New World species of the genus Calliscelio Ashmead (Hymenoptera, Platygastridae, Scelioninae)

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Academic editor: J. Fernandez-Triana

Received 27 October 2016 | Accepted 20 December 2016 | Published 30 January 2017

Abstract

The genus Calliscelio Ashmead is presumed to be a diverse group of parasitoids of the eggs of crickets (Orthoptera: Gryllidae). A least one species has been found to be an important factor in depressing cricket pest populations. The New World species of Calliscelio are revised. Forty-two species are recognized, 3 are redescribed: C. bisulcatus (Kieffer), C. laticinctus Ashmead, C. rubriclavus (Ashmead), comb. n.; and 38 are described as new: C. absconditum Chen & Johnson, sp. n., C. absum Chen & Johnson, sp. n., C. alcoa Chen & Masner, sp. n., C. amadoi Chen & Johnson, sp. n., C. armila Chen & Masner, sp. n., C. bidens Chen & Masner, sp. n., C. brachys Chen & Johnson, sp. n., C. brevinotaulus Chen & Johnson, sp. n., C. brevitas Chen & Johnson, sp. n., C. carinigena Chen & Johnson, sp. n., C. crater Chen & Johnson, sp. n., C. crena Chen & Johnson, sp. n., C. eborii Chen & Johnson, sp. n., C. extenuatus Chen & Johnson, sp. n., C. flavicuda Chen & Johnson, sp. n., C. foveolatus Chen & Johnson, sp. n., C. gatineau Chen & Johnson, sp. n., C. glaber Chen & Masner, sp. n., C. granulatus Chen & Masner, sp. n., C. latifrons Chen & Johnson, sp. n., C. levis Chen & Johnson, sp. n., C. longius Chen & Johnson, sp. n., C. magnificus Chen & Masner, sp. n., C. migina Chen & Johnson, sp. n., C. minutia Chen & Johnson, sp. n., C. paralabaver Chen & Johnson, sp. n., C. pararemigio Chen & Masner, sp. n., C. prolixus Chen & Johnson, sp. n., C. punctatifrons Chen & Johnson, sp. n., C. remigio Chen & Masner, sp. n., C. ruga Chen & Johnson, sp. n., C. rugicosa Chen & Masner, sp. n., C. serna Chen & Johnson, sp. n., C. storea Chen & Johnson, sp. n., C. suni Chen & Johnson, sp. n., C. telum Chen & Johnson, sp. n., C. torquero Chen & Johnson, sp. n., C. virga Chen & Johnson, sp. n. Four species are treated as junior synonyms of Calliscelio rubriclavus (Ashmead): Anteris nigriceps Ashmead, syn. n., Caloteleia marlattii Ashmead syn. n., Caloteleia grenadensis Ashmead, syn. n., and Macroteleia ruskini Girault, syn. n.
Keywords
Egg parasitoid, key, revision, Gryllidae

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The genus Calliscelio Ashmead was first erected for a single species, C. laticinctus Ashmead, from the Lesser Antilles (Ashmead 1893). For nearly 80 years it was considered to be a valid genus although it remained narrowly defined. Kieffer (1926), for example, included only two species in his monograph on world Scelionidae (= Platygastridae sensu Sharkey 2007). Masner (1972) treated Calliscelio as a junior synonym of Calotelea Westwood. Shortly thereafter, though, Masner (1976) rejected this hypothesis, treated Calliscelio as valid, and also significantly expanded the extent of the genus. Kieffer had described seven other genera over the years, all of which Masner (1976) treated as junior synonyms of Calliscelio (see generic synonymy below). Recently, in a survey of external morphology across the superfamily Platygastridea, Talamas et al. (2016) found that the prioniform sensillum on the mandible is synapomorphy for the genus Calliscelio and treated Crama Galloway, Lispoteleia Galloway, Xentor Masner and Johnson, and Yunkara Galloway as junior synonyms of Calliscelio.

The current concept of Calliscelio is a relatively large genus in the subfamily Scelioninae, comprising 77 known species (including 3 fossil species; Johnson 2016). It is a worldwide genus, with species found in all six major biogeographic regions. Interestingly, at least two species, i.e., C. rubriclavus (Ashmead) and C. elegans (Perkins), have extraordinarily broad geographic distributions possibly due to increased globalization of human commerce (Masner et al. 2009). This phenomenon leads to the question: from which part of the world did these species originate? Also, although Calliscelio was originally erected based on species in the New World, only 6 species were reported from this region to date, suggesting that more species remain to be discovered. Thus, a comprehensive revision of species of Calliscelio based on extensive sampling from the New World is needed to provide a more accurate understanding of the diversity and interrelationships among species in the genus.

Even though Calliscelio is a diverse, common, and widespread genus, the available biological data are extremely scanty. The only host record is for C. teleogrylli Hill, which was reported to attack the eggs of Teleogryllus commodus (Walker) (Orthoptera: Gryllidae), a widespread pest in pastures in the Pacific region (Hill 1983).
parison with *C. teleogrylli*, Masner et al. (2009) suggested that *C. elegans* may attack the eggs of one or more species of Gryllidae associated with sugar cane.

The goal of this work is to reevaluate the known species of *Calliscelio* from the New World, expand the biogeographic data associated with these species, and to describe new species. The contributions of the authors are as follows. H-y Chen and N.F. John-son: character definition, generic concept development, species concept development, imaging, key development, manuscript preparation; L. Masner: character definition, 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 in the following collections, with abbreviations used in the text: AMNH, American Museum of Natural History, New York, NY; ANIC, Australian National Insect Collection, Canberra, Australia; BMNH, The Natural History Mu-seum, London, UK; BPBM, Bernice P. Bishop Museum, Honolulu, HI; CAS, California Academy of Sciences, San Francisco, CA; CMNH, Carnegie Museum of Natural History, Pittsburgh, PA; Cnci, Canadian National Collection of Insects, Ottawa, Canada; FSCA, Florida State Collection of Arthropods, Gainesville, FL; IAVH, Instituto Alexander von Humboldt, Villa de Leyva, Columbia; MNHNPy, Museo Nacional de Historia Natural del Paraguay, San Lorenzo; INhs, Illinois Natural History Survey, Urbana, IL; MAIC, M.A. Ivie Private Collection, Bozeman, MT; MEMU, Mississippi State University, Missis-sippi State, MS; MHNG, Muséum d’Histoire Naturelle, Geneva, Switzerland; MNHN, Muséum National d’Histoire Naturelle, Paris, France; MPEG, Museu Paraense Emílio Goeldi, Belém, PA, Brazil; MZLU, Lund Museum of Zoology, Lund University, Lund, Sweden; MZSP, Museu de Zoologia da Universidade de São Paulo Sao, Brazil; NMNH, National Museum of Natural History, Washington, DC; OSUC, C.A. Triplehorn Insect Collection, Ohio State University, Columbus, OH; UCDC, R.M. Bohart Museum of Entomology, University of California, Davis, CA; UCFC, The Stuart M. Fullerton Collection of Arthropods at the University of Central Florida, Orlando, FL; UCMC, University of Colorado, Boulder, CO; UCRC, University of California, Riverside, CA; USNM, National Museum of Natural History, Washington, DC.

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); EH: eye height, length of compound eye measured parallel to dorsoventral midline of head; IOS: interocul-lar space, minimal distance on frons between compound eyes; OD: ocellar diameter, greatest width of ocellus; OOL: ocular ocellar line, shortest distance from inner orbit and outer margin of posterior ocellus (Masner 1980); T1, T2, … T7: metasomal tergite 1, 2, … 7; S1, S2, … S7: metasomal sternite 1, 2, … 7. Morphological terminology otherwise generally follows Masner (1980) and Mikó et al. (2007).
Morphological terms used in this work are as in the Hymenoptera Anatomy Ontology (Yoder et al. 2010) (Appendix 1). Identifiers (URIs) in the format HAO_XXXXXXXX represent concepts in the HAO and are provided to enable readers to confirm their understanding of the concepts being referenced. To find out more about a given concept, including additional images, notes, references and other metadata, use the identifier as a search term at http://glossary.hymao.org or use the identifier as a web-link.

In the Material Examined section, the specimens studied are recorded in an abbreviated format, using unique identifiers (numbers prefixed with “OSUC”, “CASENT”, “UCFC”, “CMNH”, “MHNG”) for the individual specimens. The label data for all specimens have been georeferenced and recorded in the Hymenoptera On-Line database, and details on the data associated with these specimens can be accessed at the following link, hol.osu.edu, and entering the identifier in the form (note the space between the acronym and the number). The electronic version of the paper contains hyperlinks to external resources. Insofar as possible, the external information conforms to standards developed and maintained through the organization Biodiversity Information Standards (Taxonomic Database Working Group). All new species have been prospectively registered with ZooBank (Polaszek et al. 2005, http://www.zoobank.org), and other taxonomic names, where appropriate, have been retrospectively registered.

Data associated with the genus *Calliscelio* can be accessed at hol.osu.edu/index.html?id=461. The generic and species descriptions were generated by an xBio:D platform application, vSysLab (vsyslab.osu.edu), designed to facilitate the production of a taxon by character data matrices, and to integrate those data with the existing taxonomic, bibliographic and specimen-level database. Data may be exported in both text format and as input files for other applications. The text output for descriptions is in the format of “Character: Character state (s)”. Polymorphic characters are indicated by semicolon-separated character states.

Images and measurements were made using Combine ZP and AutoMontage extended-focus software, using JVC KY-F75U digital camera, Leica Z16 APOA microscope, and 1X objective lens. Images were post-processed with Adobe Photoshop CS3 Extended. A standard set of images is provided for each species: dorsal habitus, lateral habitus, dorsal and lateral views of the head and mesosoma, and anterior view of head. The individual images are archived in Specimage (specimage.osu.edu), the image database at The Ohio State University.

**Taxonomy**

*Calliscelio* Ashmead

*Calliscelio* Ashmead, 1893: 209, 218 (original description. Type: *Calliscelio laticinctus* Ashmead, by monotypy and original designation, keyed); Ashmead 1894: 216 (keyed); Dalla Torre 1898: 501 (catalog of species); Ashmead 1900: 327 (list of species of West Indies); Ashmead 1903: 91 (keyed); Brues 1908: 27, 28, 33 (diagnosis,
list of species, keyed); Kieffer 1908: 122 (keyed); Kieffer 1910b: 66 (keyed); Kieffer 1913: 232 (description); Kieffer 1926: 273, 499 (description, keyed, key to species); Muesebeck and Walkley 1956: 338 (citation of type species); Baltazar 1966: 185 (cataloged, catalog of species of the Philippines); Masner 1972: 839 (junior synonym of Calotelea Westwood); Masner 1976: 34, 36, 43 (description; key to Calliscelio Ashmead, Paradris Kieffer, Oethocotonus Ashmead, and Probaryconus Kieffer; key to Calotelea Westwood and Calliscelio Ashmead); Mani and Sharma 1982: 178 (description); Galloway and Austin 1984: 8, 27, 28 (description, list of species described from Australia, keyed); Kozlov and Kononova 1985: 19 (description, key to species of the Palearctic); Kozlov and Kononova 1990: 19, 173, 183 (description, key to species of the USSR, keyed); Johnson 1992: 355 (catalog of world species); Kononova 1995: 61, 69 (keyed, diagnosis, key to species of Russian Far East); Austin and Field 1997: 20, 68 (structure of ovipositor system, discussion of phylogenetic relationships); Narendran and Ramesh Babu 1990: 2 (key to species of India); Lê 2000: 31, 46 (keyed, description, key to species); Loiácono and Margaría 2002: 557 (catalog of Brazilian species); Mineo 2004: 174 (distribution in Sicily); Rajmohana 2006: 116, 119, 120 (description, keyed, key to species of India); Kononova and Furov 2007а: 57 (description); Kononova and Furov 2007b: 98 (description); Kononova and Kozlov 2008: 23, 257, 258 (description, keyed, key to species of Palearctic region); Rajmohana and Peter 2013: 76 (key to species Calliscelio rugosus Rajmohana & Peter and Calliscelio agaliensis Narendran & Ramesh Babu); Talamas and Buffington 2015: 12. (fossil in Dominican amber); Talamas, Johnston-Jordan and Buffington 2016: 413, 416 (description, synonymy).

http://zoobank.org/29B1D7E4-1173-4D61-B695-CA755632F5EA
http://bioguid.osu.edu/xbiod_concepts/461

Baryteleia Kieffer, 1926: 273, 544 (original description. Type: Macroteleia nigriceps Kieffer, by original designation, keyed, key to species); Muesebeck and Walkley 1956: 336 (citation of type species); Masner 1976: 36 (junior synonym of Calliscelio Ashmead).

http://zoobank.org/AB0DBC82-18D8-431F-9069-783F4874CEC1
http://bioguid.osu.edu/xbiod_concepts/8406

Caenoteleia Kieffer, 1926: 266, 550 (original description. Type: Caloteleia elegans Perkins, by monotypy, keyed); Muesebeck and Walkley 1956: 338 (citation of type species); Johnson 1992: 355 (catalog of world species); Masner et al. 2009: 60 (junior synonym of Calliscelio Ashmead, discussion of status).

http://zoobank.org/5FEFDDED1-26AD-40D7-A49B-8B4B5DF03630
http://bioguid.osu.edu/xbiod_concepts/460

Ceratoteleia Kieffer, 1908: 121 (original description. Type Caloteleia grenadensis Ashmead, designated by Kieffer (1926), keyed); Kieffer 1910b: 65, 66, 88 (description, list of species, keyed); Dodd 1913а: 131, 144 (key to species of Australia); Dodd 1913b: 176 (comparison with Macroteleia Westwood); Kieffer 1913: 222 (description); Kieffer 1913: 232 (description); Kieffer 1914а: 315 (description, key to species of Europe and Algeria); Kieffer 1926: 273, 500 (description, keyed, key to species, designation of type species); Nixon 1931: 356 (keyed, key to spe-
cies of Africa); Nixon 1933: 292 (keyed); Brues 1940: 82 (key to species of Baltic amber); Maneval 1940: 114 (keyed); Risbec 1950: 603 (key to species of Ethiopian region); Muesebeck and Walkley 1951: 705 (catalog of species of U.S. and Canada); Muesebeck and Walkley 1956: 341 (citation of type species); Masner 1976: 36 (junior synonym of Calliscelio Ashmead).

http://zoobank.org/70CBF446-7CD7-4211-BF0C-F401DAE92DDA
http://bioguid.osu.edu/xbiod_concepts/8400

Crama Galloway, 1984: 7, 8, 28 (original description. Type: Baryconus albicoxa Dodd, by original designation, key to Australian species, keyed); Johnson 1992: 364 (catalog of world species); Talamas, Johnston-Jordan and Buffington 2016: 413, 417 (junior synonym of Calliscelio Ashmead).

http://zoobank.org/10BDF90E-0D3E-491E-98B2-8B39BB9D5871
http://bioguid.osu.edu/xbiod_concepts/466

Glyptoteleia Kieffer, 1926: 272, 487 (original description. Type: Baryconus bisulcatus Kieffer, by monotypy, keyed); Muesebeck and Walkley 1956: 356 (citation of type species); Szabó 1962: 241 (diagnosis); Masner 1976: 36 (junior synonym of Calliscelio Ashmead); De Santis 1980: 312 (catalog of species of Brazil).

http://zoobank.org/FFA0AF0B-A126-4A36-8DB4-E25910A88C3D
http://bioguid.osu.edu/xbiod_concepts/8405

Lispoteleia Galloway, 1984: 7, 9, 35 (original description. Type: Lispoteleia collina Galloway, by original designation, key to species of Australia, keyed); Johnson 1992: 421 (catalog of world species); Austin and Field 1997: 22, 68 (structure of ovipositor system, discussion of phylogenetic relationships); Talamas, Johnston-Jordan and Buffington 2016: 413, 417 (junior synonym of Calliscelio Ashmead).

http://zoobank.org/A458DE09-DAFA-424E-B60E-1A831B19D01E
http://bioguid.osu.edu/xbiod_concepts/503

Mesoteleia Kieffer, 1917: 51 (original description. Type: Mesoteleia pallida Kieffer, by monotypy and original designation); Kieffer 1926: 271, 441 (description, keyed); Muesebeck and Walkley 1956: 369 (citation of type species); Baltazar 1966: 182 (cataloged, catalog of species of the Philippines); Masner 1976: 36 (junior synonym of Calliscelio Ashmead).

http://zoobank.org/B6CD6365-672B-4E49-B3AE-6AAFA9C42DA6
http://bioguid.osu.edu/xbiod_concepts/8404

Prosanteris Kieffer, 1908: 121, 136 (original description. Type: Anteris nigriceps Ashmead, designated by Kieffer (1910b), keyed); Kieffer 1910b: 65, 87 (description, key to subgenera, list of species, keyed); Kieffer 1913: 232 (description); Kieffer 1926: 272, 437 (description, keyed, key to species); Muesebeck and Walkley 1951: 704 (catalog of species of U.S. and Canada); Muesebeck and Walkley 1956: 391 (citation of type species); Muesebeck 1958: 93 (junior synonym of Ceratoteleia Kieffer).

http://zoobank.org/31DB13FB-2699-4E1D-A023-1BA21C1B9503
http://bioguid.osu.edu/xbiod_concepts/8401

Uroscelio Kieffer, 1914: 291 (original description. Type: Uroscelio luteipes Kieffer, by monotypy and original designation); Kieffer 1926: 268, 409 (description, keyed); Muesebeck and Walkley 1956: 408 (citation of type species); Baltazar 1966: 180
(cataloged, catalog of species of the Philippines); Masner 1976: 36 (junior synonym of *Calliscelio* Ashmead).
http://zoobank.org/91A2A4C7-7D11-4723-8C53-02DEA8A0213B
http://bioguid.osu.edu/xbiod_concepts/8403

*Xentor* Masner & Johnson, 2007: 12, 14 (original description. Type: *Xentor schlingeri* Masner & Johnson, by original designation, key to species); Talamas, Johnston-Jordan and Buffington 2016: 416 (junior synonym of *Calliscelio* Ashmead).
http://zoobank.org/1578C9FB-4A24-42D6-922D-05CDA2626906
http://bioguid.osu.edu/xbiod_concepts/211604

*Yunkara* Galloway, 1984: 9, 33 (original description. Type: *Yunkara inornata* Galloway, by monotypy and original designation, keyed); Johnson 1992: 510 (catalog of world species); Talamas, Johnston-Jordan and Buffington 2016: 413, 418 (junior synonym of *Calliscelio* Ashmead).
http://zoobank.org/4FBE9CB9-3B71-4DFB-BCE0-781664A31929
http://bioguid.osu.edu/xbiod_concepts/578

**Description** (based on New World species). Length: 1.27–3.88 mm; body moderately to markedly elongate, robust.

**Head.** Head shape in dorsal view: transverse. Hyperoccipital carina: absent; present. Occipital carina: present, complete medially; present laterally, broadly interrupted medially; completely absent. Occipital carina sculpture: crenulate; unsculptured. OOL: lateral ocellus nearly contiguous with inner orbits, OOL < 0.5 OD; lateral ocellus contiguous with inner orbit. Upper frons: convex, without frontal shelf. Scrobe shape: frons broadly convex, without distinct scrobe. Frons sculpture: scrobe largely smooth, otherwise granulate or variably punctate. Submedian carina: absent. Orbital carina: absent. Inner orbits: diverging ventrally. IOS/EH: IOS distinctly less than EH; IOS slightly greater than EH. Interantennal process: short, often excavate medially. Central keel: present; absent. Torulus opening: laterally on interantennal process. Lower frons striae: absent. Malar sulcus: present. Compound eye size: of normal proportions, not significantly reduced. Compound eye setation: glabrous; sparsely setose; densely setose. Gena: broad, convex, distinctly produced behind eye. Clypeus shape: narrow, slightly convex medially, lateral corner not produced. Apical margin of clypeus: straight. Anteclypeus: absent. Postclypeus: absent. Labrum: not visible. Mandible shape: moderate. Mandibular teeth: apex with 3, acute, subequal teeth. Arrangement of mandibular teeth: transverse. Number of maxillary palpomeres: 4. Shape of maxillary palpomeres: cylindrical. Number of labial palpomeres: 2.

**Antenna.** Number of antennomeres in female: 12. Number of antennomeres in male: 12. Insertion of radicle into A1: parallel to longitudinal axis of A1. Shape of A1: more or less cylindrical, not flattened. Length of A3 of female: distinctly longer than A2. Number of clavomeres in female antenna: 6. Claval formula of female antenna: A12–A7/1-2-2-2-2-1. Arrangement of doubled multiporous plate sensilla on female clava: in longitudinal pairs. Tyloid distribution on male antenna: A5 only. Shape of male flagellum: filiform.
Mesosoma. Mesosoma shape in dorsal view: longer than wide. Mesosoma shape in lateral view: longer than high. Medial portion of transverse pronotal carina: weakly indicated laterally; absent. Posterior apex of pronotum in dorsal view: straight, bifid apically to articulate with tegula. Vertical epomial carina: absent. Dorsal epomial carina (lateral portion of transverse pronotal carina of Vilhelmsen et al. 2010): present. Anterior face of pronotum: oblique, visible dorsally, short. Lateral face of pronotum: weakly concave below position of dorsal epomial carina. Netrion: present. Netrion shape: narrow to moderately wide, open ventrally. Anterior portion of mesoscutum: vertical, flexed ventrally to meet pronotum. Mesoscutum shape: semielliptical, excavate at base of wings. Skaphion: absent. Notauli: present, percurrent; present, abbreviated. Parapsidal lines: absent. Transscutal articulation: well-developed, narrow. Shape of mesoscutellum: quadrate to trapezoidal. Armature of mesoscutellum: absent. Surface of mesoscutellum: convex throughout. Median longitudinal furrow on mesoscutellum: absent. Shape of axillula: small, dorsal margin sinuate. Metascutellum: clearly differentiated. Metascutellar armature: absent. Metascutellar setation: glabrous. Metapostnotum: not defined externally. Extent of metasomal depression of propodeum: percurrent, extending anteriorly to anterior margin of propodeum. Lateral propleural projection: absent. Mesopleural carina: present, extending at least to sternaulus; absent or strongly abbreviated, present only near mid coxa. Mesal course of acetabular carina: projecting as small spur anteriorly, not separating fore coxae. Mesopleural pit: present. Sternaulus: absent. Posterodorsal corner of mesopleuron: rounded anteriorly.

Legs. Number of mid tibial spurs: 1. Number of hind tibial spurs: 1. Dorsal surface of hind coxa: smooth; transversely rugose. Hind tibia shape: cylindrical, ecarinate. Trochantellus: indicated by transverse sulcus on femur.

Wings. Wing development of female: macropterous. Wing development of male: macropterous. Tubular veins in fore wing: present. Bulla of fore wing R: absent. Extent of marginal venation of fore wing: distinct marginal or postmarginal veins developed. Origin of r-rrs in fore wing: arising from marginal vein along costal margin. Development of basal vein (Rs+M) in fore wing: spectral; nebulous, strongly pigmented; absent. Development of R in hind wing: elongate, extending to costal margin.

Metasoma. Number of external terga in female: 6. Number of external sterna in female: 6. Number of external terga in male: 7. Number of external sterna in male: 7. Shape of metasoma: lanceolate. Laterotergites: present, narrow. Laterosternites: present. T1 of female: more or less evenly convex; produced medially into cylindrical or elliptical horn housing ovipositor. Relative size of metasomal segments: T2–T4 largest, subequal in size. Terga with basal crenulae: T2. Sublateral carinae on tergites: absent. Median longitudinal carina on metasomal terga: absent. Shape of female T6: flattened. Shape of posterior margin of male T7: rounded. Anterior margin of S1: not produced anteriorly, concave. Distribution of felt fields: absent. Ovipositor type: Scelio-type (Austin and Field 1997).

Diagnosis. Calliscelio may be distinguished from other genera of the subfamily by the combination of the following characters: eyes glabrous in many species but in some with short hairs or even densely hairy; skaphion never developed; metanotum medially
produced into a transverse plate or lamella, neither spinose nor toothed laterally; propodeum usually unarmed, often excavate to contain T1 horn, only in a few species with posterolateral corner acute; T6 in females often elongate, sword-like, depressed dorsoventrally. Calliscelio is most similar to Holoteleia Kieffer and Probaryconus Kieffer in the tribe Calliscelionini and Calotelea in Psilanteridini in body shape and some external characters. The following key is used to separate these genera with the fewest characters possible.

