 22 µm, root 15-20 µm. Neck trapezoidal, 0.18 long, 0.13-0.22 wide. Proboscis receptacle 0.6 long, 0.2 wide. Lemnisci 1.3 (1.4) long, 0.1-0.11 wide. Testes not clearly seen; anterior testis at *c.* 1.12 from tip of proboscis receptacle. Length of cement glands *c.* 0.80.

Female. Trunk elliptical, oval to fusiform, 4.4-5.6 long, 1.9-2.2 wide. Proboscis cylindrical, situated at angle to trunk axis, 0.76 long, 0.19 wide. Proboscis armament consists of 17 longitudinal rows of 15-16 hooks per row. Length of first 9 (10) hooks – blade 37-49 µm, root indistinct; length of next 2-3 hooks – blade 29-32 µm, root indistinct; remaining 4 hooks could not be measured. Neck withdrawn. Proboscis re-

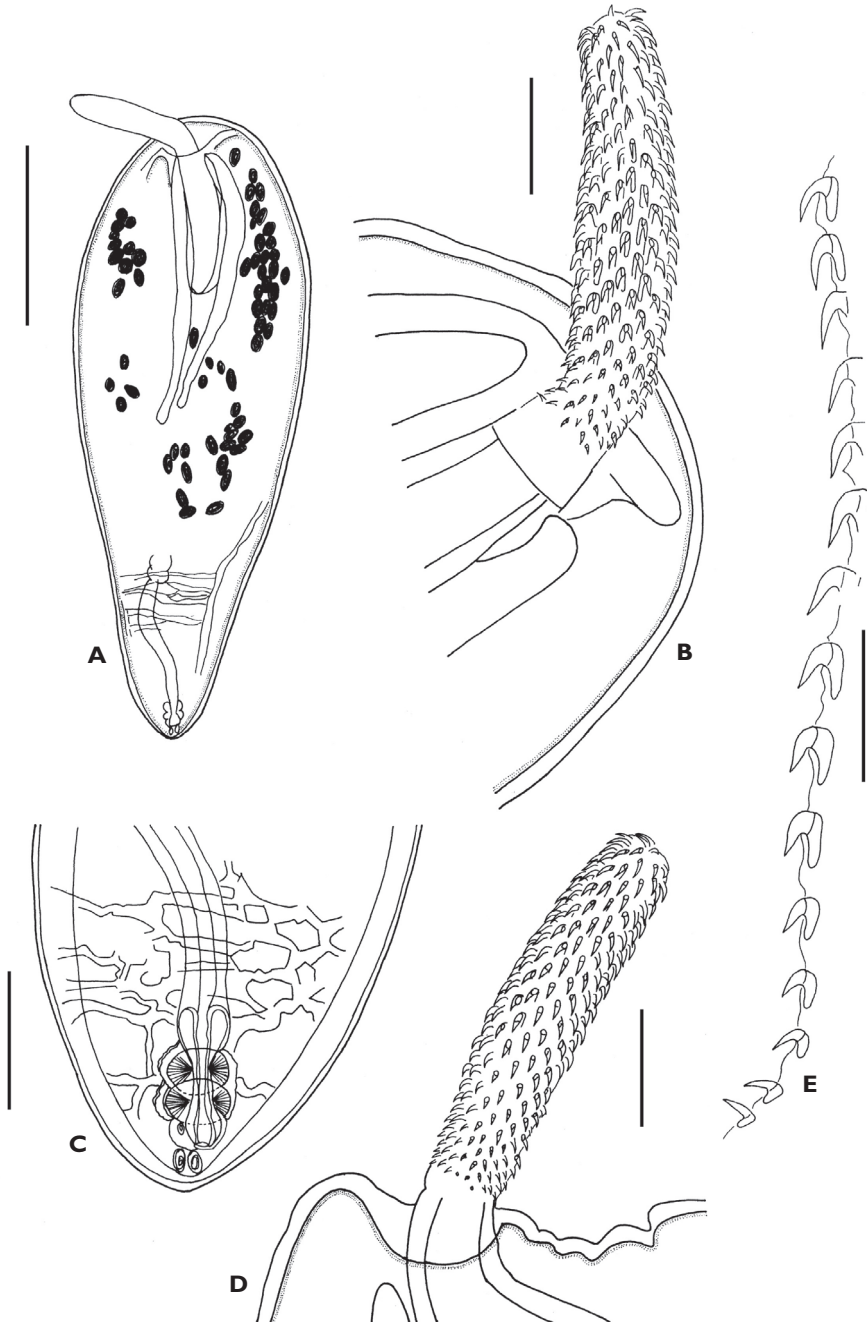


Fig. 2. *Plagiorhynchus (Plagiorhynchus) odbneri* Lundström, 1942. **A.** Female, general view. **B.** Female, anterior end of trunk. **C.** Female, posterior end of trunk with terminal genital tract. **D.** Male, anterior end of trunk. **E.** Female, longitudinal row of hooks (lateral view). *Scale-bars:* A, 1.0 mm; B, C, D, 0.2 mm; E, 0.1 mm.

ceptacle and lemnisci indistinct. Genital pore at 0.2 from end of trunk. Eggs elongate-oval, shuttle-shaped, with polar prolongations, $93\text{--}115 \times 20\text{--}39 \mu\text{m}$.

Additional data. Based on 1 immature specimen from *C. hiaticula* and 1 specimen from *Haematopus ostralegus*. Trunk of immature specimen 3.6 long, 1.4 wide. Proboscis cylindrical, situated at angle to trunk axis, 0.76 long, 0.17 wide. Proboscis armament consists of 18 longitudinal rows of 15–16 hooks in each row. Length of first 9–10 hooks – blade $36\text{--}43 \mu\text{m}$, root $39\text{--}44 \mu\text{m}$; length of next 2–3 hooks – blade $27\text{--}32 \mu\text{m}$, root $27\text{--}39 \mu\text{m}$; length of last 3 hooks $22\text{--}27 \mu\text{m}$, root $20 \mu\text{m}$ (for hooks XIV–XV). Trunk of female specimen *c.* 4.0 long, 1.55 wide. Proboscis 0.8 long, 0.15 wide.

Remarks. Lundström (1942) described this species from *Haematopus ostralegus* in Sweden. Golvan (1956) considered it to be a variety of *P. crassicollis* and later (Golvan 1960) as a subspecies. In the taxonomic arrangement of the nominotypical subgenus of *Plagiorhynchus* proposed by Schmidt and Kuntz (1966) and Amin (1985), this species is missing. According to other authors (Petrochenko 1958; Yamaguti 1963; Khokhlova 1986; Golvan 1994), *P. odhneri* is a valid species. Lisitsina (1992) redescribed it on the basis of specimens from *Charadrius dubius* Scopoli and *C. alexandrinus* L. in the Ukraine.

Unfortunately, the type material of this species was not available for re-examination during the course of the present study. The studied specimens were identified as *P. odhneri* mainly on the basis of the proboscis armature (especially with regard to the number of hooks in each longitudinal row). The armature (17–20 longitudinal rows of 15–17 hooks) recorded in the present study is within the limits of variation reported by Lundström (1942) in the original description (18–19 longitudinal rows of 14–18 hooks) and by Lisitsina (1992) (18–22 longitudinal rows of 15–19 hooks).

In comparison with the previous descriptions (Lundström 1942; Lisitsina 1992), I found some differences. These mainly concern the shape and measurements of the trunk. The present specimens possess an almost oval trunk (only the female metasoma is spindle-shaped) with measurements of $4.0 \times ?$ (male) and $4.4\text{--}5.6 \times 1.9\text{--}2.2$ mm (female) versus an almost spindle-shaped trunk measuring $5.0\text{--}8.4 \times 0.8\text{--}1.7$ (male) and $9.0\text{--}11.0 \times 1.7\text{--}2.4$ mm (female), as described by Lundström (1942), and an almost cylindrical trunk measuring $3.57\text{--}6.58 \times 0.96\text{--}1.58$ (male) and $8.76\text{--}12.53 \times 1.10\text{--}1.23$ mm (female), according to Lisitsina (1992). With regard to these characters, our specimens are close to *P. crassicollis* (see above), as described by Lühe (1911), with an oval trunk and measurements of $5.0 \times 1.6\text{--}1.8$ (male) and 7.0×3.0 mm (female).