**Key to separate Calliscelio, Calotelea, Holoteleia and Probaryconus**

1  Skaphion indicated posteriorly by more or less distinct rim ................................................................. **Calotelea** Westwood
   – Skaphion never developed, no rim posteriorly.......................................................... 2

2  Genal striae present; epomial carina present........... **Probaryconus** Kieffer
   – Genal striae absent; epomial carina absent ................................................................. 3

3  Metanotum medially notably wider than at sides, expanded into lamella......
   ................................................................................................................................. **Calliscelio** Ashmead
   – Metanotum narrow, strip-like, medially not produced into lamella...........
   ................................................................................................................................. **Holoteleia** Kieffer

**New World species of Calliscelio Ashmead**

*C. absconditum* Chen & Johnson, sp. n.
*C. absum* Chen & Johnson, sp. n.
*C. alcoa* Chen & Masner, sp. n.
*C. amadoi* Chen & Johnson, sp. n.
*C. armila* Chen & Masner, sp. n.
*C. bidens* Chen & Masner, sp. n.
*C. bisulcatus* (Kieffer, 1910)
*C. brachys* Chen & Johnson, sp. n.
*C. brevnotaclus* Chen & Johnson, sp. n.
*C. brevitas* Chen & Johnson, sp. n.
*C. carinigena* Chen & Johnson, sp. n.
*C. crater* Chen & Johnson, sp. n.
*C. crena* Chen & Johnson, sp. n.
*C. eboris* Chen & Johnson, sp. n.
*C. elegans* (Perkins)
   *Calotelea tanugatra* Narendran
*C. extenuatus* Chen & Johnson, sp. n.
*C. flavicauda* Chen & Johnson, sp. n.
*C. foveolatus* Chen & Johnson, sp. n.
*C. gatineau* Chen & Johnson, sp. n.
*C. glaber* Chen & Masner, sp. n.
*C. granulatus* Chen & Masner, sp. n.
New World species of the genus Calliscelio Ashmead...

*C. laticinctus* Ashmead, 1893
*C. latifrons* Chen & Johnson, sp. n.
*C. levis* Chen & Johnson, sp. n.
*C. longius* Chen & Johnson, sp. n.
*C. magnificus* Chen & Masner, sp. n.
*C. minuta* Chen & Johnson, sp. n.
*C. paraglaber* Chen & Johnson, sp. n.
*C. pararemigio* Chen & Masner, sp. n.
*C. prolixus* Chen & Johnson, sp. n.
*C. punctatifrons* Chen & Johnson, sp. n.
*C. remigio* Chen & Masner, sp. n.
*C. rubriclaveus* (Ashmead, 1887), comb. n.
  *Anteris nigriceps* Ashmead, 1893, syn. n.
  *Caloteleia Marlattii* Ashmead, 1893, syn. n.
  *Caloteleia grenadensis* Ashmead, 1896, syn. n.
  *Macroteleia ruskini* Girault, 1920, syn. n.
*C. ruga* Chen & Johnson, sp. n.
*C. rugicoxa* Chen & Masner, sp. n.
*C. sfina* Chen & Johnson, sp. n.
*C. storea* Chen & Johnson, sp. n.
*C. suni* Chen & Johnson, sp. n.
*C. telum* Chen & Johnson, sp. n.
*C. torqueo* Chen & Johnson, sp. n.
*C. virga* Chen & Johnson, sp. n.

Key to females of *Calliscelio* of the New World

1 Occipital carina complete medially (Figs 19, 37, 43, 49, 55, 73, 91, 103, 109, 115, 121, 133, 139, 145, 151, 157, 163, 169, 181, 193, 199, 217, 235, 247, 259, 271).................................................................................................................................2
  – Occipital carina interrupted medially (Figs 25, 31, 61, 67, 79, 85, 97, 127, 175, 187, 205, 229, 241, 253, 265).................................................................................................................................28

2 Eye bare (Figs 38, 74, 92, 110, 116, 122, 140, 152, 158, 164, 170, 182, 194, 218)..................................................................................................................................................3
  – Eye setose (Figs 44, 56, 50, 103, 133, 146, 200, 236, 248, 260, 272) ......17

3 A4 distinctly shorter than A3 (Figs 18, 36, 72, 90, 114, 118, 182) ............4
  – A4 approximately as long as or distinctly longer than A3 (Figs 10, 140, 150, 162, 166, 190).................................................................................................................................11

4 Horn on T1 weakly developed, smooth (Figs 117, 183).........................5
  – Horn on T1 large and distinct, variably sculptured (Figs 21, 39, 123, 217)...6

5 Metascutellum without a longitudinal median carina (Fig. 181); foveolae of scutocutellar sulcus between notauli smaller than those along margin of axilla
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(Fig. 181); posterior vertex smooth throughout (Fig. 181)..........................

............................................ Calliscelio paraglaber Chen & Johnson, sp. n.

– Metascutellum with a longitudinal median carina (Fig. 115); foveolae of scutoscutellar sulcus between notauli as large as those along margin of axilla (Fig. 115); posterior vertex smooth to coriaceous (Fig. 115).......................

............................................ Calliscelio foveolatus Chen & Johnson, sp. n.

6 T6 strongly elongate, at least 2.0× longer than wide (Figs 63, 93)...............

– T6 short, at most 1.5× longer than wide (Figs 21, 39, 123, 224)...................8

7 Setae on frons short (Fig. 74); posterior vertex granulate to rugulose or densely punctate (Fig. 73); mesoscutum largely coriaceous with dense and fine punctures at posterior extreme (Fig. 73)..........

Calliscelio brevitas Chen & Johnson, sp. n.

– Setae on frons long (Fig. 92); posterior vertex largely smooth with sparse fine punctures (Fig. 91); mesoscutum with anterior margin rugulose, remainder smooth (Fig. 91)..........................

Calliscelio crena Chen & Johnson, sp. n.

8 R1 as long as r-rs (Figs 13, 212); IOS slightly less than or greater than EH (Figs 122, 218)..........................................................

– R1 as long as 2.0× length of r-rs (Figs 21, 39); IOS distinctly less than EH (Figs 20, 38)..........................................................

9 Mesepisternum below mesopleural depression densely punctate (Fig. 211); horn on T1 large and distinct, granulate or rugose dorsally (Fig. 217)...........

.............................................................. Calliscelio rubriclavus (Ashmead)

– Mesepisternum below mesopleural depression smooth (Fig. 119); horn on T1 present as a small bulge, dorsally granulate medially, with V-shaped keels on edge (Fig. 123) ............. Calliscelio gatineau Chen & Johnson, sp. n.

10 Posterior vertex largely smooth with sparse fine punctures (Fig. 37); Rs+M dark, nebulous (Fig. 39); T1 horn transversely striate (Fig. 39)......................

.............................................................. Calliscelio amadoi Chen & Johnson, sp. n.

– Posterior vertex granulate to rugulose (Fig. 19); Rs+M spectral (Fig. 21); T1 horn with V-shaped striae (Fig. 21)..........................

............................................ Calliscelio absconditum Chen & Johnson, sp. n.

11 T6 short, at most 1.5× longer than wide (Figs 111, 153, 171, 195)...........

– T6 strongly elongate, at least 2.0× longer than wide (Figs 159, 165)...........

12 Horn on T1 absent or weakly developed (Figs 153, 195); dorsal propodeum not excavate medially, lateral propodeal carinae meeting anteromedially (Figs 151, 193)..........................................

– Horn on T1 present as a small bulge (Figs 111, 171); dorsal propodeum shallowly excavate medially, with lateral propodeal carinae widely separated (Fig. 109, 169)..........................................

13 A4 distinctly longer than A3 (Fig. 192); upper frons densely setose (Fig. 194); T1 longitudinally striate medially (Fig. 195)..........................

............................................ Calliscelio prolixus Chen & Johnson, sp. n.

– A4 as long as A3 (Fig. 150); upper frons sparsely setose (Fig. 152); T1 smooth medially (Fig. 153)..........................

Calliscelio levis Chen & Johnson, sp. n.
New World species of the genus Calliscelio Ashmead...

14 Scutoscutellar sulcus strongly foveolate medially (Fig. 109); upper frons densely setose (Fig. 110); T3 smooth throughout (Fig. 111)................................. Calliscelio flavicauda Chen & Johnson, sp. n.
– Scutoscutellar sulcus weakly foveolate medially (Fig. 169); upper frons sparsely setose (Fig. 170); T3 with longitudinal submedian striae (Fig. 171) .................. Calliscelio migma Chen & Johnson, sp. n.

15 Horn on T1 smooth (Fig. 165); foveolae of scutoscutellar sulcus between notauli smaller than those along margin of axilla (Fig. 163)................................. Calliscelio magnificus Chen & Masner, sp. n.
– Horn on T1 at least partly transversely striate (Figs 139, 159); foveolae of scutoscutellar sulcus between notauli as large as those along margin of axilla (Fig. 139, 157) ........................................... 16

16 A4 distinctly longer than A3 (Fig. 10); A5 longer than A3 (Fig. 10) .................. Calliscelio longius Chen & Johnson, sp. n.
– A4 slightly longer than A3 (Fig. 140); A5 shorter than A3 (Fig. 140) .................. Calliscelio laticinctus Ashmead

17 Median keels on propodeum present (Figs 49, 235) ................................... 18
– Median keels on propodeum absent (Figs 43, 55, 103, 133, 145, 199, 247, 259, 271) ............................................................................. 19

18 Horn on T1 absent, anterior margin of T1 longitudinally striate (Fig. 81); hind coxae smooth (Fig. 47); T6 short, slightly longer than wide (Fig. 51)... Calliscelio bidens Chen & Masner, sp. n.
– Horn on T1 weakly developed, rugose dorsally (Fig. 237); hind coxae rugose (Fig. 233); T6 distinctly elongate, 2.0× longer than wide (Fig. 237) ..........

19 T6 strongly elongate, at least 2.0× longer than wide (Figs 135, 261)........... 20
– T6 short, at most 1.5× longer than wide (Figs 45, 57, 105, 147, 201, 249, 273) ................................................................................. 22

20 Fore wing strikingly banded, with dark bands basally, medially and apically, separated by light bands; R1 only slightly longer than r-rs ................................. Calliscelio elegans (Perkins)
– Fore wing hyaline; R1 approximately as long as 2.0× length of r-rs............. 21

21 Setae of upper frons short, dense (Fig. 134); netrion rugose (Fig. 131); horn on T1 longitudinally striate (Fig. 135).................................................. Calliscelio granulatus Chen & Johnson, sp. n.
– Setae of upper frons long, sparse (Fig. 260); netrion smooth (Fig. 257); horn on T1 rugulose (Fig. 261)........... Calliscelio telum Chen & Johnson, sp. n.

22 Horn on T1 absent (Fig. 105); dorsal propodeum not excavate medially (Fig. 103).................. Calliscelio extenuatus Chen & Johnson, sp. n.
– Horn on T1 present (Figs 45, 57, 147, 201, 249, 273); dorsal propodeum excavate medially (Figs 43, 55, 145, 199, 247, 271) .................. 23

23 Horn on T1 variably sculptured (Figs 45, 147, 249).......................... 24
– Horn on T1 smooth (Figs 57, 201, 273) ........................................... 26
24 Notaulus abbreviated, at most reaching middle of mesoscutum (Fig. 145); T3 with submedian longitudinal striae (Fig. 147) .............................................................. *Calliscelio latifrons* Chen & Johnson, sp. n.
– Notaulus percurrent (Figs 43, 247); T3 smooth throughout (Figs 45, 249) .... 25
25 Horn on T1 rugulose (Fig. 249); legs orange throughout (Fig. 244) .......... ............................................. *Calliscelio storea* Chen & Johnson, sp. n.
– Horn on T1 smooth to rugulose medially, with V-shaped keels laterally (Fig. 45); legs with coxae and femora white, otherwise pale yellow throughout (Fig. 40) .............................................. *Calliscelio armila* Chen & Masner, sp. n.
26 Frons below median ocellus densely punctate (Fig. 200); posterior vertex densely punctate (Fig. 199); R distinctly longer than r-rs (Fig. 201) .............. ........................................................................ *Calliscelio punctatifrons* Chen & Johnson, sp. n.
– Frons below median ocellus largely smooth with sparse fine punctures (Figs 56, 272); posterior vertex granulate (Figs 55, 271); R approximately as long as r-rs (Fig. 268) .......................................................... 27
27 Metascutellum approximately 4.0× wider than long, smooth (Fig. 271); mesopleural carina absent (Fig. 269); mesepisternum below mesopleural depression smooth throughout (Fig. 269) ........ *Calliscelio virga* Chen & Johnson, sp. n.
– Metascutellum approximately 2.0× wider than long, rugose anteriorly, smooth posteriorly (Fig. 55); mesopleural carina present (Fig. 53); mesepisternum below mesopleural depression with a row of foveae along mesopleural carina .............................................................. *Calliscelio bisulcatus* (Kieffer)
28 Horn on T1 absent or at most weakly developed (Figs 27, 63, 99, 177, 261) ... 29
– Horn on T1 present (Figs 33, 69, 87, 129, 189, 207, 243, 267) ............... 34
29 Notaulus abbreviated, at most reaching middle of mesoscutum (Figs 25, 61) ... 30
– Notaulus percurrent (Figs 97, 175, 229, 259) ......................................... 31
30 A4 distinctly shorter than A3 (Fig. 22); postgena behind outer orbit coriaceous (Fig. 23) ............... *Calliscelio absum* Chen & Johnson, sp. n.
– A4 as long as A3 (Fig. 60); postgena behind outer orbit smooth (Fig. 59) .... .... *Calliscelio brachys* Chen & Johnson, sp. n.
31 Eye hairy (Fig. 229); A6 distinctly longer than wide ........................................ *Calliscelio ruga* Chen & Johnson, sp. n.
– Eye bare (Figs 98, 176, 260); A6 subquadrate or distinctly transverse ...... 32
32 Fore wing hyaline with an infuscate band in the middle (Fig. 174); A4 distinctly shorter than A3; postgena behind outer orbit granulate (Fig. 173) .... .... ........................................................................ *Calliscelio minutia* Chen & Johnson, sp. n.
– Fore wing entirely hyaline (Figs 99, 258); A4 as long as A3; postgena behind outer orbit smooth (Figs 95, 257) .......................................................... 33
33 Central keel of frons absent (Fig. 260); frons below median ocellus smooth (Fig. 260); Rs+M nebulose, weakly pigmented (Fig. 261) .................................................. *Calliscelio suni* Chen & Johnson, sp. n.
– Central keel of frons present (Fig. 98); frons below median ocellus coriaceous (Fig. 98); Rs+M spectral (Fig. 99) .......................................................... *Calliscelio eboris* Chen & Johnson, sp. n.
New World species of the genus Calliscelio Ashmead...

34 Frons and posterior vertex smooth (Figs 127, 128, 187, 188, 205, 206, 265, 266)..................................................................................................................................................35
– Frons and posterior vertex variably sculptured (Figs 31, 32, 67, 68, 79, 80, 85, 86, 241, 242) ....................................................................................................................................................................................................38

35 T6 strongly elongate, approximately 3.0× longer than wide (Figs 189, 207); Metascutellum finely granulate (Figs 187, 205) .................................................................................................................................................................36
– T6 short, slightly longer than wide (Figs 129, 267); Metascutellum finely smooth (Figs 127, 265). ........................................................................................................................................................................................................37

36 Head strongly transverse in dorsal view (Fig. 205); T1 horn transversely striate (Fig. 207) .................................Calliscelio remigio Chen & Masner, sp. n.
– Head subglobose in dorsal view (Fig. 187); T1 horn densely and concentrically striate anteriorly, smooth posteriorly (Fig. 189) ............................................................................................................................Calliscelio pararemigio Chen & Masner, sp. n.

37 A4 distinctly longer than A3 (Fig. 264); horn on T1 smooth (Fig. 267)......  Calliscelio torqueo Chen & Johnson, sp. n.
– A4 distinctly shorter than A3 (Fig. 126); horn on T1 concentrically striate (Fig. 129) .................................................................................Calliscelio glaber Chen & Masner, sp. n.

38 Hyperoccipital carina present (Figs 79, 85) .........................................................................................................................39
– Hyperoccipital carina absent (Figs 31, 67, 241) .........................................................................................................................40

39 Postgena behind outer orbit with large foveae (Fig. 83); horn on T1 large and distinct, rugose medially, with V-shaped keels laterally (Fig. 87).................................Calliscelio crater Chen & Johnson, sp. n.
– Postgena with a carina along outer orbit (Fig. 77); horn on T1 weakly indicated, smooth to somewhat transversely striate (Fig. 69)..................................................................................................................................................................................Calliscelio carinigena Chen & Johnson, sp. n.

40 Mesoscutum densely punctate (Fig. 31); horn on T1 densely and transversely striate (Fig. 33); T6 strongly elongate, tapering apically (Fig. 33) ............ Calliscelio alcoa Chen & Masner, sp. n.
– Mesoscutum granulate (Figs 67, 241); horn on T1 with V-shaped striae (Figs 69, 243); T6 short, subtriangular (Figs 69, 243) .................................................................................................................................41

41 Notaulus abbreviated, at most reaching anteriorly to middle of mesoscutum (Fig. 67); ventral metapleural area largely smooth (Fig. 65); S3 largely smooth with sparse fine punctures........ Calliscelio brevinotaulus Chen & Johnson, sp. n.
– Notaulus percurrent (Fig. 241); ventral metapleural area rugose throughout (Fig. 239); S3 densely punctate medially, longitudinally striate laterally ...... Calliscelio sfina Chen & Johnson, sp. n.

Key to males (unknown for C. amadoi, C. bidens, C. brevitas, C. foveolatus, C. gatineau, C. levis, C. prolixus, C. rugicoxa, C. ruga and C. storea)

1 Occipital carina complete medially (Figs 19, 43, 55, 91, 103, 109, 133, 139, 145, 157, 163, 169, 181, 199, 217, 259, 271) ..........................................................................................................................................................................................................................................................................................2
– Occipital carina interrupted medially (Figs 25, 31, 61, 67, 79, 85, 97, 127, 175, 187, 205, 241, 259, 265) ..........................................................................................................................................................................................................................................................................................19
1 Eye bare (Figs 20, 92, 110, 140, 158, 164, 170, 182) ................................................. 3
  – Eye setose (Figs 44, 103, 133, 200, 260, 272) ................................................................. 11
2 Rs+M spectral (Figs 21, 212); R distinctly shorter than r-rs ........................................ 4
  – Rs+M nebulose, pigmented (Figs 15, 90, 159, 165, 171, 183); R as long as or longer than r-rs ................................................................. 5
3 Mesepisternum below mesopleural depression densely punctate (Fig. 211); IOS slightly less than EH (Fig. 218); R1 as long as r-rs ..............................................

Calliscelio rubriclavus (Ashmead)
  – Mesepisternum below mesopleural depression smooth (Fig. 17); IOS distinctly less than EH (Fig. 20); R1 approximately as long as 2.0× length of r-rs .................................................................

Calliscelio absconditum sp. n.
4 Upper frons densely setose (Figs 110, 140, 158, 164) ................................................. 6
  – Upper frons sparsely setose (Figs 92, 170, 182) ............................................................. 9
5 Metascutellum smooth (Fig. 163) ..............................................................................

Calliscelio magnificus Chen & Masner, sp. n.
  – Metascutellum rugose (Figs 109, 139, 157) ................................................................. 7
6 A11 approximately 4.5× longer than wide .................................................................

Calliscelio longuis Chen & Johnson, sp. n.
  – A11 approximately 3.0× longer than wide ................................................................. 8
7 T3 smooth throughout (Fig. 111); hind femora brown ................................................

Calliscelio flavicauda Chen & Johnson, sp. n.
  – T3 with longitudinal submedian striae; hind femora yellow ........................................

Calliscelio laticinctus Ashmead
8 A11 approximately 2.0× longer than wide; length of T5 tyloid greater than 0.5× length of A5 .................................................................

Calliscelio crena Chen & Johnson, sp.n
  – A11 approximately 4.0× longer than wide; length of T5 tyloid approximately 0.3× length of A5 ................................................................. 10
9 Mesoscutum smooth throughout (Fig. 181); T3 smooth throughout (Fig. 183) ............

Calliscelio paraglaber Chen & Johnson, sp. n.
  – Mesoscutum coriaceous or smooth with sparse punctures (Fig. 169); T3 with longitudinal submedian striae (Fig. 171) .................................................................

Calliscelio migma Chen & Johnson, sp. n.
10 R1 approximately as long as r-rs ..............................................................................

Calliscelio bisulcatus (Kieffer)
  – R1 at least 2.0× length of r-rs .............................................................................. 14
11 Fore wing strikingly banded, with dark bands basally, medially and apically, separated by light bands .................................................................

Calliscelio elegans (Perkins)
  – Fore wing hyaline (Figs 54, 268) .............................................................................. 13
12 Metascutellum rugose (Fig. 55); mesepisternum below mesopleural depression largely smooth with a row of foveae along mesopleural carina ........................................

Calliscelio virga Chen & Johnson, sp. n.
New World species of the genus *Calliscelio* Ashmead...

14 IOS slightly greater than EH (Fig. 146); antennal flagellomeres moniliform, A11 as long as wide (Fig. 5) ... *Calliscelio latifrons* Chen & Johnson, sp. n.

- IOS less than EH (Figs 44, 104, 134, 200, 260); antennal flagellomeres filiform, A11 at least 2.5× longer than wide (Fig. 2) .................................................. 15

15 Posterior vertex densely punctate (Fig. 199); mesostutellum smooth with sparse fine punctures (Fig. 199) ..... *Calliscelio punctatifrons* Chen & Johnson, sp. n.

- Posterior vertex granulate (Figs 43, 103, 133, 259); mesoscotellum granulate (Figs 43, 103, 133, 259) .......................................................... 16

16 R1 greater than 3.0× length of r-rs .............................................. *Calliscelio extenuatus* Chen & Johnson, sp. n.

- R1 approximately as long as 2.0× length of r-rs .......................... 17

17 Frons below median ocellus largely smooth with sparse fine punctures (Fig. 44); IOS slightly less than EH (Fig. 44).......................................................... *Calliscelio armila* Chen & Masner, sp. n.

- Frons below median ocellus granulate (Figs 134, 260); IOS distinctly less than EH (Figs 134, 260) .......................................................... 18

18 Rs+M nebulose, strongly pigmented; dorsal propodeum with one or two longitudinal keels lateral to median keels ............................................. *Calliscelio telum* Chen & Johnson, sp. n.

- Rs+M spectral; dorsal propodeum rugose throughout, only with medial keels .................. *Calliscelio granulatus* Chen & Masner, sp. n.

19 Notaulus abbreviated, at most reach anteriorly to middle of mesoscotum (Figs 15, 61, 61) ............................................................................. 20

- Notaulus percurrent (Figs 31, 79, 85, 97, 127, 175, 187, 205, 241, 259, 265) .......................................................... 21

20 Neterion rugose (Fig. 65); mesopleural carina absent (Fig. 65) ............... *Calliscelio brevinotaularis* Chen & Johnson, sp. n.

- Neterion smooth (Figs 23, 59); mesopleural carina present (Figs 23, 59) .................. 21

21 Postgena behind outer orbit smooth (Fig. 59); length of A5 tyloid approximately 0.3× length of A5; dorsal propodeum with one or two longitudinal keels lateral to median keel ..... *Calliscelio brachys* Chen & Johnson, sp. n.

- Postgena behind outer orbit coriaceous (Fig. 23); length of A5 tyloid longer than 0.5× length of A5; lateral propodeal area rugose throughout .................................................. *Calliscelio absum* Chen & Johnson, sp. n.

22 Frons below median ocellus smooth (Figs 128, 188, 206, 260, 266) .............. 23

- Frons below median ocellus sculptured (Figs 32, 80, 86, 98, 176, 242) ............ 27

23 Rs+M nebulose, pigmented (Figs 258, 264) ........................................... 24

- Rs+M spectral (Figs 126, 186, 204) .................................................. 25

24 Metascotellum rugose (Fig. 259); R distinctly shorter than r-rs; T3 smooth throughout (Fig. 261) ............... *Calliscelio suni* Chen & Johnson, sp. n.

- Metascotellum smooth (Fig. 265); R approximately as long as r-rs; T3 with longitudinal submedian striae (Fig. 267) .......................................................... *Calliscelio torqueo* Chen & Johnson, sp. n.
25 Mesopleural carina absent (Fig. 125); mesoscutellum smooth throughout (Fig. 127) ........................................ Calliscelio glaber Chen & Masner, sp. n.
– Mesopleural carina present (Figs 185, 203); mesoscutellum with sparse fine punctures (Fig. 187, 205) ........................................ 26

26 Head strongly transverse in dorsal view (Fig. 205); S3 densely punctate or punctate rugose (Fig. 207) ........ Calliscelio remigio Chen & Masner, sp. n.
– Head subglobose in dorsal view (Fig. 187); S3 largely smooth with sparse fine punctures (Fig. 189) ........ Calliscelio pararemigio Chen & Masner, sp. n.

27 Mesoscutum densely punctate (Fig. 31); R approximately as long as r-rs; ..... ................................................................. Calliscelio alcoa Chen & Masner, sp. n.
– Mesoscutum coriaceous or granulate (Figs 79, 85, 97, 175, 241); R distinctly shorter than r-rs; ........................................ 28

28 Hyperoccipital carina present (Figs 79, 85, 97) ........................................ 29
– Hyperoccipital carina absent (Figs 175, 241) ........................................ 31

29 Postgena behind outer orbit with large foveae (Fig. 83) ................................................................. Calliscelio crater Chen & Johnson, sp. n.
– Postgena behind outer orbit without foveae (Figs 77, 95) ........................................ 30

30 Posterior vertex transversely striate (Fig. 97); postgena behind outer orbit smooth (Fig. 95) ...................... Calliscelio eboris Chen & Johnson, sp. n.
– Posterior vertex granulate to rugulose (Fig. 79); postgena behind outer orbit with a carina along outer orbit (Fig. 77) ........................................ 31

S3 smooth (Fig. 177); fore wing hyaline with infuscate band in the middle (Fig. 174); ventral metapleural area smooth dorsally, densely punctate ventrally (Fig. 173) ...................... Calliscelio minutia Chen & Johnson, sp. n.
– S3 densely punctate medially, longitudinally striate laterally (Fig. 243); fore wing hyaline throughout (Fig. 240); ventral metapleural area rugose (Fig. 239) ........................................ 32

Calliscelio absconditum Chen & Johnson, sp. n.

http://zoobank.org/7A1C9B4D-B25D-403F-9DE3-B2278A4BFED8
http://bioguid.osu.edu/xbiod_concepts/384359
Figures 16–21

**Description.** Body length of female: 2.04–2.54 mm (n=20). Body length of male: 1.70–2.36 mm (n=20). Color of head: variably brown to black. Color of antennal clava (A7–A12): dark brown to black. Shape of head: subglobose. Central keel of frons: absent. Setation of upper frons: with sparse, long setae. IOS/EH: IOS distinctly less than EH. Sculpture of ventrolateral frons: smooth to coriaceous. Sculpture of frons below median ocellus: coriaceous. Sculpture of posterior vertex: granulate to rugulose. Hyperoccipital carina: absent. Occipital carina medially: complete, weakly crenulate throughout. Length of OOL: less than 0.5× ocellar diameter. Sculpture of postgena...
New World species of the genus Calliscelio Ashmead...

behind outer orbit: largely smooth with small granulate area. Ocular setae: absent. A4 in female: distinctly shorter than A3. A5 in female: shorter than A3, as long as wide. Shape of female A6: distinctly wider than long. Form of male antennal flagellomeres: filiform, A11 approximately 2.0× longer than wide. Length of A5 tyloid in male: greater than 0.5× length of A5.

Color of mesosoma in female: orange throughout; variably orange to pale brown. Color of mesosomal in male: variably orange to pale brown; dark brown throughout. Sculpture of dorsal pronotal area: rugose. Sculpture of lateral pronotal area: smooth throughout. Sculpture of netrion: smooth. Notaulus: percurrent. Sculpture of mesoscutum: granulate. Shape of mesoscutellum: semiellipsoidal. Foveolae of scutoscutellar sulcus between notaulli: as large as those along margin of axilla. Sculpture of mesoscutellum: smooth with sparse fine punctures. Shape of metascutellum: posterior margin straight, approximately 3.0× wider than long. Sculpture of metascutellum in female: rugose. Sculpture of metascutellum in male: rugose. Dorsal propodeum in female: shallowly excavate medially, with lateral propodeal carinae widely separated. Sculpture of dorsal propodeum in female: rugose. Sculpture of dorsal propodeum in male: rugose. Median keels on propodeum in female: absent. Mesopleural carina: absent. Sculpture of mesepisternum below mesopleural depression: smooth. Sculpture of ventral metapleural area: largely smooth with an oblique carina. Color of legs: pale yellow throughout. Sculpture of hind coxa: smooth.

Color of fore wing: hyaline. Rs+M: spectral. Setae on R: long, erect, surpassing the margin of the wing. Length of R: distinctly shorter than r-rs. Length of R1: approximately as long as 2.0× length of r-rs.

Color of metasoma in female: orange throughout; variably orange to pale brown. Color of metasoma in male: brown throughout. Horn on T1 in female: large and distinct. Sculpture of T1 horn dorsally: smooth to rugulose medially, with V-shaped keels laterally; with V-shaped striae. Sculpture of posterior margin of T1 in female: longitudinally striate throughout. Sculpture of T1 in male: longitudinally striate. Development of longitudinal striae on T2 in female: reaching posterior margin of T2. Sculpture of T3: smooth; smooth medially, coriaceous laterally. Shape of T6 in female: short, wider than long. Sculpture of S3: smooth to coriaceous.

Diagnosis. This species is similar to C. brevinotaulus, C. carinigena, C. crater and C. sfina in color pattern, size, and habitus. It may be distinguished by the complete occipital carina and granulate to rugulose posterior vertex (Fig. 19).

Etymology. The epithet is used as a noun in apposition derived from the Latin word for hidden, in reference to the obscurity of the occipital carina from dorsal view.

Link to distribution map. [http://hol.osu.edu/map-full.html?id=384359]

Material examined. Holotype, female: PARAGUAY: Canindeyú Dept., Jejuí-mí, Bosque Mbaracayú Natural Reserve, 10.I.1997, B. Garcete, OSUC 323924 (deposited in MNHNPY). Paratypes: (59 females, 104 males) BOLIVIA: 7 females, OSUC 534032, 534038, 534040, 534054–534055, 534058, 534186 (CNCI). BRAZIL: 11 females, 28 males, OSUC 534520 (CNCI); OSUC 10439, 10444, 10601, 10610, 10653, 110189, 131761, 131787, 131827, 134436, 134786, 134875, 510887, 826
(MZSP); OSUC 10040, 10557, 10533, 10718, 10949, 110085, 110139, 112, 130, 131695, 131754, 131816, 131840, 131892, 133022, 133090, 134370, 134681, 134791 (OSUC). PARAGUAY: 41 females, 76 males, OSUC 534107-534115, 534559 (CNCI); OSUC 534683, 534695-534697, 534699-534700, 534702, 534704, 534706-534707, 534713-534714, 534726-534728, 534731-534749, 570521-570525, 570527-570534 (MNHNPy); OSUC 150602-150603, 150606, 150610-150611, 165099, 176064, 276773-276777, 276796, 278657-278658, 278661-278662, 278664-278665, 278668-278670, 278673, 278676, 278679, 322990, 323001-323003, 323027-323029, 323032, 323035, 323920-323923, 323925-323927, 412079-412082, 412085, 534725, 570526, 577174, 577176, 577178-577180, 577188-577189, 577340, 577343, 577346, 577349-577350 (OSUC).

**Calliscelio absum** Chen & Johnson, sp. n.
http://zoobank.org/2877EC6A-9602-499F-9075-0CCC91166CD9
http://bioguid.osu.edu/xbiod_concepts/384780

Figures 22–27

**Description.** Body length of female: 1.49–2.58 mm (n=20). Body length of male: 1.49–1.60 mm (n=20). Color of head: black throughout; dark brown; orange throughout. Color of antennal clava (A7–A12): dark brown to black. Shape of head: subglobose. Central keel of frons: absent. Setation of upper frons: with sparse, short setae. IOS/EH: IOS distinctly less than EH. Sculpture of ventrolateral frons: smooth to granulate. Sculpture of frons below median ocellus: smooth; coriaceous. Sculpture of posterior vertex: smooth; coriaceous. Hyperoccipital carina: absent. Occipital carina medially: interrupted. Length of OOL: less than 0.5× ocellar diameter. Sculpture of postgena behind outer orbit: coriaceous. Ocular setae: absent. A4 in female: distinctly shorter than A3. A5 in female: shorter than A3, as long as wide. Shape of female A6: distinctly wider than long. Form of male antennal flagellomeres: filiform, A11 approximately 2.5× longer than wide. Length of A5 tyloid in male: greater than 0.5× length of A5.

Color of mesosoma in female: orange throughout; black throughout; orange to pale brown. Color of mesosoma in male: orange throughout; dark brown throughout; black throughout. Sculpture of dorsal pronotal area: smooth. Sculpture of lateral pronotal area: smooth throughout; smooth anteriorly, granulate posteriorly. Sculpture of netrion: smooth. Notaulus: abbreviated, at most reaching middle of mesoscutum. Sculpture of mesoscutum: coriaceous. Shape of mesoscutellum: semiellipsoidal. Foveolae of scutoscutellar sulcus between notauli: smaller than those along margin of axilla. Sculpture of mesoscutellum: coriaceous; anterior half granulate, posterior half smooth. Shape of metascutellum: posterior margin rounded, approximately 3.0× wider than long. Sculpture of metascutellum in female: with short longitudinal carinae. Sculpture of metascutellum in male: rugose. Dorsal propodeum in female: not excavate medially,
lateral propodeal carinae meeting anteromedially. Sculpture of dorsal propodeum in female: rugose. Sculpture of dorsal propodeum in male: rugose. Median keels on propodeum in female: absent. Mesopleural carina: present. Sculpture of mesepisternum below mesopleural depression: smooth. Sculpture of ventral metapleural area: largely smooth with an oblique carina. Color of legs: pale yellow throughout; white throughout. Sculpture of hind coxa: smooth.

Color of fore wing: hyaline. Rs+M: spectral. Setae on R: long, erect, surpassing the margin of the wing. Length of R: distinctly shorter than r-rs. Length of R1: greater than 3.0× length of r-rs.

Color of metasoma in female: dark brown; orange throughout; yellow throughout. Color of metasoma in male: orange throughout; brown throughout. Horn on T1 in female: absent; weakly developed. Sculpture of T1 horn dorsally: smooth. Sculpture of posterior margin of T1 in female: longitudinally striate throughout. Sculpture of T1 in male: longitudinally striate. Development of longitudinal striae on T2 in female: reaching the middle of T2 medially; reaching posterior margin of T2. Sculpture of T3: smooth; smooth medially, longitudinally striate laterally. Shape of T6 in female: short, wider than long. Sculpture of S3: smooth.

**Diagnosis.** This species is most similar to *C. brachys* in size and abbreviated notaulus. It may be distinguished from *C. brachys* in having A4 distinctly shorter than A3, A6 distinctly transverse in the female.

**Etymology.** The specific epithet is to be treated as a noun in apposition, derived from the Latin for “be away,” and refers to the abbreviated notaulus.

**Link to distribution map.** [http://hol.osu.edu/map-full.html?id=384780](http://hol.osu.edu/map-full.html?id=384780)

**Material examined.** Holotype, female: COLOMBIA: Magdalena Dept., Zaino, M.567, 50m, 11°20’N 74°02’W, Tayrona Natural National Park, 28.VII–14.VIII.2000, Malaise trap, R. Henriquez, OSUC 190716 (deposited in IAVH). Para-types: (146 females, 106 males) BELIZE: 42 females, 27 males, OSUC 534029 (CNCI); OSUC 185847, 185849–185851, 185854, 237727–237729, 246215–246217, 247494, 342738–342741, 397563, 398893, 47953, 47963, 47971, 48049–48052, 48054, 64034, 64038, 64041, 64043, 64073, 64077, 64090, 64096–64097, 64102, 64109, 64111, 64116, 64167, 91685, 91687, 91689, 91693, 91695–91696, 91699–91700, 91702, 92079, 93526, 93590–93593, 93714, 93735, 93743, 93745, 94041–94042, 94046–94047, 94083–94084, 94087–94089 (OSUC). COLOM-BIA: 75 females, 59 males, OSUC 557540–557545, 557558, 557560, 557574–557575, 557586, 557629–557632 (CNCI); OSUC 188866, 188888, 189393–189394, 189397, 190667–190669, 190675–190676, 190679, 192201, 192203, 192206–192207, 192210, 192212–192213, 192217–192223, 192382–192384, 192391–192392, 192395–192396, 192398–192399, 194186–194188, 194190, 194192, 194195 (IAVH); OSUC 170498–170502, 189905, 189907–189909, 190096, 190099, 190101, 190711–190712, 190714, 190717–190718, 190993, 191058–191060, 191063, 191144, 191240, 191244, 191252, 191264–191266, 191269–191271, 191277, 191279–191280, 191282, 191740, 192208, 192224, 193702–193703, 193705, 193771, 193773–193776, 193808, 194191, 194197,
Calliscelio alcoa Chen & Masner, sp. n.  
http://zoobank.org/A4769E20-E5A0-42CE-8768-D3C39939FC9D  
http://bioguid.osu.edu/xbiod_concepts/362051  
Figures 7–9, 28–33

**Description.** Body length of female: 2.86–3.10 mm (n=10). Body length of male: 2.42–2.54 mm (n=16). Color of head: orange throughout. Color of antennal clava (A7–A12): A7 dark orange, remainder dark brown to black. Shape of head: subglobose. Central keel of frons: absent. Setation of upper frons: with dense, short setae. IOS/EH: IOS distinctly less than EH. Sculpture of ventrolateral frons: granulate to finely punctate. Sculpture of frons below median ocellus: largely smooth with sparse fine punctures. Sculpture of posterior vertex: densely punctate. Hyperoccipital carina: absent. Occipital carina medially: interrupted. Length of OOL: less than 0.5× ocellar diameter. Sculpture of postgena behind outer orbit: smooth. Ocular setae: absent. A4 in female: distinctly shorter than A3. A5 in female: shorter than A3, distinctly longer than wide. Shape of female A6: distinctly longer than wide. Form of male antennal flagellomeres: filiform, A11 approximately 3.0× longer than wide. Length of A5 tyloid in male: approximately 0.3× length of A5.

Color of mesosoma in female: orange throughout. Color of mesosoma in male: orange throughout. Sculpture of dorsal pronotal area: rugose. Sculpture of lateral pronotal area: smooth anteriorly, punctate rugulose posteriorly. Sculpture of neurotron: rugulose. Notaulus: percurrent. Sculpture of mesoscutum: densely punctate. Shape of mesoscutellum: semiellipsoidal. Foveolae of scutoscutellar sulcus between notauli: smaller than those along margin of axilla. Sculpture of mesoscutellum: smooth with sparse fine punctures. Shape of metascutellum: posterior margin somewhat rounded, approximately 4.0× wider than long. Sculpture of metascutellum in female: rugose anteriorly, smooth posteriorly. Sculpture of metascutellum in male: rugose. Dorsal propodeum in female: deeply excavate medially, with lateral propodeal carinae widely separated, running subparallel to accommodate T1 horn. Sculpture of dorsal propodeum in female: rugose. Sculpture of dorsal propodeum in male: rugose with one or two longitudinal keels lateral to median keel. Median keels on propodeum in female: absent. Mesopleural carina: present. Sculpture of
mesepisternum below mesopleural depression: smooth. Sculpture of ventral meta-
pleural area: smooth. Color of legs: pale yellow throughout. Sculpture of hind coxa:
smooth.
Color of fore wing: hyaline. Rs+M: nebulose, weakly pigmented. Setae on R: long, erect, surpassing the margin of the wing. Length of R: approximately as long as r-rs. Length of R1: approximately as long as 2.0× length of r-rs.

Color of metasoma in female: yellow to dark brown. Color of metasoma in male: T3 yellow, otherwise brown to dark brown. Horn on T1 in female: large and distinct. Sculpture of T1 horn dorsally: densely and transversely striate. Sculpture of posterior margin of T1 in female: longitudinally striate throughout. Sculpture of T1 in male:
New World species of the genus Calliscelio Ashmead...

Figures 16–21. 16 Calliscelio absconditum sp. n., female, paratype (OSUC 134791), dorsal habitus 17–20 Calliscelio absconditum sp. n., female, holotype (OSUC 323924). 17 Head and mesosoma, lateral view 18 Dorsal habitus 19 Head and mesosoma, dorsal view 20 Head, anterior view 21 Metasoma, dorsal view. Scale bars in millimeters.

longitudinally striate. Development of longitudinal striae on T2 in female: reaching posterior margin of T2. Sculpture of T3: smooth medially, longitudinally striate laterally. Shape of T6 in female: distinctly elongate, approximately 3.5× longer than wide. Sculpture of S3: largely smooth with sparse and fine punctures.

**Diagnosis.** The medially interrupted occipital carina, densely punctate mesoscutum and densely and transversely striate T1 horn in the female distinguish this species of Calliscelio from all others.
Figures 22–27. *Calliscelio absum* sp. n., female, holotype (OSUC 190716). 22 Lateral habitus 23 Head and mesosoma, lateral view 24 Dorsal habitus 25 Head and mesosoma, dorsal view 26 Head, anterior view 27 Metasoma, dorsal view. Scale bars in millimeters.

**Etymology.** The specific epithet refers to the locality on the label of the holotype and should be treated as a noun in apposition.

**Link to distribution map.** [http://hol.osu.edu/map-full.html?id=362051]

**Material examined.** Holotype, female: DOMINICAN REPUBLIC: Pedernales Prov., 25km of Alcoa Road, dry montane forest, Baoruco (Bahoruco) Mountains, 700m, 18.I.1989, L. Masner, OSUC 458212 (deposited in CNCI). Paratypes: DOMINICAN REPUBLIC: 9 females, 16 males, CMNH-486,529 (CMNH); OSUC 458213–458232, 458251, 458327–458328, 534379 (CNCI).
New World species of the genus Calliscelio Ashmead...

Figures 28–33. Calliscelio alcoa sp. n., female, holotype (OSUC 458212). 28 Lateral habitus 29 Head and mesosoma, lateral view 30 Dorsal habitus 31 Head and mesosoma, dorsal view 32 Head, anterior view 33 Metasoma, dorsal view. Scale bars in millimeters.

Calliscelio amadoi Chen & Johnson, sp. n.
http://zoobank.org/6571E5B9-E640-47B3-AD2C-D654DC26829F
http://bioguid.osu.edu/xbiod_concepts/384810
Figures 34–39

Description. Body length of female: 1.35–2.05 mm (n = 20). Color of head: brown throughout; yellow throughout; yellow, becoming darker at vertex. Color of antennal clava (A7–A12): A7 orange, remainder dark brown to black. Shape of head: subglo-
bose. Central keel of frons: present. Setation of upper frons: with sparse, long setae. IOS/EH: IOS distinctly less than EH. Sculpture of ventrolateral frons: smooth with sparse punctures. Sculpture of frons below median ocellus: largely smooth with sparse fine punctures. Sculpture of posterior vertex: largely smooth with sparse fine punctures. Hyperoccipital carina: absent. Occipital carina medially: complete, weakly crenulate throughout. Length of OOL: less than 0.5× ocellar diameter. Sculpture of postgena behind outer orbit: smooth. Ocular setae: absent. A4 in female: distinctly shorter than A3. A5 in female: shorter than A3, slightly longer than wide. Shape of female A6: as long as wide.

Color of mesosoma in female: orange throughout; yellow throughout; dark brown. Sculpture of dorsal pronotal area: rugose. Sculpture of lateral pronotal area: smooth anteriorly, granulate posteriorly. Sculpture of netrion: smooth. Notaulus: percurrent or nearly so. Sculpture of mesoscutum: coriaceous. Shape of mesoscutellum: semielipsoid. Foveolae of scutoscutellar sulcus between notauli: as large as those along margin of axilla. Sculpture of mesoscutellum: smooth with sparse fine punctures. Shape of metascutellum: posterior margin straight, approximately 4.0× wider than long. Sculpture of metascutellum in female: smooth with a longitudinal, median carina. Dorsal propodeum in female: shallowly excavate medially, with lateral propodeal carinae widely separated. Sculpture of dorsal propodeum in female: rugose. Median keels on propodeum in female: absent. Mesopleural carina: absent. Sculpture of mesepisternum below mesopleural depression: smooth. Sculpture of ventral metapleural area: smooth. Color of legs: pale yellow throughout. Sculpture of hind coxa: smooth.

Color of fore wing: hyaline. Rs+M: nebulose, strongly pigmented. Setae on R: long, erect, surpassing the margin of the wing. Length of R: approximately as long as r-rs. Length of R1: greater than 3.0× length of r-rs.

Color of metasoma in female: orange to pale brown; orange throughout; yellow throughout. Horn on T1 in female: large and distinct. Sculpture of T1 horn dorsally: rugulose; transversely striate. Sculpture of posterior margin of T1 in female: longitudinally striate throughout. Development of longitudinal striae on T2 in female: present on anterior margin of T2 medially, reaching posterior margin of T2 laterally. Sculpture of T3: smooth with longitudinal submedian striae. Shape of T6 in female: short, approximately 1.5× longer than wide. Sculpture of S3: smooth.

**Diagnosis.** This species is most similar to *C. levis* and *C. migma*. It may be separated from *C. levis* by the well-developed T1 horn in the female, from *C. migma* by having A5 in female slightly longer than wide, and A6 quadrate, whereas both antennomeres are distinctly longer than wide in *C. migma*.

**Etymology.** The epithet is used as a genitive noun derived from the name of the collector of the holotype.

**Link to distribution map.** [http://hol.osu.edu/map-full.html?id=384810]

**Material examined.** Holotype, female: **COLOMBIA**: Amazonas Dept., Amacayacu Natural N.P., M.840, 150m, 03°46’S 70°18’W, San Martín, 16.IX–24.IX.2000, Malaise trap, B. Amado, OSUC 193589 (deposited in IAVH). Paratypes: (50 females) **BRAZIL**: 4 females, OSUC 322670, 348261, 371852, 376063 (OSUC). **COLOMBIA**: 7 females,
New World species of the genus *Calliscelio* Ashmead...

**Figures 34–39.** *Calliscelio amadoi* sp. n., female, holotype (OSUC 193589). 34 Lateral habitus 35 Head and mesosoma, lateral view 36 Dorsal habitus 37 Head and mesosoma, dorsal view 38 Head, anterior view 39 Metasoma, dorsal view. Scale bars in millimeters.

OSUC 191148, 193587 (IAVH); OSUC 178096, 191040, 259754, 262600, 276046 (OSUC). **ECUADOR:** 15 females, OSUC 458510, 458533, 534249–534251, 553237, 553242–553243, 553246, 553406–553407, 553530, 553651, 553687 (CNCI); OSUC 534659 (OSUC). **FRENCH GUIANA:** 10 females, OSUC 458384, 458413, 458421, 458459–458460, 458474, 546106–546108, 546135 (CNCI). **GRENADE:** 6 females, OSUC 534255–534260 (CNCI). **PERU:** 5 females, OSUC 553952, 553955, 553967, 554016, 554021 (CNCI). **TRINIDAD AND TOBAGO:** 3 females, OSUC 534601, 534605–534606 (CNCI).
Calliscelio armila Chen & Masner, sp. n.
http://zoobank.org/6AB94D9B-DEF6-4FE0-BC1B-5F5BAB7A15F1
http://bioguid.osu.edu/xbiod_concepts/362054
Figures 40–45

Description. Body length of female: 2.12–2.51 mm (n=11). Body length of male: 2.05–2.27 mm (n=13). Color of head: black throughout; dark brown. Color of antennal clava (A7–A12): black. Shape of head: subglobose. Central keel of frons: absent. Setation of upper frons: with sparse, long setae. IOS/EH: IOS slightly less than EH. Sculpture of ventrolateral frons: smooth to rugulose. Sculpture of frons below median ocellus: largely smooth with sparse fine punctures. Sculpture of posterior vertex: coriaceous. Hyperocipital carina: absent. Occipital carina medially: weakly developed, irregularly sculptured. Length of OOL: greater than 0.5× ocellar diameter. Sculpture of postgena behind outer orbit: coriaceous. Ocular setae: sparse, short. A4 in female: distinctly shorter than A3. A5 in female: shorter than A3, as long as wide. Shape of female A6: distinctly wider than long. Form of male antennal flagellomeres: filiform, A11 approximately 3.0× longer than wide. Length of A5 tyloid in male: approximately 0.3× length of A5.