In addition, the proboscis of our worms is shorter, i.e. 0.68 (male) and 0.76–0.8 mm (female) compared with 0.8 (male) and 0.9–1.1 mm (female) as recorded by Lundström (1942). However, it is longer than the proboscis of *P. crassicollis* (0.6 mm) (Lühe 1911). Lisitsina (1992) reported wider limits of variation for this character (0.68–1.23 mm in both sexes), and our specimens fit within this morphometric range. More abundant material is needed to assess the variation within *P. odhneri* and to confirm its validity.

P. odhneri has previously been reported from *Charadrius hiaticula* and *Haematopus ostralegus* in the United Kingdom (Williams 1961; Threlfall 1963). Other records are from charadriiform birds in Sweden, Russia (White Sea coast), the Ukraine and Bulgaria (Lundström 1942; Belopol'skaya 1983; Lisitsina 1992; Hansson 1997; Dimitrova et al. 2000).

***Plagiorhynchus (Plagiorhynchus) charadrii* (Yamaguti, 1939)
Van Cleave & Williams, 1951**

Material studied. BMNH 1965.931-937, from the small intestine of *Charadrius alexandrinus nihonensis* Deignan, Pescadore Islands, Taiwan, whole-mount of 2 specimens (1 slide).

Description (Fig. 3)

Based on 2 male specimens.

Males. Trunk elongate, almost cylindrical but tapering both anteriorly and posteriorly, 3.7-4.0 long, 0.9-1.1 wide. Numerous amoeba-shaped hypodermal nuclei. Proboscis cylindrical (in both specimens invaginated to different degrees, i.e. anterior third in first specimen and anterior two-thirds in other), c.0.93-0.95 long, 0.23 wide. Proboscis armament consists of 18 longitudinal rows of 12-13 hooks (anterior hooks invaginated) (in 1 specimen). Most of hooks with posteriorly directed roots; only pos-

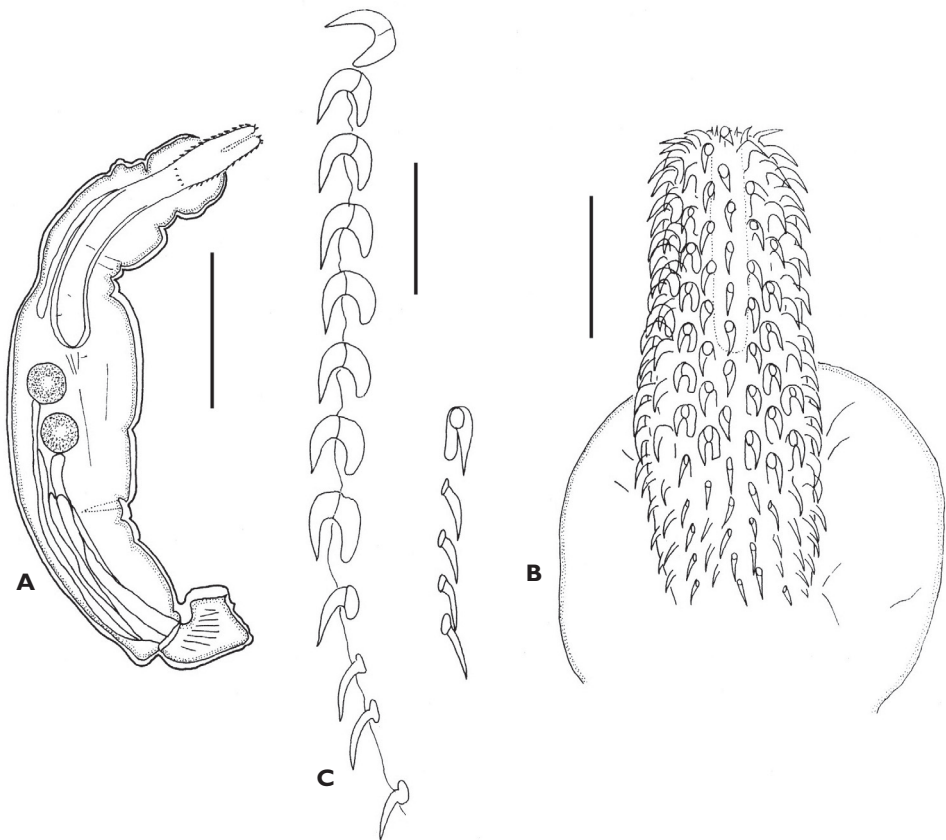


Fig. 3. *Plagiorhynchus (Plagiorhynchus) charadrii* (Yamaguti, 1939). **A.** Male, general view. **B.** Proboscis. **C.** Longitudinal rows of hooks (lateral view) and some posterior hooks (frontal view). *Scale-bars:* A, 1.0 mm; B, 0.2 mm; C, 0.1 mm.

terior most 4 (3) hooks spiniform with short apophyses. Length of first 8 (9) hooks – blade 52–59 μm , root 29–49 μm ; length of last 4 (3) spiniform hooks – 42–52 (54) μm , root 12–22 μm . Neck short, *c.*0.13 long, 0.25 wide. Proboscis receptacle double-walled, 1.5 long, 0.26 wide. Lemnisci band-shaped, *c.*1.5 long, *c.*0.05 wide (only 1 measured). Testes spherical, 0.26–0.32 long, 0.23–0.35 wide, situated in tandem in middle of trunk, at *c.*0.06 from one another; anterior testis 0.14 from tip of proboscis receptacle. Cement glands 6 in number, tubular, arranged in 2 groups of 3; longest cement gland of first group (1.70 long) present immediately posterior to anterior testis; remaining 2 cement glands slightly further posterior, 1.44 and 1.01 long; 2 of cement glands of second group present posterior to hind testis, 1.35 long, with remaining cement gland slightly further posterior, 1.03 long. Genital bursa (everted in 1 specimen) 0.55 long, 0.45 wide.

Remarks. Despite the partial invagination of the proboscis, we identified these specimens as *Plagiorhynchus charadrii* based on the number of the longitudinal rows and morphometric data from both the hooks (especially the posterior three or four hooks) and of some internal organs (testes and cement glands). When comparing the present morphometric data with those from published descriptions (Yamaguti 1939; Johnston and Edmonds 1947; Schmidt and Kuntz 1966; Belopol'skaya 1983; Amin et al. 1999; Dimitrova et al. 1999), we did not find significant differences, although differences in the maximum length of the hook blade are apparent. Regarding the latter feature, the studied specimens are most similar to the descriptions given by Yamaguti (1939), Schmidt and Kuntz (1966) and Dimitrova et al. (1999), i.e. 60–63 versus 59 μm in present specimens. However, Johnston and Edmonds (1947) and Belopol'skaya (1983) reported smaller lengths for the hooks, i.e. 29 and 54 μm , respectively.

This species was described from *Charadrius dubius curonicus* Gmelin in Japan (Yamaguti 1939) and later recorded, mainly from charadriiform birds, in the Australian Region (Australian mainland and Tasmania) (Johnston and Edmonds 1947; Amin et al. 1999; Smales 2002, 2003), the Palaeotropical Region (Taiwan and the Pescadore Islands) (Schmidt and Kuntz 1966; Amin et al. 1999), the Palaearctic Region (Japan, Russian Far East, Kazakhstan, the Ukraine and Bulgaria) (Lisitsina 1992; Amin et al. 1999; Dimitrova et al. 1999; Araki 2003), the Oceanic Region (Hawaii) (Amin et al. 1999) and the Neotropical Region (Belize) (Canaris and Kinsella 2001).