Color of mesosoma in female: variably orange to pale brown. Color of mesosoma in male: orange throughout; variably orange to pale brown. Sculpture of dorsal pronotal area: rugose. Sculpture of lateral pronotal area: largely smooth, granulate ventrally and posteriorly. Sculpture of netrion: rugose. Notaulus: percurrent or nearly so. Sculpture of mesoscutum: granulate. Shape of mesoscutellum: semiellipsoidal. Foveolae of scutoscutellar sulcus between notauli: smaller than those along margin of axilla. Sculpture of mesoscutellum: granulate. Shape of metasculptellum: posterior margin straight, approximately 3.5× wider than long. Sculpture of metasculptellum in female: rugose anteriorly, smooth posteriorly. Sculpture of metasculptellum in male: rugose. Dorsal propodeum in female: deeply excavate medially, with lateral propodeal carinae widely separated, running subparallel to accommodate T1 horn. Sculpture of dorsal propodeum in female: rugulose. Sculpture of dorsal propodeum in male: rugose. Median keels on propodeum in female: absent. Mesopleural carina: absent. Sculpture of mepsisternum below mesopleural depression: smooth. Sculpture of ventral metapleural area: smooth. Color of legs: coxae to femur white, remainder of the legs pale yellow. Sculpture of hind coxa: smooth.

Color of fore wing: hyaline. Rs+M: spectral. Setae on R: long, erect, surpassing the margin of the wing. Length of R: distinctly shorter than r-rs. Length of R1: approximately as long as 2.0× length of r-rs.

Color of metasoma in female: orange to pale brown. Color of metasoma in male: T3–T4 orange, otherwise brown. Horn on T1 in female: large and distinct. Sculpture of T1 horn dorsally: smooth to rugulose medially, with V-shaped keels laterally. Sculpture of posterior margin of T1 in female: longitudinally striate throughout. Sculpture of T1 in male: longitudinally striate. Development of longitudinal striae on T2 in female: present on the anterior margin of T2. Sculpture of T3: smooth. Shape of T6
New World species of the genus Calliscelio Ashmead...

in female: short, slightly longer than wide. Sculpture of S3: largely smooth with sparse and fine punctures.

**Diagnosis.** This species is most similar to *C. latifrons* in the female T1 horn, size and habitus but can be easily distinguished by its smooth upper frons and T3.

**Etymology.** The specific epithet is to be treated as a noun in apposition, derived from the Latin for “bracelet” and refers to the rim on T1 horn.

**Link to distribution map.** [http://hol.osu.edu/map-full.html?id=362054]
Material examined. Holotype, female: HAITI: Sud Dept., Hotte Mts., S slope of Mt. Formon, 31km NW Les Cayes, disturbed forest & fields, 1405m, 18°20’N, 74°01’W, Formond, 7.IX–8.IX.1995, R. Davidson, G. Onore & J. Rawlins, OSUC 458342 (deposited in CNCI). Paratypes: HAITI: 10 females, 13 males, OSUC 458334–458341, 458343–458357 (CNCI).

*Calliscelio bidens* Chen & Masner, sp. n.
http://zoobank.org/0200D54C-C0FF-41DC-9D85-829CCD8BF6AE
http://bioguid.osu.edu/xbiod_concepts/362052
Figures 46–51

Description. Body length of female: 3.35 mm (n=1). Color of head: brown throughout. Color of antennal clava (A7–A12): dark brown to black. Shape of head: subglobose. Central keel of frons: present. Setation of upper frons: with dense, short setae. IOS/EH: IOS distinctly less than EH. Sculpture of ventrolateral frons: smooth with sparse punctures. Sculpture of frons below median ocellus: granulate to finely punctate. Sculpture of posterior vertex: punctate rugose. Hyperoccipital carina: absent. Occipital carina medially: complete, strongly crenulate throughout. Length of OOL: greater than 0.5× ocellar diameter. Sculpture of postgena behind outer orbit: smooth. Ocular setae: sparse, short. A4 in female: as long as A3. A5 in female: shorter than A3, distinctly longer than wide. Shape of female A6: distinctly longer than wide.

Color of mesosoma in female: dark brown. Sculpture of dorsal pronotal area: areolate. Sculpture of lateral pronotal area: smooth dorsally, rugulose ventrally. Sculpture of metanotum: rugulose. Notaulus: percurrent or nearly so. Sculpture of mesoscutum: densely punctate. Shape of mesoscutellum: semiellipsoidal. Foveolae of scutoscutellar sulcus between notauli: as large as those along margin of axilla. Sculpture of mesoscutellum: densely punctate. Shape of metascutellum: posterior margin rounded, approximately 4.0× wider than long. Sculpture of metascutellum in female: rugose. Dorsal propodeum in female: not excavate medially, lateral propodeal carinae meeting anteromedially. Sculpture of dorsal propodeum in female: rugose. Median keels on propodeum in female: present. Mesopleural carina: present. Sculpture of mesepisternum below mesopleural depression: smooth. Sculpture of ventral metapleural area: largely smooth, rugose ventrally. Color of legs: orange yellow. Color of hind coxa: smooth.

Color of fore wing: hyaline. Rs+M: nebulose, strongly pigmented. Setae on R: long, erect, surpassing the margin of the wing. Length of R: distinctly shorter than r-rs. Length of R1: greater than 3.0× length of r-rs.

Color of metasoma in female: dark brown. Horn on T1 in female: absent. Sculpture of posterior margin of T1 in female: longitudinally striate throughout. Development of longitudinal striae on T2 in female: reaching posterior margin of T2. Sculpture of T3: smooth. Shape of T6 in female: short, slightly longer than wide. Sculpture of S3: smooth.

Diagnosis. This species is most similar to *C. rugicoxa* with which it shares the characters of the hairy compound eyes and the median keels on propodeum in female.
New World species of the genus Calliscelio Ashmead...

It can be distinguished by its smooth hind coxa and the absence of a T1 horn in the female.

**Etymology.** The specific epithet means “with two teeth,” referring to the median keels of propodeum of the species and should be treated as a noun in apposition.

**Link to distribution map.** [http://hol.osu.edu/map-full.html?id=362052]

**Material examined.** Holotype, female: COLOMBIA: Valle del Cauca Dept., 650m, 03°26′N, 76°48′W, Farallones de Cali Natural National Park, 8.V–19.VI.2001, Malaise trap, S. Sarria, OSUC 458326 (deposited in CNCI).
**Calliscelio bisulcatus** (Kieffer)
http://zoobank.org/3C2921D8-CDFA-4CDA-86F2-C61304A4730B
http://bioguid.osu.edu/xbiod_concepts/4139
Figures 52–57

*Baryconus bisulcatus* Kieffer, 1910a: 320 (original description, keyed).
*Baryconus* (*Baryconus*) *bisulcatus* Kieffer: Kieffer 1910b: 84 (subgeneric assignment).
*Glyptoteleia bisulcata* (Kieffer): Kieffer 1926: 487 (generic transfer, description).
*Calliscelio bisulcatus* (Kieffer): Masner 1976: 38 (description, generic transfer, type information).

**Description.** Body length of female: 1.75–2.18 mm (n=20). Body length of male: 1.70–2.12 mm (n=20). Color of head: black throughout; dark brown; orange throughout. Color of antennal clava (A7–A12): dark brown to black. Shape of head: subglobose. Central keel of frons: absent. Setation of upper frons: with sparse, long setae. IOS/EH: IOS distinctly less than EH. Sculpture of ventrolateral frons: smooth with sparse punctures. Sculpture of frons below median ocellus: largely smooth with sparse fine punctures. Sculpture of posterior vertex: granulate. Hyperoccipital carina: absent. Occipital carina medially: complete, strongly crenulate throughout. Length of OOL: less than 0.5× ocellar diameter. Sculpture of postgena behind outer orbit: granulate. Ocular setae: dense, long. A4 in female: distinctly shorter than A3. A5 in female: shorter than A3, as long as wide. Shape of female A6: distinctly wider than long. Form of male antennal flagellomeres: filiform, A11 approximately 2.0× longer than wide. Length of A5 tyloid in male: greater than 0.5× length of A5.

Color of mesosoma in female: orange throughout; variably orange to pale brown. Color of mesosoma in male: orange throughout; variably orange to pale brown. Sculpture of dorsal pronotal area: rugose. Sculpture of lateral pronotal area: smooth throughout. Sculpture of netrion: rugose. Notaulus: percurrent or nearly so. Sculpture of mesoscutum: smooth with sparse punctures. Shape of mesoscutellum: semiellipsoidal. Foveolae of scutocutellar sulcus between notauli: as large as those along margin of axilla. Sculpture of mesoscutellum: smooth with sparse fine punctures. Shape of metascutellum: posterior margin straight, approximately 2.0× wider than long. Sculpture of metascutellum in female: rugose anteriorly, smooth posteriorly. Sculpture of metascutellum in male: rugose. Dorsal propodeum in female: shallowly excavate medially, with lateral propodeal carinae widely separated. Sculpture of dorsal propodeum in female: rugose. Sculpture of dorsal propodeum in male: rugose. Median keels on propodeum in female: absent. Mesopleural carina: present. Sculpture of mesepisternum below mesopleural depression: largely smooth with a row of foveae along mesopleural carina. Sculpture of ventral metapleural area: smooth dorsally, densely punctate ventrally. Color of legs: orange throughout. Sculpture of hind coxa: smooth.

Color of fore wing: hyaline. Rs+M: spectral. Setae on R: long, erect, surpassing the margin of the wing. Length of R: approximately as long as r-rs. Length of R1: approximately as long as r-rs.
Color of metasoma in female: orange throughout; variably orange to pale brown. Color of metasoma in male: variably orange to pale brown. Horn on T1 in female: present as a small bulge. Sculpture of T1 horn dorsally: smooth. Sculpture of posterior margin of T1 in female: longitudinally striate throughout. Sculpture of T1 in male: longitudinally striate. Development of longitudinal striae on T2 in female: reaching the middle of T2 medially. Sculpture of T3: smooth. Shape of T6 in female: short, slightly longer than wide. Sculpture of S3: smooth.
Diagnosis. This species is similar to *C. punctatifrons* in the shape of metascutellum and sculpture of T1 horn in the female but can be distinguished by its largely smooth upper frons, granulate posterior vertex and smaller body size.

Link to distribution map. [http://hol.osu.edu/map-full.html?id=4139](http://hol.osu.edu/map-full.html?id=4139)

Material examined. Holotype, female, *B. bisulcatus*; BRAZIL: PA, no date, Baker, CAS Type No. 9590 (deposited in CASC). Other material: (216 females, 71 males) ARGENTINA: 8 females, 8 males, OSUC 534117–534124, 534436, 534440–534442 (CNCI); OSUC 63157 (OSUC); OSUC 577254, 577258–577259 (UCRC). BELIZE: 14 females, 1 male, OSUC 534192, 534199–534200, 534202, 534206–534210, 534302–534307 (CNCI). BOLIVIA: 6 females, 2 males, OSUC 534027–534028, 534044, 534049–534053 (CNCI). BRAZIL: 43 females, 23 males, OSUC 534521–534522, 557242, 557297, 557299, 557309–557310 (CNCI); OSUC 410142, 210175, 110182, 111340, 111379, 111382, 111522, 111527, 111531, 111633, 111693–111694, 111697, 111701, 111712–111713, 111920, 111922, 111939, 112040, 112070, 112090, 112186, 112453, 112781, 112806, 113027, 12276, 12356, 130739, 130748, 131475, 132140, 132282, 132534, 132690–132691, 132717, 133048, 133057, 133124, 134453, 134455, 137972, 138060, 232036, 374721–374722, 374726–374727, 48518, 48526, 48548, 48563, 48565, 48568, 48573, 55927, 813 (OSUC). COLOMBIA: 2 females, 3 males, OSUC 557536, 557576, 557624–557625 (CNCI); OSUC 369977 (OSUC). COSTA RICA: 10 females, 1 male, OSUC 532493, 532618–532622, 532646, 532718–532719, 532722, 532740 (CNCI). ECUADOR: 34 females, 10 males, OSUC 458496, 458498, 458500, 458503, 458505–458506, 458508, 458515, 458529, 534229, 534235, 534239–534240, 534242, 553262, 553386–553387, 553389, 553399, 553408–553410, 553497–553499, 553551, 553559, 553594–553595, 553622, 553625, 553634–553636, 553649–553650, 553681, 577329–577330, 577335 (CNCI); OSUC 534658, 534660–534661, 534672 (OSUC). FRENCH GUIANA: 15 females, OSUC 458392, 458398, 546112, 546119, 546122, 546127–546128, 546136–546138, 546140–546141, 546144–546145, 546148 (CNCI). MEXICO: 2 females, OSUC 534459 (CNCI); OSUC 377895 (OSUC). PANAMA: 3 females, OSUC 534083, 534085, 535877 (CNCI). PARAGUAY: 7 females, 18 males, OSUC 185325, 276696, 276729–276731, 276901–276907, 280295, 323025–323026, 323054–323055, 323067, 577193–577194, 577341, 577354, 583310–583311, 583314 (OSUC). PERU: 14 females, 1 male, OSUC 534389 (CNCI); OSUC 323933–323937, 323940–323943, 323945, 323947, 323949–323951 (OSUC). SURINAME: 19 females, OSUC 534562–534567, 534570–534571, 534573–534579, 534582, 553631–553633 (CNCI). TRINIDAD AND TOBAGO: 22 females, OSUC 545999, 546002–546003, 546013, 546027–546028, 546050–546052, 546057, 546077, 546082, 546086, 546088–546089, 546093–546096, 546099–546100, 553676 (CNCI). URUGUAY: 5 females, OSUC 534610–534614 (CNCI). VENEZUELA: 12 females, 4 males, OSUC 545881, 545884, 545887, 545893, 545895, 545897–545898, 545942–545943, 557648–557649, 557651–557654 (CNCI); OSUC 55923 (OSUC).
Calliscelio brachys Chen & Johnson, sp. n.
http://zoobank.org/D4F29FBA-909B-4DE6-969B-BBA983996BD5
http://bioguid.osu.edu/xbiod_concepts/384702
Figures 58–63

Description. Body length of female: 1.52–1.85 mm (n=20). Body length of male: 1.45–1.88 mm (n=20). Color of head: orange throughout. Color of antennal clava (A7–A12): A7–A9 brown, A10–A12 yellow. Shape of head: subglobose. Central keel of frons: absent. Setation of upper frons: with sparse, short setae. IOS/EH: IOS distinctly less than EH. Sculpture of ventrolateral frons: smooth to coriaceous. Sculpture of frons below median ocellus: coriaceous. Sculpture of posterior vertex: smooth; smooth to transversely striate. Hyperoccipital carina: absent. Occipital carina medially: interrupted. Length of OOL: less than 0.5× ocellar diameter. Sculpture of postgena behind outer orbit: smooth. Ocular setae: absent. A4 in female: as long as A3. A5 in female: shorter than A3, distinctly longer than wide. Shape of female A6: as long as wide. Form of male antennal flagellomeres: filiform, A11 approximately 3.5× longer than wide. Length of A5 tyloid in male: approximately 0.3× length of A5.

Color of mesosoma in female: orange throughout; orange to pale brown. Color of mesosoma in male: orange throughout; variably orange to pale brown. Sculpture of dorsal pronotal area: smooth. Sculpture of lateral pronotal area: smooth throughout. Sculpture of metanotum: smooth. Notaulus: abbreviated, at most reaching middle of mesoscutum. Sculpture of mesoscutum: granulate. Shape of metascutellum: semiellipsoidal. Foveolae of scutoscutellar sulcus between nota: smaller than those along margin of axilla. Sculpture of metascutellum: granulate. Shape of metascutellum: posterior margin rounded, approximately 2.5× wider than long. Sculpture of metascutellum in female: rugulose with a longitudinal, median carina. Sculpture of metascutellum in male: rugose. Dorsal propodeum in female: not excavate medially, lateral propodeal carinae meeting anteromedially. Sculpture of dorsal propodeum in female: rugose. Sculpture of dorsal propodeum in male: rugose with one or two longitudinal keels lateral to median keel. Median keels on propodeum in female: absent. Mesopleural carina: present. Sculpture of mesepisternum below mesopleural depression: smooth. Sculpture of ventral metapleural area: largely smooth with an oblique carina. Color of legs: orange throughout; pale yellow throughout. Sculpture of hind coxa: smooth.

Color of fore wing: hyaline. Rs+M: spectral. Setae on R: long, erect, surpassing the margin of the wing. Length of R: distinctly shorter than r-rs. Length of R1: greater than 3.0× length of r-rs.

Color of metasoma in female: orange throughout; variably orange to pale brown. Color of metasoma in male: variably orange to pale brown. Horn on T1 in female: absent. Sculpture of posterior margin of T1 in female: longitudinally striate throughout. Sculpture of T1 in male: longitudinally striate. Development of longitudinal striae on T2 in female: present on the anterior margin of T2. Sculpture of T3: smooth. Shape of T6 in female: short, slightly longer than wide. Sculpture of S3: smooth.
Diagnosis. This species shares the character of the abbreviated notaulus with *C. absum* and *C. brevinotaulus*. It can be separated from *C. absum* by having A4 as long as A3 in the female and the length of the A5 tyloid in the male is approximately 0.3× length of A5; from *C. brevinotaulus* it may be distinguished by the absence of the T1 horn in the female.

Etymology. The epithet is derived the Greek word for short, in reference to the abbreviated notaulus, and is intended to be treated as a noun in apposition.

Link to distribution map. [http://hol.osu.edu/map-full.html?id=384702]
Material examined. Holotype, female: COLOMBIA: Amazonas Dept., Amacayacu Natural N.P, M.842, 150m, 03°46’S 70°18’W, San Martín, 16.VIII–24. VIII.2000, Malaise trap, B. Amado, OSUC 193349 (deposited in IAVH). Paratypes: (74 females, 26 males) BOLIVIA: 1 female, OSUC 534149 (CNCI). COLOMBIA: 63 females, 24 males, OSUC 557548, 557582 (CNCI); OSUC 152149-152150, 152152, 152154, 182229, 182592, 188678, 188682, 188955, 189186, 189190-189191, 189193, 189195, 189226, 193282, 193284, 193541, 193570, 193584, 193597, 193903, 231811, 249895, 253463, 259760, 259762, 275804-275805, 276184, 276236, 276244-276245, 279657, 363591, 364075 (IAVH); OSUC 152162, 162499, 162501, 162509, 162584, 162586-162587, 162594, 162596, 162599, 162606-162607, 162609, 170495, 182596, 182722-182723, 182740, 188551, 188941, 188944, 188963, 189183, 189267-189268, 189271, 189273, 189279, 191094, 191150, 192353, 192358, 193320-193321, 193329, 193338, 193340, 193538, 193598-193599, 193814, 231829, 267807, 267962, 280198, 372644-372645 (OSUC). ECUADOR: 5 females, 1 male, OSUC 458488, 458497, 458536, 534237, 553561, 577338 (CNCI). PERU: 5 females, 1 male, OSUC 553970, 553972, 554010, 554023-554024, 554032 (CNCI).

Calliscelio brevinotaulus Chen & Johnson, sp. n.
http://zoobank.org/9D986838-195F-44DD-BF84-3D933502679D
http://bioguid.osu.edu/xbiod_concepts/363559
Figures 64–69

Description. Body length of female: 1.78–2.98 mm (n=20). Body length of male: 1.78–2.41 mm (n=20). Color of head: black throughout; variably orange to dark brown. Color of antennal clava (A7–A12): dark brown to black. Shape of head: subglobose. Central keel of frons: absent. Setation of upper frons: with sparse, short setae. IOS/EH: IOS distinctly less than EH. Sculpture of ventrolateral frons: transversely rugulose to granulate. Sculpture of frons below median ocellus: granulate. Sculpture of posterior vertex: granulate. Hyperoccipital carina: absent. Occipital carina medially: interrupted. Length of OOL: less than 0.5× ocellar diameter. Sculpture of postgena behind outer orbit: largely smooth with small granulate area. Ocular setae: absent. A4 in female: distinctly shorter than A3. A5 in female: shorter than A3, as long as wide. Shape of female A6: subquadrate. Form of male antennal flagellomeres: filiform, approximately 2.0× longer than wide. Length of A5 tyloid in male: greater than 0.5× length of A5.

Color of mesosoma in female: orange throughout; variably orange to pale brown. Color of mesosoma in male: orange throughout; variably orange to pale brown. Sculpture of dorsal pronotal area: rugose. Sculpture of lateral pronotal area: smooth throughout; smooth anteriorly, granulate posteriorly. Sculpture of netrion: rugose. Notaulus: abbreviated, at most reaching middle of mesoscutum. Sculpture of mesoscutum: granulate. Shape of mesoscutellum: semiellipsoidal. Foveolae of scutoscutellar sulcus be-
Figures 64–69. *Calliscelio brevinotaulus* sp. n., female, holotype (OSUC 190678). 64 Lateral habitus 65 Head and mesosoma, lateral view 66 Dorsal habitus 67 Head and mesosoma, dorsal view 68 Head, anterior view 69 Metasoma, dorsal view. Scale bars in millimeters.

tween notauli: smaller than those along margin of axilla. Sculpture of mesoscutellum: granulate. Shape of metascutellum: posterior margin rounded, 2.5× wider than long. Sculpture of metascutellum in female: rugose. Sculpture of metascutellum in male: rugose. Dorsal propodeum in female: shallowly excavate medially, with lateral propodeal carinae widely separated. Sculpture of dorsal propodeum in female: rugose. Sculpture of dorsal propodeum in male: rugose with one or two longitudinal keels lateral to median keel. Median keels on propodeum in female: absent. Mesopleural carina: absent. Sculpture of mesepisternum below mesopleural depression: smooth. Sculpture
New World species of the genus Calliscelio Ashmead...

of ventral metapleural area: largely smooth, rugose ventrally. Color of legs: orange throughout; mid and hind coxae dark brown to black, otherwise yellow throughout. Sculpture of hind coxa: smooth.

Color of fore wing: hyaline. Rs+M: spectral. Setae on R: long, erect, surpassing the margin of the wing. Length of R: distinctly shorter than r-rs. Length of R1: greater than 3.0× length of r-rs.

Color of metasoma in female: orange throughout; variably orange to pale brown. Color of metasoma in male: orange throughout; variably orange to pale brown. Horn on T1 in female: weakly indicated. Sculpture of T1 horn dorsally: with V-shaped striae. Sculpture of posterior margin of T1 in female: longitudinally striate throughout. Sculpture of T1 in male: longitudinally striate. Development of longitudinal striae on T2 in female: reaching posterior margin of T2. Sculpture of T3: smooth; largely smooth with submedian longitudinal striae. Shape of T6 in female: short, slightly longer than wide. Sculpture of S3: largely smooth with sparse and fine punctures.

Diagnosis. This species is most similar to C. brachys in color, size and the abbreviated notaulus but can be distinguished by the granulate upper frons and that A4 is shorter than A3.

Etymology. The epithet refers to the short notauli in this species and is intended to be used as a noun in apposition.