Discussion

The most recent checklist of the species of the subgenus *Plagiorhynchus* is that given by Golvan (1994). He considered *Plagiorhynchus* and *Prosthorhynchus* as distinct genera (recognised here as subgenera within *Plagiorhynchus*) and placed 19 species in the former. In my opinion, nine of them do not belong to the subgenus *Plagiorhynchus*. These are:

P. kuntzi Gupta & Fatma, 1987. Gupta and Fatma (1987) described this species as a member of *Plagiorhynchus* on the basis of specimens collected from *Buceros bicornis* L. [= *Dichoceros bicornis* (L.)] in India. The authors presented ambiguous information

relative to the two main features distinguishing the subgenera *Plagiorhynchus* and *Prosthorhynchus*, i.e. “eggs with and without polar prolongations” and “female gonopore terminal or subterminal”. Furthermore, the host is a forest bird, eating mainly fruit. Therefore, the position of this species remains uncertain and it cannot be allocated to the subgenus *Plagiorhynchus*.

P. limnobaeni (Tubangui 1933) Van Cleave & Williams, 1951. Tubangui (1933) described this species on the basis of two male specimens and placed it in *Prosthorhynchus*. Van Cleave and Williams (1951) transferred it to *Plagiorhynchus*. Golvan (1956) considered it also in *Plagiorhynchus*. However, Petrochenko (1958), Yamaguti (1963), Schmidt and Kuntz (1966) and Amin (1985) considered it to belong to *Prosthorhynchus*, and Amin et al. (1999) included it in their key to the species of the subgenus *Prosthorhynchus* on the basis of the proboscis armature. Unfortunately, the known features of the male specimens only are not adequate to confirm the validity of this species or its position within the subgenus *Plagiorhynchus*.

P. pupa (von Linstow, 1905) Golvan, 1994. Kostylev (1922) redescribed this species on the basis of materials from *Somateria molissima* L. as *Echinorhynchus pupa*. Travassos (1926) transferred it to *Filicollis* Lühe, 1911, but Meyer (1932) proposed it be attributed to *Prosthorhynchus*. Nevertheless, Petrochenko (1958) listed it among the species of *Polymorphus* as “*Polymorphus pupa* (von Linstow, 1905) Kostylew, 1922”. This generic allocation was followed by Khokhlova (1986) and Amin (1992). According to the ICZN, the valid combination for this species is *Polymorphus pupa* (von Linstow, 1905) Petrochenko, 1958.

P. rectus (Linton, 1892) Van Cleave, 1918. The original description was based on one male and one immature female (Van Cleave 1918). Van Cleave (1918) re-examined the female specimen but did not give any details of the female genital system (except mentioning that there were no ripe eggs). Its position in *Prosthorhynchus* has been accepted by many authors (e.g. Travassos 1926; Meyer 1932; Petrochenko 1958; Amin 1985), but Schmidt and Kuntz (1966) considered it as a *species incertae sedis*. This species was recorded from an aquatic host (*Larus* sp.). The inadequate description of females does not permit its consideration as a species of the subgenus *Plagiorhynchus*.

P. reticulatus (Westrumb, 1821) Golvan, 1956. This species was recorded from aquatic birds (Rallidae and Charadriidae) from Brazil. De Marval (1905) described the presence of polar prolongations of eggs, whereas Travassos (1926) reported eggs without polar prolongations. It is almost generally accepted that this species belongs to the subgenus *Prosthorhynchus* (see Meyer 1932; Petrochenko 1958; Yamaguti 1963; Schmidt and Kuntz 1966; Amin 1985; Amin et al. 1999).

P. rostratus (De Marval, 1902). De Marval (1905) considered this species as a synonym of ‘*Echinorhynchus cylindraceus* Schrank, 1788’. Meyer (1932), Petrochenko (1958) and Yamaguti (1963) recognised it as *Prosthorhynchus rostratus*, whereas Golvan (1956) and Schmidt (1981) listed it among the synonyms of *Plagiorhynchus* (*Prosthorhynchus*) *cylindraceus* (Goeze, 1782) Schmidt & Kuntz, 1966. Amin (1985) recognised this species among the *Plagiorhynchinae incertae sedis*. Data on the eggs and female genital system are not available, but the hosts are terrestrial birds (Corvidae).

The position of this species is uncertain, but the most probable allocation on the basis of the available data is to the subgenus *Prosthorhynchus*.

P. spiralis (Rudolphi, 1809) Golvan, 1956. Schmidt and Kuntz (1966) considered this as a *species incertae sedis*. Amin (1985) recognised it as valid species within the subgenus *Plagiorhynchus*. However, Dimitrova and Georgiev (1994) examined both the type material and new material from Bulgaria and erected for it the monotypic *Ardeirhynchus* Dimitrova and Georgiev, 1994 (Polymorphidae) due to the presence of trunk spines.

P. taiwanensis Schmidt & Kuntz, 1966. According to Schmidt (1981), Amin (1985) and Amin et al. (1999), this species is a synonym of *Prosthorhynchus cylindraceus* (Goeze, 1782).

P. urichi (Cameron, 1936) Golvan, 1956. This species was described from *Procyon ?carnivora* (probably *P. lotor* L.) in Canada (Yamaguti 1963). Except for Golvan (1956, 1994), only Yamaguti (1963) considered it as a valid species, but placed it in *Prosthorhynchus*. Both Schmidt and Kuntz (1966) and Amin (1985) considered it as *Plagiorhynchus incertae sedis* and Plagiorhynchinae *incertae sedis*, respectively, due to its inadequate description.

'*P. freitasi* Vicente, 1977'. Golvan (1994) listed this species in his list of *Plagiorhynchus* spp, but did not cite the source. There is no record of this taxon in the *Zoological Record*.

Two further species are not included in Golvan's (1994) checklist. These are *Plagiorhynchus ponticus* Lisitsina, 1992, a parasite of *Haematopus ostralegus* L. (Charadriiformes, Haematopidae) in the Ukraine (Lisitsina 1992), and *P. allisonae* Smales, 2002 from *H. ostralegus finschi* Martens in New Zealand (Smales 2002). Therefore, a total of 11 species are considered here as belonging to the subgenus *Plagiorhynchus*, and these are included in the key presented below.

According to Schmidt and Kuntz (1966), there are two main characters distinguishing the subgenera *Plagiorhynchus* and *Prosthorhynchus* from one another. These are the terminal position of the female genital pore and the elongate eggs with prolongations of the middle shell (in *Plagiorhynchus*) versus the subterminal female genital pore and the oval eggs without polar prolongation (in *Prosthorhynchus*). However, in two of the species included in the subgenus *Plagiorhynchus*, the genital pore is subterminal, i.e. in *P. ponticus* (Lisitsina 1992) and *P. paulus* Van Cleave & Williams, 1951 (see Amin et al. 1999). In addition, Dimitrova et al. (1999) and the present study described a slightly subterminal genital pore in *Plagiorhynchus charadriicola* (Dollfus, 1953) Golvan, 1956, *P. crassicollis* and *P. odhneri*; all of which are characterised by a vagina possessing two sphincters. Belopol'skaya (1983) reported slightly a subterminal pore and vagina with two sphincters in *Prosthorhynchus scolopacidis* Kostylev, 1915. In order to increase the usefulness of these characters, more data of the structure of the vagina will be required in future studies. It seems that the position of the genital pore correlates with the structure of the vagina, e.g. the genital pore of *Prosthorhynchus cylindraceus* is distinctly subterminal and the vagina (with one sphincter) is curved, forming angle (Amin et al. 1999; Dimitrova et al. 1999), whereas, in other species (*Plagiorhynchus charadriicola*, *P. crassicollis* and *P. odhneri*), the vagina is straight, provided with two sphincters and the genital pore is terminal or slightly subterminal.

Both Johnston and Best (1943) and Smales (2002) redescribed *Plagiorhynchus menurae* Johnston, 1912 and reported the nerve ganglion as positioned at the posterior end of the proboscis receptacle. However, according to Lühe (1911) and Schmidt and Kuntz (1966), the position of this ganglion is about the middle of the proboscis receptacle for species of the genus *Plagiorhynchus*.