Link to distribution map. [http://hol.osu.edu/map-full.html?id=363559]

Material examined. Holotype, female: COLOMBIA: Magdalena Dept., Zaino, M.564, 50m, 11°20’N 74°02’W, Tayrona Natural National Park, 14.VIII–30.VIII.2000, Malaise trap, R. Henriquez, OSUC 190678 (deposited in IAVH). Paratypes: (264 females, 99 males) BELIZE: 7 females, 5 males, OSUC 534277, 534279, 534283–534284, 534290–534292, 534301, 534308, 534310–534311, 534313 (CNCI). BRAZIL: 29 females, 1 male, OSUC 348007, 348118, 353716, 363846, 366704–366705, 371850, 374564, 374566, 374738, 347969, 348098, 349378, 349773, 351396, 351679, 351831–351832, 351839–351840, 351843 (OSUC). COLOMBIA: 70 females, 61 males, OSUC 557546, 557554, 557559, 557561, 557569-557573, 557584, 557621, 557628, 557634-557639 (CNCI); OSUC 170449-170452, 170497, 170503-170504, 170506, 188889, 189906, 189910, 190095, 190097-190098, 190100, 190124, 190706-190707, 190709, 190986, 190988-190989, 190992, 190994, 191057, 191061, 191143, 191739, 191742-191743, 191745, 192204, 192211, 192214, 193379, 193701, 193706-193709, 193772, 259573, 259583, 269666, 273785, 364080-364086, 370058, 370060, 370063-370064 (IAVH); OSUC 188887, 188890, 189390-189391, 189396, 189398, 190666, 190672-190673, 190677, 190680-190681, 190683, 191064, 191241-191242, 191245, 191247, 191249-191250, 191253-191258, 191268, 191272-191276, 191278, 192202, 192215-192216, 192385-192390, 192394, 193704, 193778, 194185, 194189, 194194, 194200, 259572, 259574, 259577, 259579, 259582, 259588-259589, 279454 (OSUC). COSTA RICA: 52 females, 22 males, OSUC 532464, 532479–532486, 532506,
Calliscelio brevitas Chen & Johnson, sp. n.

http://zoobank.org/10B4E8E2-0970-4E2A-85EC-7B373111AFDF
http://bioguid.osu.edu/xbiod_concepts/367290

Figures 70–75

**Description.** Body length of female: 1.83–2.88 mm (n=20). Color of head: black throughout; orange throughout; variably orange to dark brown. Color of antennal clava (A7–A12): A7 dark orange, remainder dark brown to black; dark brown to black. Shape of head: subglobose. Central keel of frons: present. Setation of upper frons: with sparse, short setae. IOS/EH: IOS distinctly less than EH. Sculpture of ventrolateral frons: granulate; smooth with sparse punctures. Sculpture of frons below median ocellus: largely smooth with sparse fine punctures. Sculpture of posterior vertex: densely punctate; granulate to rugulose. Hyperoccipital carina: absent. Occipital carina medially: complete, weakly crenulate throughout. Length of OOL: less than 0.5x ocellar diameter. Sculpture of postgena behind outer orbit: smooth. Ocular setae: absent. A4 in female: distinctly shorter than A3. A5 in female: shorter than A3, distinctly longer than wide. Shape of female A6: as long as wide.

Color of mesosoma in female: orange throughout; black throughout; variably orange to pale brown. Sculpture of dorsal pronotal area: rugose. Sculpture of lateral pronotal area: smooth throughout; largely smooth, granulate ventrally and posteriorly. Sculpture of netrion: smooth; rugose. Notaulus: percurrent or nearly so. Sculpture of
mesoscutum: largely coriaceous with dense and fine punctures at posterior end. Shape of mesoscutellum: semiellipsoidal. Foveolae of scutoscutellar sulcus between notauli: as large as those along margin of axilla. Sculpture of mesoscutellum: smooth with sparse fine punctures. Shape of metascutellum: posterior margin straight, approximately 4.0× wider than long. Sculpture of metascutellum in female: rugose. Sculpture of metascutellum in male: rugose. Dorsal propodeum in female: deeply excavate medially, with lateral propodeal carinae widely separated, running subparallel to accommodate T1 horn. Sculpture of dorsal propodeum in female: rugose. Sculpture of dorsal propo-
deum in male: rugose. Median keels on propodeum in female: absent. Mesopleural carina: absent. Sculpture of mesepisternum below mesopleural depression: smooth. Sculpture of ventral metapleural area: smooth; largely smooth, rugose ventrally. Color of legs: pale yellow throughout; coxae pale yellow, otherwise orange to pale brown. Sculpture of hind coxa: smooth.

Color of fore wing: hyaline. Rs+M: nebulose, strongly pigmented. Setae on R: long, erect, surpassing the margin of the wing. Length of R: approximately as long as r-rs. Length of R1: greater than 3.0× length of r-rs.

Color of metasoma in female: variably yellow to pale brown. Color of metasoma in male: brown throughout; reddish brown. Horn on T1 in female: large and distinct. Sculpture of T1 horn dorsally: transversely striate. Sculpture of posterior margin of T1 in female: longitudinally striate throughout. Sculpture of T1 in male: longitudinally striate. Development of longitudinal striae on T2 in female: reaching posterior margin of T2; present on anterior margin of T2 medially, reaching posterior margin of T2 laterally. Sculpture of T3: smooth with longitudinal submedian striae. Shape of T6 in female: distinctly elongate, at least 2.0× longer than wide. Sculpture of S3: densely punctate.

**Diagnosis.** This species is most similar to *C. laticinctus* and *C. longius* in color, size and habitus. It may be distinguished from them by having A6 quadrate in female, whereas A6 is distinctly longer than wide in *C. laticinctus* and *C. longius*.

**Etymology.** The epithet is used as a noun in apposition derived from the Latin word for shortness, in reference to the shortened A5 and A6.

**Link to distribution map.** [http://hol.osu.edu/map-full.html?id=367290]

**Material examined.** Holotype, female: **COLOMBIA**: Magdalena Dept., Zaino, M.567, 50m, 11°20’N 74°02’W, Tayrona Natural National Park, 28.VII–14.VIII.2000, Malaise trap, R. Henriquez, OSUC 190705 (deposited in IAVH). Paratypes: (355 females) **BRAZIL**: 11 females, OSUC 534537, 534539 (CNCI); OSUC 121827, 252086, 323928, 326208, 348271, 349206, 355169, 376519, 376528 (OSUC). **COLOMBIA**: 126 females, OSUC 557562-557564, 557568, 557581, 557583, 557590, 557592-557597, 557603, 557626-557627 (CNCI); OSUC 144164, 144230, 162601, 166586, 170369-170371, 178098, 178162, 178174, 178192-178193, 178195, 190125, 191183, 191206, 191212, 191243, 191248, 191381, 191383, 193128, 193130, 193179, 193193, 193294, 193322, 193326, 193332, 193863-193864, 193866-193868, 193879, 193906, 193910, 193913, 262616, 267805, 363594, 76997 (IAVH); OSUC 178021, 178191, 182228, 182482, 182754-182756, 182762, 188688, 188726, 188730, 188951, 188954, 189176, 189199, 189277, 189282, 189285, 189287, 189291-189292, 189297, 190310, 191096, 191098, 191827, 192354-192355, 192359, 193166, 193293, 193560, 193563, 193565-193566, 193572, 193576, 193689-193691, 194196, 202078, 232297-232298, 253454-253455, 268911, 269217, 269350, 269356, 275800, 275803, 275808, 275811, 279350, 279899, 279903, 279908-279909, 279911, 280179, 280181, 280195, 280204-280205, 363600, 374718, 377424 (OSUC). **COSTA RICA**: 133 females, OSUC 532458, 532503, 532535, 532570, 532616–532617, 532627–532628, 532630–532631, 532635, 532637–532639, 532660, 532771, 532774, 532784–532785, 532825,
New World species of the genus Calliscelio Ashmead...

Calliscelio carinigena Chen & Johnson, sp. n.
http://zoobank.org/ADB95787-EBBB-4A36-B75D-5CE10D93826F
http://bioguid.osu.edu/xbiod_concepts/363281
Figures 76–81

Description. Body length of female: 1.70–2.46 mm (n=20). Body length of male: 2.00–2.29 mm (n=20). Color of head: black throughout; orange throughout; variably brown to black. Color of antennal clava (A7–A12): dark brown to black. Shape of head: subglobose. Central keel of frons: absent. Setation of upper frons: with sparse, long setae. IOS/EH: IOS distinctly less than EH. Sculpture of ventrolateral frons: smooth to granulate. Sculpture of frons below median ocellus: granulate. Sculpture of posterior vertex: granulate to rugulose above hyperoccipital carina, smooth below. Hyperoccipital carina: present. Occipital carina medially: interrupted. Length of OOL: less than 0.5× ocellar diameter. Sculpture of postgena behind outer orbit: with a carina along outer orbit. Ocular setae: absent. A4 in female: distinctly shorter than A3. A5 in female: shorter than A3, as long as wide. Shape of female A6: distinctly wider than long. Form of male antennal flagellomeres: filiform, A11 approximately 3.0× longer than wide. Length of A5 tyloid in male: longer than 0.5× length of A5.

Color of mesosoma in female: orange throughout. Color of mesosoma in male: orange throughout; variably orange to pale brown. Sculpture of dorsal pronotal area: rugose. Sculpture of lateral pronotal area: smooth throughout. Sculpture of petrioon: smooth. Notaulus: percurrent or nearly so. Sculpture of mesoscutum: granulate. Shape of mesoscutellum: semielipsoidal. Foveolae of scutoscutellar sulcus between notauli: smaller than those along margin of axilla. Sculpture of mesoscutellum: granulate. Shape of metasternum: posterior margin rounded, 2.5× wider than long. Sculpture
Figures 76–81. Calliscelio carinigena sp. n., female, holotype (OSUC 343907). 76 Lateral habitus 77 Head and mesosoma, lateral view 78 Dorsal habitus 79 Head and mesosoma, dorsal view 80 Head, anterior view 81 Metasoma, dorsal view. Scale bars in millimeters.

of metascutellum in female: rugose. Sculpture of metascutellum in male: rugose. Dorsal propodeum in female: shallowly excavate medially, with lateral propodeal carinae widely separated. Sculpture of dorsal propodeum in female: rugose. Sculpture of dorsal propodeum in male: rugose. Median keels on propodeum in female: absent. Mesopleural carina: present. Sculpture of mesepisternum below mesopleural depression: smooth. Sculpture of ventral metapleural area: largely smooth, rugose ventrally. Color of legs: orange throughout; pale yellow throughout. Sculpture of hind coxa: smooth.
Color of fore wing: hyaline. Rs+M: spectral. Setae on R: long, erect, surpassing the margin of the wing. Length of R: distinctly shorter than r-rs. Length of R1: greater than 3.0× length of r-rs.

Color of metasoma in female: orange throughout; yellow throughout; T1 horn and T6 pale brown, otherwise orange throughout. Color of metasoma in male: orange throughout; variably orange to pale brown. Horn on T1 in female: weakly developed. sculpture of T1 horn dorsally: smooth to somewhat transversely striate. sculpture of T2 in female: reaching the middle of T2 medially. sculpture of T3: smooth. Shape of T6 in female: short, wider than long. sculpture of S3: smooth.

**Diagnosis.** This species is most similar to *C. crater* and *C. sfina*. It can be separated from *C. crater* by the presence of a carina along the outer orbit on the postgena rather than large foveae, and from *C. sfina* by the presence of the hyperoccipital carina.

**Etymology.** The epithet is a compound noun in reference to the genal carina along the outer orbit. It is intended to be used as a noun in apposition.

**Link to distribution map.** [http://hol.osu.edu/map-full.html?id=363281]

**Material examined.** Holotype, female: BRAZIL: SP, Pilões Trail, Boracéia Biological Station, pr. 4, 23°39’05.0”S 45°53’40.1”W, Salesópolis, 19.X–22.X.2002, yellow pan trap, A. P. Aguiar & J. S. Freitas, OSUC 343907 (deposited in MZSP). Paratypes: (941 females, 591 males) ARGENTINA: 1 female, OSUC 534443 (CNCI). BOLIVIA: 4 females, 1 male, OSUC 534041–534043, 534056, 534064 (CNCI). BRAZIL: 929 females, 582 males, OSUC 557167–557179, 557182–557187, 557189–557196, 557210–557219, 557221–557241, 557244–557245, 557247, 557249–557253, 557256–557281, 557284–557295, 557300–557308, 557311–557317, 557322–557324, 557326–557336, 557339, 557341, 557343–557348, 557350–557359, 557363–557374, 557378–557394, 557396–557408 (CNCI); OSUC 577148, 577309–577311, 577313, 577379–577381, 577384–577387, 577389 (MNHN); OSUC 135930, 135955, 136029, 136037, 136420, 136453, 136953, 136964, 137063, 137244, 137263, 137306, 137403, 137408, 137429, 137694–137695, 137702, 137711–137712, 137740, 137743, 137753, 137762, 137766, 137768, 137771, 137775, 137777, 137806, 137890, 137894, 137912, 137916, 137927, 138530, 138536, 138542–138543, 138546, 138693, 138699–138701, 138721–138722, 138724, 138894, 138987, 139006, 139016, 139029, 150129–150152, 150154–150155, 150157, 150208–150250, 150265–150279, 150281–150285, 150357, 150371–150372, 150393–150394, 150419, 237725–237726, 318263–318266, 318268–318276, 318278–318280, 318961–318963, 319014–319021, 319023–319027, 319080–319139, 319340–319348, 319390–319400, 320901, 322525–322527, 322529–322531, 322541–322543, 322550–322551, 323094–323098, 323286, 323308, 323324, 323328, 323336, 343702, 343899–343906, 343908–343913, 343915–343931, 345915–345917, 345919, 345922, 345925, 345938, 345945, 345955, 345958–345959, 345962–345965, 345967–345968, 345970–345978, 345980–345983, 345985–345988, 345991, 345997, 346002, 346004–346006, 346011–346012, 346021, 346056–346057, 346059, 346062, 346068, 346072–346075, 346095, 346097–346099, 346112–346113, 349591, 349593,
New World species of the genus Calliscelio Ashmead...

Calliscelio crater Chen & Johnson, sp. n.
http://zoobank.org/3643BD0B-9BF3-4C41-A861-2AB72C701CA3
http://bioguid.osu.edu/xbiod_concepts/363278
Figures 82–87

Description. Body length of female: 1.74–2.35 mm (n=20). Body length of male: 1.86–2.36 mm (n=20). Color of head: black throughout; variably orange to dark brown. Color of antennal clava (A7–A12): dark brown to black. Shape of head: subglobose. Central keel of frons: absent. Setation of upper frons: with sparse, long setae. IOS/EH: IOS distinctly less than EH. Sculpture of ventrolateral frons: smooth to granulate. Sculpture of frons below median ocellus: granulate. Sculpture of posterior vertex: granulate above hyperoccipital carina, smooth to rugulose below. Hyperoccipital carina: present. Occipital carina medially: interrupted. Length of OOL: less than 0.5× ocellar diameter. Sculpture of postgena behind outer orbit: with large foveae. Ocular setae: absent. A4 in female: distinctly shorter than A3. A5 in female: shorter than A3, as long as wide. Shape of female A6: subquadrate. Form of male antennal...
Figures 82–87. Calliscelio crater sp. n., female, holotype (OSUC 276803). 82 Lateral habitus 83 Head and mesosoma, lateral view 84 Dorsal habitus 85 Head and mesosoma, dorsal view 86 Head, anterior view 87 Metasoma, dorsal view. Scale bars in millimeters.

flagellomeres: filiform, A11 approximately 2.0× longer than wide. Length of A5 tyloid in male: greater than 0.5× length of A5.

Color of mesosoma in female: orange throughout. Color of mesosoma in male: orange throughout; variably orange to pale brown. Sculpture of dorsal pronotal area: rugose. Sculpture of lateral pronotal area: smooth anteriorly, granulate posteriorly. Sculpture of netrior: smooth. Notaulus: percurrent or nearly so. Sculpture of mesoscutum: granulate. Shape of mesoscutellum: semiellipsoidal. Foveolae of scutoscutellar sulcus between notauli: smaller than those along margin of axilla. Sculpture of mes-
New World species of the genus Calliscelio Ashmead...

oscutellum: granulate. Shape of metascutellum: posterior margin straight, approximately 2.5× wider than long. Sculpture of metascutellum in female: rugose. Sculpture of metascutellum in male: rugose. Dorsal propodeum in female: shallowly excavate medially, with lateral propodeal carinae widely separated. Sculpture of dorsal propodeum in female: rugose. Sculpture of dorsal propodeum in male: rugose. Median keels on propodeum in female: absent. Mesopleural carina: absent. Sculpture of dorsal propodeum in female: rugose. Sculpture of dorsal propodeum in male: rugose. Median keels on propodeum in female: absent. Mesopleural carina: absent. Sculpture of mesepisternum below mesopleural depression: smooth. Sculpture of ventral metapleural area: largely smooth, rugose ventrally. Color of legs: orange throughout. Sculpture of hind coxa: smooth.

Color of fore wing: hyaline. Rs+M: spectral. Setae on R: long, erect, surpassing the margin of the wing. Length of R: distinctly shorter than r-rs. Length of R1: approximately as long as 2.0× length of r-rs.

Color of metasoma in female: orange throughout; T1 horn and T6 pale brown, otherwise orange throughout. Color of metasoma in male: variably orange to pale brown. Horn on T1 in female: present as a small bulge. Sculpture of T1 horn dorsally: rugose medially, with V-shaped keels laterally. Sculpture of posterior margin of T1 in female: longitudinally striate throughout. Sculpture of T1 in male: longitudinally striate. Development of longitudinal striae on T2 in female: reaching the middle of T2 medially. Sculpture of T3: coriaceous; granulate; smooth medially, coriaceous laterally; longitudinally striate throughout. Shape of T6 in female: short, slightly longer than wide. Sculpture of S3: smooth to coriaceous.

Diagnosis. This species is similar to *C. carinigena* and *C. sfina* in color, size and habitus, but it can be easily recognized by the large foveae on the postgena (postgena of *C. sfina* granulate, whereas *C. carinigena* with a carina along outer orbit).

Etymology. The specific epithet refers to the foveae on the postgena and should be treated as a noun in apposition.

Link to distribution map. [http://hol.osu.edu/map-full.html?id=363278]

Material examined. Holotype, female: PARAGUAY: Guairá Dept., Amambay Stream, Pa’í Thermal Waterfall, second growth forest, 221m, 25°44’56”S 56°15’12”W, Melgarejo, 24.III–25.III.2005, yellow pan trap, Garcete, OSUC 276803 (deposited in MNHNPy). Paratypes: (228 females, 322 males) BOLIVIA: 8 females, OSUC 534556, 534558, 534559, 534560, 534561, 534562 (CNCI), 202 females, 276 males, OSUC 534519, 534524, 534546-534547, 534552 (CNCI); OSUC 577298, 577305 (MHN); OSUC 10431, 10463, 10584, 10625, 10833, 10857, 11088, 110198, 131683, 134141, 134350, 134445, 134795, 134802, 134829, 134845, 135140, 135614, 135652-135653, 137956, 137964, 137982, 138015, 138041, 138116, 138181, 147790, 151160, 151162, 232033, 232035, 323264-323266, 323269-323271, 323273-323274, 323276-323279, 323281, 323283-323285, 323288-323291, 323296-323297, 323299-323301, 323303-323304, 323311-323316, 323318, 323320, 323322, 323326, 323332-323335, 323525, 323529-323530, 323533-323537, 323539-323541, 323543, 323545, 323548, 323550, 323553-323557, 323561-323562, 323564-323565, 323914, 323918, 356945, 357216-357223, 357226-357228, 357257-357258, 357262-357263, 357273, 357278, 358790, 358944, 358984, 375277, 375285-375287, 375295, 375300,
Description. Body length of female: 2.95–3.51 mm (n=20). Body length of male: 2.24–2.37 mm (n=6). Color of head: black throughout; dark brown. Color of antennal clava (A7–A12): dark brown to black. Shape of head: subglobose. Central keel of frons: absent. Setation of upper frons: with sparse, long setae. IOS/EH: IOS distinctly less than EH. Sculpture of ventrolateral frons: smooth with sparse punctures.
New World species of the genus *Calliscelio* Ashmead...

Figures 88–93. *Calliscelio crena* sp. n., female, holotype (OSUC 553462). 88 Lateral habitus 89 Head and mesosoma, lateral view 90 Dorsal habitus 91 Head and mesosoma, dorsal view 92 Head, anterior view 93 Metasoma, dorsal view. Scale bars in millimeters.

Sculpture of frons below median ocellus: largely smooth with sparse fine punctures. Sculpture of posterior vertex: largely smooth with sparse fine punctures. Hyperoccipital carina: absent. Occipital carina medially: complete, strongly crenulate throughout. Length of OOL: less than 0.5× ocellar diameter. Sculpture of postgena behind outer orbit: smooth. Ocular setae: absent. A4 in female: distinctly shorter than A3. A5 in female: shorter than A3, distinctly longer than wide. Shape of female A6: as long as wide. Form of male antennal flagellomeres: filiform, A11 approximately 2.0× longer than wide. Length of A5 tyloid in male: greater than 0.5× length of A5.
Color of mesosoma in female: brown. Color of mesosoma in male: brown throughout. Sculpture of dorsal pronotal area: rugose. Sculpture of lateral pronotal area: smooth anteriorly, granulate posteriorly. Sculpture of netrion: rugulose. Notaulus: percurrent or nearly so. Sculpture of mesoscutum: anterior margin rugulose, remainder smooth. Shape of mesoscutellum: semiellipsoidal. Foveolae of scutoscutellar sulcus between notauli: as large as those along margin of axilla. Sculpture of mesoscutellum: smooth with sparse fine punctures. Shape of metascutellum: posterior margin straight, approximately 4.0× wider than long. Sculpture of metascutellum in female: rugose. Sculpture of metascutellum in male: rugose. Dorsal propodeum in female: deeply excavate medially, with lateral propodeal carinae widely separated, running subparallel to accommodate T1 horn. Sculpture of dorsal propodeum in female: rugose. Sculpture of dorsal propodeum in male: rugose with one or two longitudinal keels lateral to median keel. Median keels on propodeum in female: absent. Mesopleural carina: absent. Sculpture of mesepisternum below mesopleural depression: smooth. Sculpture of ventral metapleural area: largely smooth, rugose ventrally. Color of legs: orange throughout; coxae to femurs pale yellow, otherwise orange. Sculpture of hind coxa: smooth.

Color of fore wing: hyaline. Rs+M: nebulose, strongly pigmented. Setae on R: long, erect, surpassing the margin of the wing. Length of R: approximately as long as r-rs. Length of R1: greater than 3.0× length of r-rs.

Color of metasoma in female: dark brown. Color of metasoma in male: brown throughout. Horn on T1 in female: large and distinct. Sculpture of T1 horn dorsally: transversely striate. Sculpture of posterior margin of T1 in female: longitudinally striate throughout. Sculpture of T1 in male: longitudinally striate. Development of longitudinal striae on T2 in female: reaching posterior margin of T2. Sculpture of T3: smooth with longitudinal submedian striae. Shape of T6 in female: distinctly elongate, approximately 3.0× longer than wide. Sculpture of S3: smooth.

**Diagnosis.** This species is most similar to *C. brevitas* in color, size and habitus but can be distinguished by its strongly crenulate occipital carina and relatively smooth posterior vertex (*C. brevitas* with occipital carina weakly crenulate, posterior vertex densely punctate).

**Etymology.** The epithet is used as a noun in apposition derived from the Latin word for notch, in reference to the strongly crenulate occipital carina medially.