Key to the species of the *Plagiorhynchus* (*Plagiorhynchus*)

- 1 Trunk elongate-cylindrical, linear, up to 50-80.7 mm long 2
- Trunk shorter (up to 30 mm), with different shape 3

- 2 Trunk up to 50 mm long; proboscis with 18 longitudinal rows of 12-18 hooks per row (in Charadriiformes: Europe)
 ***P. linearis* (Westrumb, 1821) Golvan, 1956**
- Trunk up to 80.7 mm long; proboscis with 24 longitudinal rows of 18 hooks per row (in Charadriiformes: Europe) ***P. totani* (Porta, 1910) Golvan, 1956**

- 3 Female genital pore distinctly subterminal 4
- Female genital pore terminal or slightly subterminal 5

- 4 Trunk smooth; proboscis with 15-16 longitudinal rows of 14-16 hooks per row; eggs 50-82 µm long (in Passeriformes: North America)
 ***P. paulus* Van Cleave & Williams, 1951**
- Trunk with pseudosegmentation; proboscis with 20-25 longitudinal rows of 16-17 hooks per row; eggs 118-130 µm long (in Charadriiformes: Ukraine)
 ***P. ponticus* Lisitsina, 1992**

- 5 Maximum length of proboscis up to 1.23 mm, with 16-23 longitudinal rows of 11-20 hooks per row; nerve ganglion in middle region of proboscis receptacle 6
- Proboscis longer (1.8-2.58 mm long), with 25-26 longitudinal rows of 30-38 hooks per row; nerve ganglion in posterior region of proboscis receptacle (in Passeriformes: Australia) ***P. menurae* (Johnston, 1912) Golvan, 1956**

- 6 Trunk ovoid to fusiform; maximum length of hooks 44-45 µm; last 1-5 hooks spiniform, with posteriorly directed roots 7
- Trunk fusiform to subcylindrical; maximum length of hooks 50-65 µm; last 2-6 hooks spiniform, sometimes with manubrium 8

- 7 Trunk ovoid; proboscis 0.6-0.7 mm long, with 18-20 longitudinal rows of 11-14 hooks per row (in Charadriiformes: Europe)
 ***P. crassicollis* (Villot, 1875) Lühe, 1911**

- Trunk elongate-fusiform; proboscis 0.8-1.23 mm long, with 17-22 longitudinal rows of 14-19 hooks per row (in Charadriiformes: Europe).....
..... ***P. odhneri* Lundström, 1942**

- 8 Trunk subcylindrical; proboscis with 16-20 longitudinal rows of 15-19 hooks per row; lemnisci 3.0-5.1 mm long; eggs 90-120 µm long **9**
- Trunk fusiform; proboscis with 18-23 longitudinal rows of 14-20 hooks per row; lemnisci 1.1 mm long; eggs 134-154 µm long (in Charadriiformes: New Zealand) ***P. allisonae* Smales, 2002**

- 9 Females 8.0 mm long; lemnisci 5.1 mm long (in Charadriiformes: Russia) ...
..... ***P. lemnisalis* Belopol'skaya, 1958**
- Females longer than 10 mm; lemnisci 3.0-4.5 mm long..... **10**

- 10 Males 9.6 mm long, females 11.5 mm long; 15-19 hooks per row; last 3-4 hooks without root or with short anterior manubrium; genital pore on a caudal nodule (in Charadriiformes; Asia, Europe, Australia, Central America) ...
..... ***P. charadrii* (Yamaguti, 1939) Van Cleave & Williams, 1951**
- Males 9-13 mm long, females 17-23 mm long; 15-17 hooks per row; last 2-3 hooks with rectangular root with anterior and posterior manubrium; genital pore not on a caudal nodule (in Charadriiformes: Morocco, Europe)
..... ***P. charadriicola* (Dollfus, 1953) Golvan, 1956**

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