**Link to distribution map.** [http://hol.osu.edu/map-full.html?id=384634](http://hol.osu.edu/map-full.html?id=384634)

**Material examined.** Holotype, female: ECUADOR: Santo Domingo de los Tsáchilas Prov., 16km SE Santo Domingo de los Colorados, Tinalandia, 680m, 4.V–25.VII.1985, malaise trap/flight intercept trap, S. Peck & J. Peck, OSUC 553462 (deposited in CNCI). Paratypes: (28 females, 6 males) COLOMBIA: 3 females, OSUC 534555, 557567 (CNCI); OSUC 279904 (OSUC). ECUADOR: 25 females, 6 males, OSUC 534227, 553367, 553373, 553382, 553437–553439, 553450–553451, 553456, 553464–553466, 553468, 553547, 553600, 553653, 553669, 553675, 553680, 553692–553699, 553705, 553707, 553717 (CNCI).
Calliscelio eboris Chen & Johnson, sp. n.

http://zoobank.org/71300D0B-D933-4E9B-A689-0C7EA098F418
http://bioguid.osu.edu/xbiod_concepts/384800

Figures 94–99

Description. Body length of female: 1.83–2.27 mm (n=20). Body length of male: 1.94–2.19 mm (n=20). Color of head: variably pale yellow to brown; reddish orange throughout. Color of antennal clava (A7–A12): A7–A9 brown, A10–A12 white; A7 brown, remainder orange. Shape of head: subglobose. Central keel of frons: present. Setation of upper frons: with sparse, long setae. IOS/EH: IOS distinctly less than EH. Sculpture of ventrolateral frons: smooth to coriaceous. Sculpture of frons below median ocellus: coriaceous. Sculpture of posterior vertex: transversely striate. Hypercyclical carina: present. Occipital carina medially: interrupted. Length of OOL: less than 0.5× ocellar diameter. Sculpture of postgena behind outer orbit: smooth. Ocular setae: absent. A4 in female: as long as A3. A5 in female: shorter than A3, distinctly longer than wide. Shape of female A6: as long as wide. Form of male antennal flagellomeres: filiform, A11 approximately 3.0× longer than wide. Length of A5 tyloid in male: greater than 0.5× length of A5.

Color of mesosoma in female: variably yellow to pale brown; reddish orange throughout. Color of mesosoma in male: orange throughout; variably orange to pale brown. Sculpture of dorsal pronotal area: rugose. Sculpture of lateral pronotal area: smooth throughout. Sculpture of notrion: smooth. Notaulus: percurrent or nearly so. Sculpture of mesoscutum: coriaceous. Shape of mesoscutellum: semiellipsoidal. Foveolae of scutocutellar sulcus between notauli: as large as those along margin of axilla. Sculpture of mesoscutellum: smooth with sparse fine punctures. Shape of metasternum: posterior margin rounded, approximately 3.0× wider than long. Sculpture of metasternum in female: smooth with a longitudinal, median carina. Sculpture of metasternum in male: smooth with longitudinal, median carina. Dorsal propodeum in female: not excavate medially, lateral propodeal carinae meeting anteromedially. Sculpture of dorsal propodeum in female: rugose with one or two longitudinal keels lateral median keel. Sculpture of dorsal propodeum in male: rugose with one or two longitudinal keels lateral median keel. Median keels on propodeum in female: absent. Mesopleural carina: present. Sculpture of mesepisternum below mesopleural depression: smooth. Sculpture of ventral metapleural area: largely smooth, rugose ventrally. Color of legs: orange throughout; pale yellow throughout. Sculpture of hind coxa: smooth.

Color of mesosoma in female: orange throughout; variably orange to pale brown. Color of metasoma in male: variably orange to pale brown. Horn on T1 in female: absent. Sculpture of posterior margin of T1 in female: longitudinally striate throughout. Sculpture of T1 in male: longitudinally striate. Development of longitudinal striae on
Figures 94–99. *Calliscelio eboris* sp. n., female, holotype (OSUC 193404). 94 Lateral habitus  95 Head and mesosoma, lateral view  96 Dorsal habitus  97 Head and mesosoma, dorsal view  98 Head, anterior view  99 Metasoma, dorsal view. Scale bars in millimeters.

T2 in female: reaching the middle of T2 medially. Sculpture of T3: smooth. Shape of T6 in female: short, wider than long. Sculpture of S3: smooth.

**Diagnosis.** This species is most similar to *C. brachys* and *C. suni*. It can be separated from *C. brachys* by the percurrent notaulus, and from *C. suni* by the spectral Rs+M and the presence of a central keel on the frons.

**Etymology.** The epithet is used as a noun in apposition derived from the Latin word for ivory, in reference to the white A11–A12 of the female antennae.

**Link to distribution map.** [http://hol.osu.edu/map-full.html?id=384800]
Material examined. Holotype, female: COLOMBIA: Amazonas Dept., Amacayacu Natural N.P., M.84, 150m, 03°41’S 70°15’W, Matamata, 6.IV–15.IV.2000, Malaise trap, A. Parente, OSUC 193404 (deposited in IAVH). Paratypes: (58 females, 26 males) BOLIVIA: 12 females, 5 males, OSUC 534030, 534150–534151, 534156–534157, 534166–534171, 534173–534176, 534178–534179 (CNCI). COLOMBIA: 30 females, 19 males, OSUC 557578–557580 (CNCI); OSUC 143977, 152163, 152166, 162512, 162608, 176895, 189272, 193278, 193324–193325, 193327, 193424, 193461, 193932, 269448, 274572, 276241 (IAVH); OSUC 152164, 182227, 182492–182493, 182496, 182591, 182718–182720, 182733, 188948, 188959, 188962, 189175, 189205, 189216, 189275, 189283, 189290, 190305–190306, 192356, 193583, 193600, 231804, 231821, 272090, 279658 (OSUC). PERU: 11 females, 2 males, OSUC 553953, 553956, 553965, 554055–554064 (CNCI). VENEZUELA: 5 females, OSUC 223877–223881 (USNM).

**Calliscelio elegans** (Perkins)
http://zoobank.org/6B386A5E-E5DF-48CB-A4C9-C82160E262C5
http://bioguid.osu.edu/xbiod_concepts/245756

**Caloteleia elegans** Perkins, 1910: 624 (original description).
**Caenoteleia elegans** (Perkins): Kieffer 1926: 550 (generic transfer, description).
**Caloteleia tanugatra** Narendran, 1998: 71 (original description, keyed); Rajmohana K. 2006: 122, 123 (description, keyed); Rajmohana, Peter and Narendran 2013: 8 (junior synonym of Calliscelio elegans (Perkins), type information).
**Calliscelio elegans** (Perkins): Masner, Johnson and Musetti 2009: 61 (description, diagnosis, generic transfer); Rajmohana, Peter and Narendran 2013: 8 (description of male, synonymy).

Description. See Masner et al. (2009) and Rajmohana et al. (2013).

Diagnosis. *Calliscelio elegans* is easily distinguished within *Calliscelio* based on the combination of the following characters: fore wing with three darkened and two white bands; head and mesosonotum granulose; metascutellum extremely narrow and weakly concave medially to accommodate T1 horn (Masner et al. 2009).

Link to distribution map. [http://hol.osu.edu/map-full.html?id=245756]
CASENT 2029779, OSUC 215759 (CAS). MAURITIUS: 1 female, MHNG 0002 (MHNG). MEXICO: 5 females, OSUC 256868–256870 (CNCI); OSUC 256875 (NMNH); OSUC 583205 (OSUC). NEPAL: 4 females, OSUC 256890–256892, 256898 (CNCI). NIGERIA: 1 female, OSUC 256881 (CNCI). PUERTO RICO: 2 females, OSUC 256876–256877 (CNCI). SAMOA: 1 female, OSUC 256865 (BPBM). SRI LANKA: 2 females, OSUC 256902–256903 (CNCI). THAILAND: 3 females, OSUC 256897, 256907, 321997 (OSUC). UNITED STATES: 3 females, OSUC 256855 (CNCI); OSUC 256878 (NMNH); UCFC 0 079 680 (UCFC). VENEZUELA: 2 females, OSUC 256879–256880 (CNCI). YEMEN: 3 females, OSUC 256887–256889 (CNCI).

*Calliscelio extenuatus* Chen & Johnson, sp. n.
http://zoobank.org/CE5AD0AA-DCC9-4645-AE36-45C93748A3EF
http://bioguid.osu.edu/xbiod_concepts/384360
Figures 100–105

**Description.** Body length of female: 1.34–1.74 mm (n=20). Body length of male: 1.81 mm (n=1). Color of head: brown throughout; orange throughout; orange to pale brown. Color of antennal clava (A7–A12): dark brown to black; A7, A8 brown, A9–A12 white to pale yellow. Shape of head: subglobose. Central keel of frons: absent. Setation of upper frons: glabrous. IOS/EH: IOS distinctly less than EH. Sculpture of ventrolateral frons: smooth to coriaceous; smooth to granulate. Sculpture of frons below median ocellus: smooth; smooth to granulate. Sculpture of posterior vertex: rugose; granulate to rugulose. Hyperoccipital carina: absent. Occipital carina medially: weakly indicated, irregularly sculptured. Length of OOL: less than 0.5× ocellar diameter. Sculpture of postgena behind outer orbit: largely smooth with small granulate area. Ocular setae: sparse, short. A4 in female: distinctly shorter than A3. A5 in female: shorter than A3, as long as wide. Shape of female A6: distinctly wider than long.

Color of mesosoma in female: orange throughout; yellow throughout; orange to pale brown. Sculpture of dorsal pronotal area: rugose. Sculpture of lateral pronotal area: smooth throughout. Sculpture of netrion: smooth. Notaulus: percurrent or nearly so. Sculpture of mesoscutum: granulate. Shape of mesoscutellum: semiellipsoidal. Foveolae of scutocutellar sulcus between notauli: smaller than those along margin of axilla. Sculpture of mesoscutellum: granulate. Shape of metascutellum: posterior margin rounded, approximately 3.0× wider than long. Sculpture of metascutellum in female: rugose. Dorsal propodeum in female: not excavate medially, lateral propodeal carinae meeting anteromedially. Sculpture of dorsal propodeum in female: rugose. Median keels on propodeum in female: absent. Mesopleural carina: absent. Sculpture of mesepisternum below mesopleural depression: smooth. Sculpture of ventral metapleural area: largely smooth, rugose ventrally. Color of legs: orange throughout; pale yellow throughout. Sculpture of hind coxa: smooth.
Color of fore wing: hyaline. Rs+M: nebulose, weakly pigmented. Setae on R: long, erect, surpassing the margin of the wing. Length of R: distinctly shorter than r-rs. Length of R1: greater than 3.0× length of r-rs.

Color of metasoma in female: orange throughout; variably orange to pale brown; yellow throughout. Horn on T1 in female: absent. Sculpture of posterior margin of T1 in female: longitudinally striate throughout. Development of longitudinal striae on T2 in female: reaching the middle of T2 medially; reaching posterior margin of T2.
Sculpture of T3: smooth. Shape of T6 in female: short, wider than long. Sculpture of S3: largely smooth with sparse and fine punctures.

**Diagnosis.** This species is most similar to *C. ruga* and *C. suni* in size and habitus. It can be separated from *C. ruga* by the complete occipital carina and the shortened A6, from *C. suni* by the hairy compound eyes.

**Etymology.** The epithet is an adjective, the Latin word for faint, weak and reduced, in reference to the weakly indicated occipital carina.

**Link to distribution map.** [http://hol.osu.edu/map-full.html?id=384360](http://hol.osu.edu/map-full.html?id=384360)

**Material examined.** Holotype, female: VENEZUELA: Aragua St., Rancho Grande Biological Station, 1100m, 10°22’N, 67°41’W, Henri Pittier National Park, 10.VIII–13.VIII.1994, flight intercept trap, M. Archangelsky, OSUC 48454 (deposited in OSUC). Paratypes: (170 females, 1 male) COLOMBIA: 1 female, OSUC 279960 (OSUC). COSTA RICA: 1 female, OSUC 237330 (OSUC). TRINIDAD AND TOBAGO: 5 females, OSUC 546023, 546097–546098, 546101–546102 (CNCI). VENEZUELA: 163 females, 1 male, OSUC 545835–545846, 545853, 545858–545861, 545873–545878, 545902, 545905–545934, 545938, 545944–545947, 545951–545954, 545960–545967, 545979–545990, 557647, 557661–557663, 557709–557710 (CNCI); OSUC 146712, 146714, 146716, 146747, 146764, 146768, 146777–146778, 146786, 334303–334308, 334310–334311, 334422–334423, 334511, 334514–334515, 334520–334522, 334524, 334536, 334539, 334542–334544, 334546, 334549–334551, 45296, 45300, 46280, 46286, 46299, 46532, 46537, 46563, 46580, 48128, 48139, 48146, 48166, 48176, 48315, 48326, 48371, 48387, 48396, 48408, 48426, 48459, 48480, 48492, 48605, 48623, 48628, 48641, 48723, 48839, 48881, 48885, 63892–63893, 63905, 63908, 63911, 63917, 64582 (OSUC).

**Calliscelio flavicauda** Chen & Johnson, sp. n.

http://zoobank.org/9A4B41F8-DDB0-449E-9E73-F5818AC5293A
http://bioguid.osu.edu/xbiod_concepts/363560

Figures 106–111

**Description.** Body length of female: 1.95–1.99 mm (n=20). Body length of male: 1.90–2.05 mm (n=2). Color of head: brown throughout; orange throughout; orange to pale brown. Color of antennal clava (A7–A12): dark brown to black. Shape of head: subglobose. Central keel of frons: present. Setation of upper frons: with dense, short setae. IOS/EH: IOS distinctly less than EH. Sculpture of ventrolateral frons: granulate. Sculpture of frons below median ocellus: smooth; smooth to coriaceous. Sculpture of posterior vertex: granulate to rugulose. Hyperoccipital carina: absent. Occipital carina medially: complete, weakly crenulate throughout. Length of OOL: less than 0.5× ocellar diameter. Sculpture of postgena behind outer orbit: largely smooth with small granulate area. Ocular setae: absent. A4 in female: distinctly longer than A3. A5 in female: shorter than A3, distinctly longer than wide. Shape of female A6: distinctly

longer than wide. Form of male antennal flagellomeres: filiform, A11 approximately 3.0× longer than wide. Length of A5 tyloid in male: approximately 0.3× length of A5.

Color of mesosoma in female: orange throughout; orange to pale brown; dark brown. Color of mesosoma in male: dark brown throughout. Sculpture of dorsal pronotal area: rugose. Sculpture of lateral pronotal area: smooth throughout. Sculpture of netrion: smooth. Notaulus: percurrent or nearly so. Sculpture of mesoscutum: coriaceous. Shape of mesoscutellum: semi-ellipsoidal. Foveolae of scutoscutellar sulcus between notauli: as large as those along margin of axilla. Sculpture of mesoscutellum:
smooth with sparse fine punctures. Shape of metascutellum: posterior margin straight, approximately 4.0× wider than long. Sculpture of metascutellum in female: smooth with a longitudinal, median carina. Sculpture of metascutellum in male: smooth. Dor- sal propodeum in female: shallowly excavate medially, with lateral propodeal carinae widely separated. Sculpture of dorsal propodeum in female: rugose. Sculpture of dorsal propodeum in male: rugose with one or two longitudinal keels lateral to median keel. Median keels on propodeum in female: absent. Mesopleural carina: present. Sculpture of mesepisternum below mesopleural depression: smooth. Sculpture of ventral meta- pleural area: smooth. Color of legs: hind femur brown, otherwise yellow. Sculpture of hind coxa: smooth.

Color of fore wing: hyaline. Rs+M: nebulose, strongly pigmented. Setae on R: long, erect, surpassing the margin of the wing. Length of R: distinctly longer than r-rs. Length of R1: greater than 3.0× length of r-rs.

Color of metasoma in female: anterior margin of T2 and T6 yellow, otherwise brown. Color of metasoma in male: anterior margin of T2 yellow, otherwise brown to black. Horn on T1 in female: present as a small bulge. Sculpture of T1 horn dorsally: transversely striate. Sculpture of posterior margin of T1 in female: smooth medially, longitudinally striate laterally. Sculpture of T1 in male: longitudinally striate. Development of longitudinal striae on T2 in female: reaching the middle of T2 medially. Sculpture of T3: smooth. Shape of T6 in female: distinctly elongate, approximately 2.0× longer than wide. Sculpture of S3: largely smooth with sparse and fine punctures.

**Diagnosis.** Females of this species are most similar to *C. migma* in size and habitus but can be distinguished by the strongly foveolate scutoscutellar sulcus and the smooth T3. Males of *C. flavicauda* are similar to *C. laticintus* and *C. longius*. It may be separated from *C. laticinctus* by the smooth T3 and the brown hind femora, from *C. longius* that A11 is approximately 3.0× longer than wide.

**Etymology.** The specific epithet meaning “yellow tail” refers to the yellow T6 in female and should be treated as a noun in apposition.

**Link to distribution map.** [http://hol.osu.edu/map-full.html?id=363560]

**Material examined.** Holotype, female: ECUADOR: Sucumbíos Prov., 270m, 00°30’S, 76°30’W, Sacha Lodge, 3.VII–13.VII.1994, Malaise trap, P. Hibbs, OSUC 553509 (deposited in CNCI). Paratypes: (52 females, 2 males) BRAZIL: 1 female, OSUC 534533 (CNCI). COLOMBIA: 11 females, OSUC 557602 (CNCI); OSUC 143969, 152156–152157, 178097, 178184, 182734, 189289, 193281, 193905, 262951 (OSUC). ECUADOR: 22 females, 2 males, OSUC 458499, 458509, 458511, 458535, 534224, 534232, 534234, 553377, 553442, 553506–553508, 553512, 553515, 553517, 553520–553523, 553562, 553566–553567, 553571, 553686 (CNCI). FRENCH GUIANA: 2 females, OSUC 546103 (CNCI); OSUC 570550 (OSUC). PERU: 16 females, OSUC 534417, 534421, 553992, 553994, 554007, 554036, 554038–554042, 554044–554046, 554050 (CNCI); OSUC 343060 (USNM).
New World species of the genus Calliscelio Ashmead...

Calliscelio foveolatus Chen & Johnson, sp. n.
http://zoobank.org/5734D0C9-1954-4A66-8E9E-412371890123
http://bioguid.osu.edu/xbiod_concepts/384809
Figures 112–117

Description. Body length of female: 1.92–2.30 mm (n=10). Color of head: black throughout; reddish orange throughout. Color of antennal clava (A7–A12): black; A7 orange, remainder dark brown to black. Shape of head: subglobose. Central keel of frons: absent. Setation of upper frons: with sparse, short setae. IOS/EH: IOS distinctly less than EH. Sculpture of ventrolateral frons: smooth with sparse punctures. Sculpture of frons below median ocellus: largely smooth with sparse fine punctures. Sculpture of posterior vertex: coriaceous; largely smooth with irregular fine sculpture. Hyperoccipital carina: absent. Occipital carina medially: complete, weakly crenulate throughout. Length of OOL: less than 0.5× ocellar diameter; greater than 0.5× ocellar diameter. Sculpture of postgena behind outer orbit: smooth. Ocular setae: absent. A4 in female: distinctly shorter than A3. A5 in female: shorter than A3, distinctly longer than wide. Shape of female A6: slightly longer than wide.

Color of mesosoma in female: orange throughout; black throughout; variably yellow to pale brown. Sculpture of dorsal pronotal area: rugose. Sculpture of lateral pronotal area: smooth throughout. Sculpture of netrion: smooth. Notaulus: percurrent or nearly so. Sculpture of mesoscutum: coriaceous; coriaceous anteriorly, smooth with sparse fine punctures posteriorly. Shape of mesoscutellum: semiellipsoidal. Foveolae of scutoscutellar sulcus between notauli: as large as those along margin of axilla. Sculpture of mesoscutellum: smooth with sparse fine punctures. Shape of metascutellum: posterior margin straight, approximately 4.0× wider than long. Sculpture of metascutellum in female: smooth with a longitudinal, median carina. Dorsal propodeum in female: not excavate medially, lateral propodeal carinae meeting anteromedially. Sculpture of dorsal propodeum in female: rugose. Median keels on propodeum in female: absent. Mesopleural carina: present. Sculpture of meseisternum below mesopleural depression: smooth. Sculpture of ventral metapleural area: smooth. Color of legs: pale yellow throughout. Sculpture of hind coxa: smooth.

Color of fore wing: hyaline. Rs+M: nebulose, strongly pigmented. Setae on R: long, erect, surpassing the margin of the wing. Length of R: approximately as long as r-rs. Length of R1: greater than 3.0× length of r-rs.

Color of metasoma in female: dark brown. Horn on T1 in female: weakly developed. Sculpture of T1 horn dorsally: smooth. Sculpture of posterior margin of T1 in female: longitudinally striate throughout. Development of longitudinal striae on T2 in female: reaching the middle of T2 medially. Sculpture of T3: smooth with longitudinal submedian striae. Shape of T6 in female: short, slightly longer than wide. Sculpture of S3: largely smooth with sparse and fine punctures.

Diagnosis. This species is most similar to C. levis but can be distinguished by the foveolae of the scutoscutellar sulcus between the notauli which are as large as those along the margin of axilla and that A4 is distinctly shorter than A3.
Figures 112–117. *Calliscelio foveolatus* sp. n., female, holotype (OSUC 532869). 112 Lateral habitus 113 Head and mesosoma, lateral view 114 Dorsal habitus 115 Head and mesosoma, dorsal view 116 Head, anterior view 117 Metasoma, dorsal view. Scale bars in millimeters.

**Etymology.** The epithet is an adjective, derived from the Latin word for small hole, in reference to the sculpture of the scutocutellar sulcus.

**Link to distribution map.** [http://hol.osu.edu/map-full.html?id=384809]

**Material examined.** Holotype, female: **COSTA RICA**: Puntarenas Prov., 24km W Piedras Blancas, Golfo Dulce, 200m, VI.1989–VIII.1989, Hanson & Goulet, OSUC 532869 (deposited in CNCI). Paratypes: (9 females) **BOLIVIA**: 1 female, OSUC 534177 (CNCI). **COSTA RICA**: 2 females, OSUC 532802, 532846 (CNCI). **ECUADOR**: 1 female, OSUC 553581 (CNCI). **PERU**: 4 females, OSUC 534393–534394, 534402, 535989 (CNCI). **VENEZUELA**: 1 female, OSUC 545903 (CNCI).
Calliscelio gatineau Chen & Johnson, sp. n.
http://zoobank.org/0C15B75D-0968-4247-BD87-9C08687543C8
http://bioguid.osu.edu/xbiod_concepts/362062
Figures 13, 118–123

Description. Body length of female: 2.97 mm (n=1). Color of head: orange throughout. Color of antennal clava (A7–A12): dark brown to black. Shape of head: subglobose. Central keel of frons: absent. Setation of upper frons: with sparse, short setae. IOS/EH: IOS slightly greater than EH. Sculpture of ventrolateral frons: smooth with sparse punctures. Sculpture of frons below median ocellus: granulate to finely punctate. Sculpture of posterior vertex: granulate. Hyperoccipital carina: absent. Occipital carina medially: complete, weakly crenulate throughout. Length of OOL: less than 0.5× ocellar diameter. Sculpture of postgena behind outer orbit: granulate. Ocular setae: absent. A4 in female: distinctly shorter than A3. A5 in female: shorter than A3, as long as wide. Shape of female A6: distinctly wider than long.

Color of mesosoma in female: orange throughout. Sculpture of dorsal pronotal area: rugose. Sculpture of lateral pronotal area: rugulose throughout. Sculpture of metanotum: rugose. Notaulus: percurrent or nearly so. Sculpture of mesoscutum: granulate. Shape of mesoscutellum: semiellipsoidal. Foveolae of scutoscutellar sulcus between notauli: absent. Sculpture of mesoscutellum: granulate. Shape of metascutellum: posterior somewhat rounded, approximately 2.5× wider than long. Sculpture of metascutellum in female: rugose. Dorsal propodeum in female: shallowly excavate medially, with lateral propodeal carinae widely separated. Sculpture of dorsal propodeum in female: rugose. Median keels on propodeum in female: absent. Mesopleural carina: absent. Sculpture of mesepisternum below mesopleural depression: smooth. Sculpture of ventral metapleural area: smooth. Color of legs: orange throughout. Sculpture of hind coxa: smooth.

Color of fore wing: hyaline. Rs+M: spectral. Setae on R: short, decumbent, hardly exceeding the margin of the wing. Length of R: distinctly shorter than r-rs. Length of R1: approximately as long as r-rs.

Color of metasoma in female: orange throughout. Horn on T1 in female: present as a small bulge. Sculpture of T1 horn dorsally: granulate medially, with V-shaped keels laterally. Sculpture of posterior margin of T1 in female: longitudinally striate throughout. Development of longitudinal striae on T2 in female: reaching posterior margin of T2. Sculpture of T3: longitudinally striate throughout. Shape of T6 in female: short, wider than long. Sculpture of S3: longitudinally striate.

Diagnosis. This species is most similar to the orange females of *C. rubriclavus* but can be distinguished based on the smooth sculpture of the mesepisternum below the mesopleural depression and the medially granulate T1 horn, with V-shaped keels laterally.

Etymology. The specific epithet refers to the locality on the label of the holotype and should be treated as a noun in apposition.

Link to distribution map. [http://hol.osu.edu/map-full.html?id=362062]

Material examined. Holotype, female: CANADA: QC, path/ridge/woodpile, Gatineau Park, IX–XI.1995, L. Masner, OSUC 534340 (deposited in CNCI).
Figures 118–123. *Calliscelio gatineau* sp. n., female, holotype (OSUC 534340). 118 Lateral habitus 119 Head and mesosoma, lateral view 120 Dorsal habitus 121 Head and mesosoma, dorsal view 122 Head, anterior view 123 Metasoma, dorsal view. Scale bars in millimeters.

*Calliscelio glaber* Chen & Masner, sp. n.
http://zoobank.org/E7A2A6C2-E787-4F5A-BC99-958CF2FF06DF
http://bioguid.osu.edu/xbiod_concepts/362055
Figures 124–129

**Description.** Body length of female: 1.79–2.17 mm (n=20). Body length of male: 1.80–2.36 mm (n=20). Color of head: brown throughout; orange throughout; orange
New World species of the genus Calliscelio Ashmead...

Figures 124–129. *Calliscelio glaber* sp. n., female, holotype (OSUC 458136). 124 Lateral habitus 125 Head and mesosoma, lateral view 126 Dorsal habitus 127 Head and mesosoma, dorsal view 128 Head, anterior view 129 Metasoma, dorsal view. Scale bars in millimeters.

to pale brown. Color of antennal clava (A7–A12): dark brown to black. Shape of head: subglobose. Central keel of frons: absent. Setation of upper frons: glabrous. IOS/EH: IOS distinctly less than EH. Sculpture of ventrolateral frons: smooth. Sculpture of frons below median ocellus: smooth. Sculpture of posterior vertex: smooth. Hyperoc- cipital carina: absent. Occipital carina medially: interrupted. Length of OOL: less than 0.5× ocellar diameter. Sculpture of postgena behind outer orbit: smooth. Ocular setae:
absent. A4 in female: distinctly shorter than A3. A5 in female: shorter than A3, distinctly longer than wide. Shape of female A6: as long as wide. Form of male antennal flagellomeres: filiform, A11 approximately 3.0× longer than wide. Length of A5 tyloid in male: approximately 0.3× length of A5.

Color of mesosoma in female: orange throughout; orange to pale brown. Color of mesosoma in male: orange throughout. Sculpture of dorsal pronotal area: rugose. Sculpture of lateral pronotal area: smooth anteriorly, punctate rugulose posteriorly. Sculpture of netrion: smooth. Notaulus: percurrent or nearly so. Sculpture of mesoscutum: smooth throughout. Shape of mesoscutellum: semiellipsoidal. Foveolae of scutoscutellar sulcus between notauli: absent. Sculpture of mesoscutellum: smooth throughout. Shape of metascutellum: posterior margin rounded, approximately 2.5× wider than long. Sculpture of metascutellum in female: smooth. Sculpture of metascutellum in male: smooth. Dorsal propodeum in female: shallowly excavate medially, with lateral propodeal carinae widely separated. Sculpture of dorsal propodeum in female: rugose. Sculpture of dorsal propodeum in male: rugose. Median keels on propodeum in female: absent. Mesopleural carina: absent. Sculpture of mesepisternum below mesopleural depression: smooth. Sculpture of ventral metapleural area: smooth. Color of legs: orange yellow. Sculpture of hind coxa: smooth.

Color of fore wing: hyaline. Rs+M: spectral. Setae on R: long, erect, surpassing the margin of the wing. Length of R: approximately as long as r-rs. Length of R1: approximately as long as 2.0× length of r-rs.

Color of metasoma in female: orange throughout. Color of metasoma in male: orange throughout. Horn on T1 in female: present as a small bulge. Sculpture of T1 horn dorsally: concentrically striate. Sculpture of posterior margin of T1 in female: longitudinally striate throughout. Sculpture of T1 in male: longitudinally striate. Development of longitudinal striae on T2 in female: reaching posterior margin of T2. Sculpture of T3: largely smooth with submedian longitudinal striae. Shape of T6 in female: short, slightly longer than wide. Sculpture of S3: largely smooth with sparse and fine punctures.

**Diagnosis.** This species is most similar to *C. paraglaber* in smooth body sculpture and size but can be distinguished by the interrupted occipital carina (occipital carina complete in *C. paraglaber*).

**Etymology.** The epithet is an adjective and Latin word for smooth, in reference to the smooth body surface.

**Link to distribution map.** [http://hol.osu.edu/map-full.html?id=362055]

**Material examined.** Holotype, female: DOMINICAN REPUBLIC: Pedernales Prov., km25 of Alcoa Road, dry montane forest, Baoruco (Bahoruco) Mountains, 700m, 18.I.1989, L. Masner, OSUC 458136 (deposited in CNCI). Paratypes: (27 females, 20 males) CUBA: 2 females, 1 male, OSUC 458145–458146, 458241 (CNCI). DOMINICAN REPUBLIC: 25 females, 19 males, OSUC 458137–458144, 458147–458176, 534372–534373, 534376, 534594–534596 (CNCI).
**Calliscelio granulatus** Chen & Masner, sp. n.
http://zoobank.org/DC45F6BB-FDE6-4E77-8A00-9B2FD32359E4
http://bioguid.osu.edu/xbiod_concepts/362058
Figures 130–135

**Description.** Body length of female: 2.31–2.53 mm (n=8). Body length of male: 2.24–2.26 mm (n=4). Color of head: orange throughout. Color of antennal clava (A7–A12): dark brown to black. Shape of head: subglobose. Central keel of frons: absent. Setation of upper frons: with dense, short setae. IOS/EH: IOS distinctly less than EH. Sculpture of ventrolateral frons: granulate. Sculpture of frons below median ocellus: granulate. Sculpture of posterior vertex: granulate. Hyperoccipital carina: absent. Occipital carina medially: complete, weakly crenulate throughout. Length of OOL: less than 0.5× ocellar diameter. Sculpture of postgena behind outer orbit: granulate. Occular setae: dense, short. A4 in female: distinctly shorter than A3. A5 in female: shorter than A3, as long as wide. Shape of female A6: distinctly wider than long. Form of male antennal flagellomeres: filiform, A11 approximately 3.0× longer than wide. Length of A5 tyloid in male: greater than 0.5× length of A5.

Color of mesosoma in female: orange throughout. Color of mesosoma in male: orange throughout. Sculpture of dorsal pronotal area: rugose. Sculpture of lateral pronotal area: largely smooth, granulate ventrally and posteriorly. Sculpture of metanotum: rugulose. Notaulus: percurrent or nearly so. Sculpture of mesoscutum: granulate. Shape of mesoscutellum: semiellipsoidal. Foveolae of scutoscutellar sulcus between notauli: smaller than those along margin of axilla. sculpture of mesoscutellum: granulate. Shape of metascutellum: posterior margin straight, approximately 4.0× wider than long. Sculpture of metascutellum in female: rugose. Sculpture of metascutellum in male: rugose. Dorsal propodeum in female: deeply excavate medially, with lateral propodeal carinae widely separated, running subparallel to accommodate T1 horn. Sculpture of dorsal propodeum in female: rugose. Sculpture of dorsal propodeum in male: rugose. Median keels on propodeum in female: absent. Mesopleural carina: present. Sculpture of mesepisternum below mesopleural depression: smooth. Sculpture of ventral metapleural area: smooth. Color of legs: orange yellow. Sculpture of hind coxa: smooth.

Color of fore wing: hyaline. Rs+M: nebulose, weakly pigmented. Setae on R: long, erect, surpassing the margin of the wing. Length of R: distinctly shorter than r-rs. Length of R1: approximately as long as 2.0× length of r-rs.

Color of metasoma in female: orange with pale brown patch on T1, T2 and T6. Color of metasoma in male: orange with pale brown patch on T2 and T5–T7. Horn on T1 in female: large and distinct. Sculpture of T1 horn dorsally: longitudinally striate. Sculpture of posterior margin of T1 in female: longitudinally striate throughout. Sculpture of T1 in male: longitudinally striate. Development of longitudinal striae on T2 in female: reaching the middle of T2 medially; reaching posterior margin of T2. Sculpture of T3: smooth. Shape of T6 in female: distinctly elongate, approximately 2.0× longer than wide. Sculpture of S3: smooth.
Figures 130–135. *Calliscelio granulatus* sp. n., female, holotype (OSUC 534599). 130 Lateral habitus 131 Head and mesosoma, lateral view 132 Dorsal habitus 133 Head and mesosoma, dorsal view 134 Head, anterior view 135 Metasoma, dorsal view. Scale bars in millimeters.

**Diagnosis.** This species is most similar to *C. telum* in hairy compound eyes and habitus but can be distinguished by its rugulose netrion and longitudinally striate T1 horn.

**Etymology.** The adjectival specific epithet refers to the sculpture of the body.

**Link to distribution map.** [http://hol.osu.edu/map-full.html?id=362058](http://hol.osu.edu/map-full.html?id=362058)

**Material examined.** Holotype, female: CUBA: Santiago de Cuba Prov., botanical garden/disturbed and scrub forest, Santiago de Cuba, 5–50m, 5.XII–17.XII.1995, flight intercept trap, S. Peck, OSUC 534599 (deposited in CNCI). Paratypes: CUBA: 7 females, 4 males, OSUC 458304–458314 (CNCI).
New World species of the genus Calliscelio Ashmead...

Calliscelio laticinctus Ashmead
http://zoobank.org/A4202C74-7737-441D-86A1-876224167CFA
http://bioguid.osu.edu/xbiod_concepts/4152
Figures 15, 136–141

Calliscelio laticinctus Ashmead, 1893: 219 (original description); Ashmead 1894: 223 (redescribed as new); Ashmead 1900: 327 (distribution); Kieffer 1926: 499 (description, keyed); Masner 1976: 38 (description, type information).

Description. Body length of female: 1.97–3.01 mm (n=20). Body length of male: 1.82–2.34 mm (n=20). Color of head: yellow throughout. Color of antennal clava (A7–A12): black. Shape of head: subglobose. Central keel of frons: present. Setation of upper frons: with dense, short setae. IOS/EH: IOS distinctly less than EH. Sculpture of ventrolateral frons: granulate. Sculpture of frons below median ocellus: coriaceous. Sculpture of posterior vertex: granulate. Hyperoccipital carina: absent. Occipital carina medially: complete, weakly crenulate throughout. Length of OOL: less than 0.5× ocellar diameter. Sculpture of postgena behind outer orbit: smooth. Ocular setae: absent. A4 in female: as long as A3. A5 in female: shorter than A3, distinctly longer than wide. Shape of female A6: distinctly longer than wide. Form of male antennal flagellomeres: filiform, A11 approximately 3.0× longer than wide. Length of A5 tyloid in male: approximately 0.3× length of A5.

Color of mesosoma in female: yellow throughout. Color of mesosoma in male: orange throughout; variably orange to pale brown; brown throughout. Sculpture of dorsal pronotal area: rugose. Sculpture of lateral pronotal area: smooth throughout. Sculpture of netrion: smooth. Notaulus: percurrent or nearly so. Sculpture of mesoscutum: granulate. Shape of mesoscutellum: semiellipsoidal. Foveolae of scutoscutellar sulcus between notauli: as large as those along margin of axilla. Sculpture of mesoscutellum: granulate. Shape of metascutellum: posterior margin straight, approximately 4.0× wider than long. Sculpture of metascutellum in female: rugose. Sculpture of metascutellum in male: rugose. Dorsal propodeum in female: deeply excavate medially, with lateral propodeal carinae widely separated, running subparallel to accommodate T1 horn. Sculpture of dorsal propodeum in female: rugose. Sculpture of dorsal propodeum in male: rugose. Median keels on propodeum in female: absent. Mesopleural carina: absent. Sculpture of mesepisternum below mesopleural depression: smooth. Sculpture of ventral metapleural area: smooth. Color of legs: orange throughout; pale yellow throughout. Sculpture of hind coxa: smooth.

Color of fore wing: hyaline. Rs+M: nebulose, weakly pigmented. Setae on R: long, erect, surpassing the margin of the wing. Length of R: distinctly longer than r-rs. Length of R1: greater than 3.0× length of r-rs.

Color of metasoma in female: dark brown; orange throughout; variably orange to black. Color of metasoma in male: brown throughout; variably yellow to pale brown; black throughout. Horn on T1 in female: large and distinct. Sculpture of T1 horn dorsally: concentrically striate. Sculpture of posterior margin of T1 in female: longitudi-
nally striate throughout. Sculpture of T1 in male: longitudinally striate. Development of longitudinal striae on T2 in female: present on anterior margin of T2 medially, reaching posterior margin of T2 laterally. Sculpture of T3: largely smooth with submedian longitudinal striae. Shape of T6 in female: distinctly elongate, approximately 2.5× longer than wide. Sculpture of S3: largely smooth with sparse and fine punctures.

**Diagnosis.** Females of this species are most similar to *C. longius* and *C. prolixus* in color, size and habitus. It can be separated from *C. longius* by A4 is slightly longer than A3 and A5 shorter than A3, from *C. prolixus* by the presence of T1 horn and the
New World species of the genus Calliscelio Ashmead...

elongate T6. Males of *C. laticinctus* are similar to *C. flavicauda* and *C. longius*. It may be separated from *C. flavicauda* by T3 with submedian longitudinal striae and the brown hind femora, from *C. longius* by A11 is approximately 3.0× longer than wide.

**Link to distribution map.** [http://hol.osu.edu/map-full.html?id=4152]

**Material examined.** Syntype, female, *C. laticinctus*: SAINT VINCENT AND THE GRENADINES: Saint Vincent Island, no date, H. H. Smith, USNM01059105 (deposited in USNM). Syntype, female, *C. laticinctus*: SAINT VINCENT AND THE GRENADINES: Saint Vincent Island, no date, H. H. Smith, USNM01059354 (deposited in USNM). Other material: (323 females, 44 males) BRAZIL: 162 females, 32 males, OSUC 534536, 534538 (CNCI); OSUC 252092, 252094, 252097, 252105–252106, 252137, 252139, 252145, 254591, 322151, 322535–322537, 322539, 322548, 322557, 322720, 323005, 323007, 323038–323081, 323083–323084, 323086–323090, 323092–323093, 323959, 326149, 326194, 326220, 326222, 326235, 343696, 344403, 344481, 345098, 345119, 345205, 345207, 345333, 346169, 346870, 347431, 347438, 347452, 347482, 348267, 348488, 348496, 348669, 348677, 348992, 349017, 349024, 349191, 349194, 349196, 349198, 349513, 349780, 351241, 352056, 352061–352062, 352066–352067, 352071, 352249, 352359, 352799, 353038–353039, 353176, 354567, 354919, 355162, 355324–355328, 357042, 361705, 363838, 363840–363842, 363845, 363847, 366692, 366711, 366780, 366782, 366786, 366943, 368420, 370883–370886, 370888–370889, 370891, 370893–370896, 370899, 370906, 370929, 373762, 373770, 374565, 374567, 374575, 374586–374587, 374592, 374597, 374623–374630, 374737, 374742, 375308, 375310, 375315, 376518, 376524, 376976, 376978–376979, 376981–376982, 376985–376988, 377482–377491, 377494, 377504, 378011–378013, 378052, 378065, 378069, 378975–378976, 380179, 380183–380185, 380187–380189, 380193, 477165, 534688–534691, 55934, 55941, 55943, 577134, 577156, 577159, 577161, 583248–583249 (OSUC); OSUC 225355, 237645 (USNM). COLOMBIA: 39 females, 1 male, OSUC 534554, 557600–557601, 557641 (CNCI); OSUC 152155, 162597, 178015, 178205, 182484, 188778, 189200, 189211, 190987, 190990–190991, 191141, 191180, 191251, 192205, 192209, 193353, 193462–193463, 193547, 232296, 232303, 235975–235976, 259757, 262613, 267804, 269431, 272086, 274573, 274973, 276235, 279926, 279929, 363586, 364067 (OSUC). DOMINICA: 5 females, 1 male, OSUC 458242–458243, 458245–458248 (CNCI). ECUADOR: 4 females, OSUC 458237, 553441, 553477, 557140 (CNCI). FRENCH GUIANA: 31 females, 1 male, OSUC 458388, 458400–458401, 458412, 458434–458435, 458437, 458441–458443, 458449–458453, 458455, 458461, 458463, 458465–458468, 458470, 458475–458477, 458479, 546105, 546111, 546139, 546150 (CNCI); OSUC 570551 (OSUC). GRENADA: 2 females, OSUC 534253–534254 (CNCI). GUYANA: 11 females, OSUC 458236, 458252–458261 (CNCI). PANAMA: 2 females, OSUC 553757, 553771 (CNCI). PERU: 2 females, OSUC 534422, 534426 (CNCI). SAINT VINCENT AND THE GRENADINES: 1 female, OSUC 458244 (CNCI). SURINAME: 2 females, OSUC 534584, 534586
**Calliscelio latifrons** Chen & Johnson, sp. n.

http://zoobank.org/F45AC467-663F-4811-B40F-AFC2493439BE

http://bioguid.osu.edu/xbiod_concepts/367272

Figures 4–6, 142–147

**Description.** Body length of female: 1.85–2.50 mm (n=11). Body length of male: 1.70–2.05 mm (n=10). Color of head: black throughout. Color of antennal clava (A7–A12): dark brown to black. Shape of head: subglobose. Central keel of frons: absent. Setation of upper frons: with sparse, short setae. IOS/EH: IOS slightly greater than EH. Sculpture of ventrolateral frons: granulate. Sculpture of frons below median ocellus: granulate. Sculpture of posterior vertex: granulate. Hyperoccipital carina: absent. Occipital carina medially: complete, weakly crenulate throughout. Length of OOL: greater than 0.5× ocellar diameter. Sculpture of postgena behind outer orbit: granulate. Ocular setae: sparse, short. A4 in female: distinctly shorter than A3. A5 in female: shorter than A3, as long as wide. Shape of female A6: as long as wide. Form of male antennal flagellomeres: moniliform, A11 as long as wide. Length of A5 tyloid in male: greater than 0.5× length of A5.

Color of mesosoma in female: black throughout; orange to pale brown. Color of mesosoma in male: dark brown throughout. Sculpture of dorsal pronotal area: granulate. Sculpture of lateral pronotal area: granulate throughout. Sculpture of netrion: rugulose. Notaulus: percurrent; abbreviated, at most reaching middle of mesoscutum. Sculpture of mesoscutum: granulate. Shape of mesoscutellum: transverse. Foveolae of scutoscutellar sulcus between notauli: absent. Sculpture of mesoscutellum: granulate. Shape of metascutellum: posterior margin straight, approximately 4.0× wider than long. Sculpture of metascutellum in female: granulate. Sculpture of metascutellum in male: granulate. Dorsal propodeum in female: deeply excavate medially, with lateral propodeal carinae widely separated, running subparallel to accommodate T1 horn. Sculpture of dorsal propodeum in female: rugose. Sculpture of dorsal propodeum in male: rugose. Median keels on propodeum in female: absent. Mesopleural carina: present. Sculpture of mesepisternum below mesopleural depression: granulate. Sculpture of ventral metapleural area: smooth dorsally, granulate ventrally. Color of legs: orange throughout. Sculpture of hind coxa: smooth.

Color of fore wing: hyaline. Rs+M: spectral. Setae on R: long, erect, surpassing the margin of the wing. Length of R: distinctively shorter than r-rs. Length of R1: approximately as long as 2.0× length of r-rs.

Color of metasoma in female: variably orange to pale brown. Color of metasoma in male: variably orange to pale brown; pale brown throughout. Horn on T1 in female:
Figures 142–147. *Calliscelio latifrons* sp. n., female, holotype (OSUC 323077). 142 Lateral habitus 143 Head and mesosoma, lateral view 144 Dorsal habitus 145 Head and mesosoma, dorsal view 146 Head, anterior view 147 Metasoma, dorsal view. Scale bars in millimeters.

present as a small bulge. Sculpture of T1 horn dorsally: granulate. Sculpture of posterior margin of T1 in female: striate rugose. Sculpture of T1 in male: longitudinally rugose. Development of longitudinal striae on T2 in female: reaching posterior margin of T2. Sculpture of T3: smooth medially, longitudinally striate laterally. Shape of T6 in female: short, slightly longer than wide. Sculpture of S3: granulate.

**Diagnosis.** This species is most similar to *C. armila* but can be easily distinguished by the granulate upper frons and the longitudinally striate T3.

**Etymology.** The epithet is a compound noun in apposition referring to the wide IOS.
Link to distribution map. [http://hol.osu.edu/map-full.html?id=367272]

Material examined. Holotype, female: PARAGUAY: Presidente Hayes Dept., 151m, 23°48'S 60°46'W, Escalante Lagoon, 27.XI.2003, yellow pan trap, B. Garcete, OSUC 323077 (deposited in MNHNPy). Paratypes: (10 females, 10 males) ARGENTINA: 2 females, OSUC 534438–534439 (CNCI). BRAZIL: 1 female, OSUC 534517 (CNCI). PARAGUAY: 7 females, 10 males, OSUC 322992, 363637, 534686-534687 (MNHNPY); OSUC 150574-150575, 276703, 322991, 322993, 323075-323076, 323078, 363707, 363711-363712, 434082-434083 (OSUC).

Calliscelio levis Chen & Johnson, sp. n.
http://zoobank.org/06FA4764-0408-4049-9F2C-A5997337F090
http://bioguid.osu.edu/xbiod_concepts/384811
Figures 148–153

Description. Body length of female: 1.52–1.77 mm (n=13). Color of head: variably brown to black. Color of antennal clava (A7–A12): A7 orange, remainder dark brown to black; A7 dark brown, A8–A12 golden yellow. Shape of head: subglobose. Central keel of frons: absent. Setation of upper frons: with sparse, short setae. IOS/EH: IOS distinctly less than EH. Sculpture of ventrolateral frons: smooth with sparse punctures. Sculpture of frons below median ocellus: smooth. Sculpture of posterior vertex: coriaceous. Hypercippital carina: absent. Occipital carina medially: complete, weakly crenulate throughout. Length of OOL: greater than 0.5× ocellar diameter. Sculpture of postgena behind outer orbit: smooth. Ocular setae: absent. A4 in female: as long as A3. A5 in female: shorter than A3, distinctly longer than wide. Shape of female A6: distinctly longer than wide.

Color of mesosoma in female: orange throughout; variably yellow to pale brown. Sculpture of dorsal pronotal area: rugose. Sculpture of lateral pronotal area: smooth throughout. Sculpture of netrion: rugulose. Notaulus: percurrent or nearly so. Sculpture of mesoscutum: coriaceous. Shape of mesoscutellum: semiellipsoidal. Foveolae of scutoscutellar sulcus between notauli: smaller than those along margin of axilla. Sculpture of mesoscutellum: smooth with sparse fine punctures. Shape of metascutellum: posterior margin somewhat rounded, approximately 3.5× wider than long. Sculpture of metascutellum in female: smooth. Dorsal propodeum in female: not excavate medially, lateral propodeal carinae meeting anteromedially. Sculpture of dorsal propodeum in female: rugose. Median keels on propodeum in female: absent. Mesopleural carina: present. Sculpture of mesepisternum below mesopleural depression: smooth. Sculpture of ventral metapleural area: largely smooth, rugose ventrally. Color of legs: orange yellow. Sculpture of hind coxa: smooth.

Color of fore wing: hyaline. Rs+M: nebulose, strongly pigmented. Setae on R: long, erect, surpassing the margin of the wing. Length of R: approximately as long as r-rs. Length of R1: greater than 3.0× length of r-rs.

Color of metasoma in female: variably yellow to pale brown. Horn on T1 in female: weakly developed. Sculpture of T1 horn dorsally: smooth. Sculpture of posterior margin of T1 in female: longitudinally striate throughout. Development of longitudi-
nal striae on T2 in female: present on anterior margin of T2 medially, reaching posterior margin of T2 laterally. Sculpture of T3: smooth; smooth with longitudinal submedian striae. Shape of T6 in female: short, subtriangular. Sculpture of S3: smooth.

**Diagnosis.** This species is most similar to *C. foveolatus* but can be distinguished because the foveolae of the scutocutellar sulcus between the notauli are smaller than those along the margin of the axilla and A4 is as long as A3.

**Etymology.** The epithet is an adjective, Latin word for smooth, polished and bald, in reference to the smooth T3.
Link to distribution map. [http://hol.osu.edu/map-full.html?id=384811]

Material examined. Holotype, female: ECUADOR: Napo Prov., Baeza, 2000m, 20.II–25.II.1979, Malaise trap, W. Mason, OSUC 553454 (deposited in CNCI). Paratypes: (12 females) ECUADOR: 10 females, OSUC 458530–458531, 553452, 553455, 553484, 553573, 553579–553580, 553582, 553691 (CNCI). PERU: 2 females, OSUC 534395, 534415 (CNCI).

Calliscelio longius Chen & Johnson, sp. n.
http://zoobank.org/36D661EE-96E2-4EB5-BB2F-0056C9FF514B
http://bioguid.osu.edu/xbiod_concepts/384815
Figures 10–12, 154–159

Description. Body length of female: 2.23–2.97 mm (n=20). Body length of male: 1.86–1.91 mm (n=3). Color of head: black throughout; orange throughout; variably brown to black; variably orange to dark brown. Color of antennal clava (A7–A12): black. Shape of head: subglobose. Central keel of frons: present. Setation of upper frons: with dense, short setae. IOS/EH: IOS distinctly less than EH. Sculpture of ventrolateral frons: granulate. Sculpture of frons below median ocellus: coriaceous; smooth to coriaceous. Sculpture of posterior vertex: granulate. Hyperoccipital carina: absent. Occipital carina medially: complete, weakly crenulate throughout. Length of OOL: less than 0.5× ocellar diameter. Sculpture of postgena behind outer orbit: smooth. Ocular setae: absent. A4 in female: distinctly longer than A3. A5 in female: longer than A3, distinctly longer than wide. Shape of female A6: length distinctly greater than width. Form of male antennal flagellomeres: filiform, A11 approximately 4.5× longer than wide. Length of A5 tyloid in male: approximately 0.3× length of A5.

Color of mesosoma in female: orange throughout; black throughout; variably orange to pale brown. Color of mesosoma in male: brown throughout; black throughout. Sculpture of dorsal pronotal area: rugose. Sculpture of lateral pronotal area: smooth throughout. Sculpture of netrion: smooth. Notaulus: percurrent or nearly so. Sculpture of mesoscutum: coriaceous; granulate. Shape of mesoscutellum: semiellipsoidal. Foveolae of scutoscutellar sulcus between notauli: as large as those along margin of axilla. Sculpture of mesoscutellum: smooth with sparse fine punctures. Shape of metascutellum: posterior margin straight, approximately 4.0× wider than long. Sculpture of metascutellum in female: smooth with a longitudinal, median carina. Sculpture of metascutellum in male: rugose. Dorsal propodeum in female: deeply excavate medially, with lateral propodeal carinae widely separated, running subparallel to accommodate T1 horn. Sculpture of dorsal propodeum in female: rugose. Sculpture of dorsal propodeum in male: rugose with one or two longitudinal keels lateral to median keel. Median keels on propodeum in female: absent. Mesopleural carina: present. Sculpture of mesepisternum below mesopleural depression: smooth. Sculpture of ventral metapleural area: smooth. Color of legs: orange yellow; hind femur brown, otherwise yellow. Sculpture of hind coxa: smooth.
Figures 154–159. *Calliscelio longius* sp. n., female, holotype (OSUC 374730). 154 Lateral habitus 155 Head and mesosoma, lateral view 156 Dorsal habitus 157 Head and mesosoma, dorsal view 158 Head, anterior view 159 Metasoma, dorsal view. Scale bars in millimeters.

Color of fore wing: hyaline. Rs+M: nebulose, strongly pigmented. Setae on R: long, erect, surpassing the margin of the wing. Length of R: distinctly longer than r-rs. Length of R1: greater than 3.0× length of r-rs.

Color of metasoma in female: dark brown; orange throughout; variably orange to black. Color of metasoma in male: brown throughout; variably yellow to pale brown; black throughout. Horn on T1 in female: large and distinct. Sculpture of T1 horn dorsally: transversely striate; smooth to somewhat transversely striate. Sculpture of posterior margin of T1 in female: longitudinally striate throughout. Sculpture of T1
in male: longitudinally striate. Development of longitudinal striae on T2 in female: reaching posterior margin of T2; present on anterior margin of T2 medially, reaching posterior margin of T2 laterally. Sculpture of T3: smooth; smooth with longitudinal submedian striae. Shape of T6 in female: distinctly elongate, approximately 3.5× longer than wide. Sculpture of S3: largely smooth with sparse and fine punctures.

**Diagnosis.** The females of this species are most similar to *C. laticinctus* and *C. prolixus* in color, size and habitus. It can be separated from *C. laticinctus* by A4 distinctly longer than A3 and A5 longer than A3, from *C. prolixus* by the presence of T1 horn and the elongate T6.

**Etymology.** The epithet is an adjective, the Latin word for longer, in reference to A5 longer than A3.

**Link to distribution map.** [http://hol.osu.edu/map-full.html?id=384815](http://hol.osu.edu/map-full.html?id=384815)

**Material examined.** Holotype, female: COLOMBIA: Nariño Dept., Permanent Parcel, M.918, 1885m, 01°15’N 78°15’W, La Planada Nature Reserve, 16.VIII–2. IX.2000, Malaise trap, G. Oliva, OSUC 374730 (deposited in IAVH). Paratypes: (102 females, 3 males) BRAZIL: 3 females, OSUC 534528–534529, 534532 (CNCI). COLOMBIA: 62 females, 1 male, OSUC 557598 (CNCI); OSUC 152153, 152158–152159, 162497, 162588–162589, 162600, 178167, 178187, 178190, 182483, 182735, 182749–182751, 188924, 188926, 188947, 188952, 188956, 188958, 189208, 189212, 189293, 189300, 190935, 191037–191038, 191041, 191301, 191305, 191316, 191318, 193200, 193299, 193319, 193544, 193561–193562, 193567–193569, 193581–193582, 193596, 193685–193686, 193832, 193841, 193915, 193935, 262614–262615, 274571, 274574, 275802, 276238, 372641, 374729, 374731–374732, 377427 (OSUC). ECUADOR: 18 females, 1 male, OSUC 458238, 458487, 553371, 553436, 553444–553445, 553463, 553467, 553474, 553476, 553519, 553527, 553538, 553546, 553596, 553606, 553678, 553690, 557141 (CNCI). PERU: 17 females, 1 male, OSUC 534406, 534413, 534423–534425, 553964, 554034, 554037, 554048, 554051, 554054 (CNCI); OSUC 323931 (OSUC); OSUC 228066–228067, 228070, 228134, 231999, 343061 (USNM). VENEZUELA: 2 females, OSUC 557699–557700 (CNCI).

**Calliscelio magnificus** Chen & Masner, sp. n.

http://zoobank.org/809ACB6E-A75D-4C0F-8F0E-1643F54AE167
http://bioguid.osu.edu/xbiod_concepts/362060

**Figures** 160–165

**Description.** Body length of female: 2.85–3.88 mm (n=19). Body length of male: 2.86–3.00 mm (n=7). Color of head: dark brown; orange to pale brown. Color of antennal clava (A7–A12): dark brown to black. Shape of head: subglobose. Central keel of frons: present. Setation of upper frons: with sparse, short setae. IOS/EH: IOS distinctly less than EH. Sculpture of ventrolateral frons: smooth to rugulose. Sculp-
New World species of the genus Calliscelio Ashmead...

Figures 160–165. Calliscelio magnificus sp. n., female, holotype (OSUC 458272). 160 Lateral habitus 161 Head and mesosoma, lateral view 162 Dorsal habitus 163 Head and mesosoma, dorsal view 164 Head, anterior view 165 Metasoma, dorsal view. Scale bars in millimeters.

Structure of frons below median ocellus: smooth; coriaceous. Sculpture of posterior vertex: granulate. Hyperoccpital carina: absent. Occipital carina medially: complete, weakly crenulate throughout. Length of OOL: less than 0.5× ocellar diameter. Sculpture of postgena behind outer orbit: largely smooth with small granulate area. Ocular setae: absent. A4 in female: distinctly longer than A3. A5 in female: shorter than A3, distinctly longer than wide. Shape of female A6: length distinctly greater than width. Form of male antennal flagellomeres: filiform, A11 approximately 3.5× longer than wide. Length of A5 tyloid in male: approximately 0.3× length of A5.
Color of mesosoma in female: variably orange to pale brown. Color of mesosoma in male: variably orange to pale brown. Sculpture of dorsal pronotal area: rugose. Sculpture of lateral pronotal area: smooth throughout. Sculpture of notrion: smooth. Notaulus: percurrent or nearly so. Sculpture of mesoscutum: granulate. Shape of mesoscutellum: semiellipsoidal. Foveolae of scutoscutellar sulcus between notauli: smaller than those along margin of axilla. Sculpture of mesoscutellum: smooth with sparse fine punctures. Shape of metascutellum: broad, short. Sculpture of metascutellum in female: smooth with a longitudinal, median carina. Sculpture of metascutellum in male: smooth. Dorsal propodeum in female: deeply excavate medially, with lateral propodeal carinae widely separated, running subparallel to accommodate T1 horn. Sculpture of dorsal propodeum in female: rugose. Sculpture of dorsal propodeum in male: rugose with one or two longitudinal keels lateral median keel. Median keels on propodeum in female: absent. Mesopleural carina: present. Sculpture of mesepisternum below mesopleural depression: smooth. Sculpture of ventral metapleural area: smooth. Color of legs: orange yellow; pale brown. Sculpture of hind coxa: smooth.

Color of fore wing: hyaline. Rs+M: nebulose, strongly pigmented. Setae on R: long, erect, surpassing the margin of the wing. Length of R: approximately as long as r-rs. Length of R1: greater than 3.0× length of r-rs.

Color of metasoma in female: variably orange to pale brown. Color of metasoma in male: variably orange to pale brown. Horn on T1 in female: large and distinct. Sculpture of T1 horn dorsally: smooth. Sculpture of posterior margin of T1 in female: longitudinally striate throughout. Sculpture of T1 in male: longitudinally striate. Development of longitudinal striae on T2 in female: present on anterior margin of T2 medially, reaching posterior margin of T2 laterally. Sculpture of T3: smooth with longitudinal submedian striae. Shape of T6 in female: distinctly elongate, approximately 3.0× longer than wide. Sculpture of S3: largely smooth with sparse and fine punctures.

**Diagnosis.** The females of this species are easily distinguished from other *Calliscelio* species by the combination of large and smooth T1 horn, elongate T6 and large body size. The males are most similar to *C. flavocauda, C. laticinctus* and *C. longius* but can be separated by the smooth metascutellum.

**Etymology.** The specific epithet is to be treated as a noun in apposition, derived from the Latin for “splendid” and refers to our impression of this species.

**Link to distribution map.** [http://hol.osu.edu/map-full.html?id=362060](http://hol.osu.edu/map-full.html?id=362060)

**Material examined.** Holotype, female: PERU: Huánuco Reg., 39km NE Tingo Maria, Azul Range, 1700m, 11.I–14.I.1983, Newton & Thayer, OSUC 458272 (deposited in CNCI). Paratypes: (20 females, 8 males) COSTA RICA: 2 females, OSUC 532663, 532746 (CNCI). ECUADOR: 1 female, OSUC 553449 (CNCI). PERU: 13 females, 8 males, OSUC 458263–458264, 458266–458271, 458273–458284, 534405 (CNCI). VENEZUELA: 4 females, OSUC 458233–458235, 557668 (CNCI).
Calliscelio migma Chen & Johnson, sp. n.
http://zoobank.org/2F3A637F-06EC-4ECE-8E73-D337BA903320
http://bioguid.osu.edu/xbiod_concepts/384750
Figures 166–171

Description. Body length of female: 1.34–2.16 mm (n=20). Body length of male: 1.43–1.94 mm (n=20). Color of head: yellow throughout; orange throughout. Color of antennal clava (A7–A12): dark brown to black; A7, A8 brown, A9–A12 white to pale yellow. Shape of head: subglobose. Central keel of frons: absent. Setation of upper frons: with dense, short setae; with sparse, short setae. IOS/EH: IOS distinctly less than EH. Sculpture of ventrolateral frons: smooth to granulate. Sculpture of frons below median ocellus: smooth; granulate. Sculpture of posterior vertex: smooth; granulate to rugulose. Hyperoccipital carina: absent. Occipital carina medially: weakly indicated, irregularly sculptured. Length of OOL: less than 0.5× ocellar diameter; greater than 0.5× ocellar diameter. Sculpture of postgena behind outer orbit: smooth. Ocular setae: absent. A4 in female: distinctly longer than A3. Shape of female A5: length distinctly greater than width. Shape of female A6: length distinctly greater than width. Form of male antennal flagellomeres: thread-like, length at least 4.0× greater than width. Length of A5 tyloid in male: approximately 0.3× length of A5.

Color of mesosoma in female: orange throughout; yellow throughout. Color of mesosoma in male: orange throughout; yellow throughout. Sculpture of dorsal pronotal area: rugose; smooth. Sculpture of lateral pronotal area: smooth throughout. Sculpture of netrion: smooth. Notaulus: percurrent or nearly so. Sculpture of mesoscutum: smooth with sparse punctures; coriaceous. Shape of mesoscutellum: semiellipsoidal. Scutoscutellar sulcus medially: weakly foveolate. Sculpture of mesoscutellum: smooth with sparse fine punctures; coriaceous. Shape of metascutellum: broad, short. Sculpture of metascutellum in female: smooth; rugose. Sculpture of metascutellum in male: rugose; smooth. Dorsal propodeum in female: shallowly excavate medially, with lateral propodeal carinae widely separated. Sculpture of lateral propodeal area in female: rugose. Sculpture of lateral propodeal area in male: rugose with one or two longitudinal keels lateral to median keel; longitudinally striate. Median keels on propodeum in female: absent. Mesopleural carina: absent. Sculpture of mesepisternum below mesopleural depression: smooth. Sculpture of ventral metapleural area: smooth; largely smooth, rugose ventrally. Color of legs: orange throughout; pale yellow throughout. Sculpture of hind coxa: smooth.

Color of fore wing: hyaline. Rs+M: nebulose, strongly pigmented. Setae on R: long, erect, surpassing the margin of the wing. Length of R: approximately as long as r-rs. Length of R1: greater than 3.0× length of r-rs.

Color of metasoma in female: orange throughout; yellow throughout. Color of metasoma in male: orange throughout; variably orange to pale brown. Horn on T1 in female: large and distinct; present as a small bulge. Sculpture of T1 horn dorsally: smooth; rugulose; transversely striate; smooth to somewhat transversely striate. Sculpture of posterior
Figures 166–171. *Calliscelio migma* sp. n., female, holotype (OSUC 380181). 166 Lateral habitus 167 Head and mesosoma, lateral view 168 Dorsal habitus 169 Head and mesosoma, dorsal view 170 Head, anterior view 171 Metasoma, dorsal view. Scale bars in millimeters.

margin of T1 in female: longitudinally striate throughout. Sculpture of T1 in male: longitudinally striate. Development of longitudinal striae on T2 in female: present on anterior margin of T2 medially, reach posterior margin of T2 laterally. Sculpture of T3: smooth with longitudinal submedian striae; longitudinally striate throughout. Shape of T6 in female: short, subtriangular. Sculpture of S3: largely smooth with sparse and fine punctures.

**Diagnosis.** This species is most similar to *C. amadoi* in color and size but it can be easily distinguished by having A5 and A6 in female distinctly longer than wide, whereas in *C. amadoi* A5 is slightly longer than wide, A6 quadrate.
**Etymology.** The epithet is used as a noun in apposition derived from the Greek word for mixture, in reference to the variations in female antennae color and T1 horn sculpture.

**Link to distribution map.** [http://hol.osu.edu/map-full.html?id=384750](http://hol.osu.edu/map-full.html?id=384750)

**Material examined.** Holotype, female: BRAZIL: PA, Melgaço Mpio., Igarapé Tijucaquara, trail, M11, P05128, 01°44’12.8"S 51°29’56.6"W, Cassiquianá, 18.XI–24.XI.2003, Malaise trap, A. P. Aguier & J. Dias, OSUC 380181 (deposited in MPEG). Paratypes: (661 females, 82 males) BOLIVIA: 1 female, OSUC 534172 (CNCI). BRAZIL: 233 females, 41 males, OSUC 534513-534516, 534531, 534535, 534543-534545, 557166, 557201-557202, 557204, 557208-557209, 557395 (CNCI); OSUC 252141, 322371, 322377, 322671, 326226, 326230, 344407-344408, 344487, 345100, 345312, 345325, 345331, 345899, 346174, 346180, 346888, 346946, 346954, 346964, 347060, 347207-347208, 347213, 347229, 347427, 347437, 348008, 348115, 348641, 348678, 349368, 349636, 349659, 349685, 349771, 349783, 349785, 351289, 351329, 351462, 351467, 351525, 351528, 351673, 351677-351678, 351680-351683, 351815, 351823, 351833, 351836-351838, 352357, 352800, 352802, 352806, 352810, 352812, 353174-353175, 353177, 353717, 353725-353726, 353732, 353951-353953, 354075, 354082, 354710, 354831, 354885, 354892, 354895, 354898, 354900, 362588-362589, 363839, 363846-363848, 363849, 370897, 370905, 370908, 370915, 370923-370924, 371841-371842, 371844, 376057, 376541, 378963, 477166-477167, 577157, 577162, 577173, 583256 (MZSP); OSUC 251768, 252087, 322150, 322152, 322370, 322532, 322545-322547, 323091, 323958, 323964, 323970, 326189, 326397, 326404, 326502-326503, 326505, 326538, 337221-337222, 346041, 346997, 347244, 347277, 347293, 347295, 347655, 347660, 347671, 347678, 347852, 347871, 347954, 348074-348075, 348081, 348094, 348097, 348117, 348356, 349102-349103, 349107, 349111, 349201, 351425, 353047, 353426, 354797, 357021, 362607, 366698, 366701, 366712, 366721, 366778-366779, 366790, 366808, 366938-366939, 366944-366945, 366953, 366964-366966, 366974, 371836, 371839, 371849, 372549-372550, 373757, 373761, 373773, 373779, 374557, 374560-374561, 374717, 374739-374741, 376486, 376498-376500, 376505, 376509, 376527, 376530-376531, 376538, 376542, 376966, 377495-377497, 378014-378015, 378033, 378035, 378041, 378054-378055, 378063, 378080, 378085, 378595, 378597, 378960-378962, 378967, 378969, 378972-378973, 378979, 380182, 45697, 45721, 55930-55932, 55946, 55953, 61378, 61404, 61446, 61454, 61499, 61504, 61518, 61580, 63283, 63288, 63292, 63295, 63309, 63319, 63330, 63353, 63362, 63431, 63439, 63538, 63643-63644, 63665 (OSUC). COLOMBIA: 330 females, 19 males, OSUC 557547, 557549, 557555-557556, 557599, 557622, 557640, 557645-557646 (CNCI); OSUC 144165, 152145, 152147-152148, 162500, 162506, 162510, 162514, 162590, 162592, 162605, 162614, 162621-162623, 178018-178019, 178091, 178157-178159, 178161, 178165-178166, 178169-178173, 178175-178177, 178183, 178185, 178188-178189, 178194, 178196-178197, 178199-178200, 178202-178204, 178206, 179458-179459, 182585-182587, 182589-182590, 182594, 182721, 182736, 182738-182739, 188624, 188684, 188921, 188923, 188928-188930, 188950, 188953, 189276, 189278, 189280, 189284, 189288, 189301-189302, 189392, 191095,
that A7, A8 brown, A9–A12 white to pale yellow. T1 horn usually is smooth, while
of the female antennal club is dark brown to black, while there are a few exceptions

This species is well supported by many characters, although there

Comments. This species is well supported by many characters, although there are
variations in female antennae color and T1 horn sculpture. The common color
of the female antennal club is dark brown to black, while there are a few exceptions
that A7, A8 brown, A9–A12 white to pale yellow. T1 horn usually is smooth, while
a few species rugulose, or transversely striate, or smooth to somewhat transversely striate. These variations are gradual among specimens. Therefore we consider them as intraspecific rather than interspecific.

**Calliscelio minutia** Chen & Johnson, sp. n.
http://zoobank.org/89839644-E7FF-40CF-834B-5C380C230B9B
http://bioguid.osu.edu/xbiod_concepts/363279
Figures 172–177

**Description.** Body length of female: 1.70–2.06 mm (n=20). Body length of male: 1.77–1.94 mm (n=8). Color of head: yellow throughout. Color of antennal clava (A7–A12): dark brown to black. Shape of head: subglobose. Central keel of frons: absent. Setation of upper frons: with sparse, long setae. IOS/EH: IOS distinctly less than EH. Sculpture of ventrolateral frons: granulate. Sculpture of frons below median ocellus: granulate. Sculpture of posterior vertex: granulate. Hyperoccipital carina: absent. Occipital carina medially: interrupted. Length of OOL: less than 0.5× ocellar diameter. Sculpture of postgena behind outer orbit: granulate. Ocular setae: absent. A4 in female: distinctly shorter than A3. A5 in female: shorter than A3, as long as wide. Shape of female A6: distinctly wider than long. Form of male antennal flagellomeres: filiform, A11 approximately 2.0× longer than wide. Length of A5 tyloid in male: greater than 0.5× length of A5.

Color of mesosoma in female: yellow throughout; yellow with mesoscutellum pale brown. Color of mesosoma in male: yellow throughout; variably yellow to pale brown. Sculpture of dorsal pronotal area: rugose. Sculpture of lateral pronotal area: smooth anteriorly, granulate posteriorly. Sculpture of metanotum: smooth. Notaulus: percurrent or nearly so. Sculpture of mesoscutum: granulate. Shape of mesoscutellum: semielipsoidal. Foveolae of scutoscutellar sulcus between notauli: absent. Sculpture of mesoscutellum: granulate. Shape of metascutellum: posterior margin rounded, approximately 3.0× wider than long. Sculpture of metascutellum in female: smooth. Sculpture of metascutellum in male: rugose. Dorsal propodeum in female: not excavate medially, lateral propodeal carinae meeting anteromedially. Sculpture of dorsal propodeum in female: smooth to rugulose. Sculpture of dorsal propodeum in male: rugulose. Median keels on propodeum in female: absent. Mesopleural carina: present. Sculpture of mesepisternum below mesopleural depression: smooth. Sculpture of ventral metapleural area: smooth dorsally, densely punctate ventrally. Color of legs: pale yellow throughout; hind coxa pale brown, otherwise pale yellow. Sculpture of hind coxa: smooth.

Color of fore wing: hyaline with infuscate band in the middle. Rs+M: spectral. Setae on R: long, erect, surpassing the margin of the wing. Length of R: distinctly shorter than r-rs. Length of R1: approximately as long as 2.0× length of r-rs.

Color of metasoma in female: yellow with variable pale brown patches; yellow throughout. Color of metasoma in male: variably yellow to pale brown. Horn on T1 in female: absent. Sculpture of posterior margin of T1 in female: longitudinally striate throughout. Sculpture of T1 in male: longitudinally striate. Development of
Figures 172–177. *Calliscelio minutia* sp. n., female, holotype (OSUC 433847). 172 Lateral habitus 173 Head and mesosoma, lateral view 174 Dorsal habitus 175 Head and mesosoma, dorsal view 176 Head, anterior view 177 Metasoma, dorsal view. Scale bars in millimeters.

longitudinal striae on T2 in female: reaching posterior margin of T2. Sculpture of T3: smooth. Shape of T6 in female: short, wider than long. Sculpture of S3: smooth.

**Diagnosis.** This species is most similar to *C. suni* in color, size and habitus, and it is also similar to small specimens of *C. sfina*. It can be separated by the presence of an infuscate band in the middle of the fore wing.

**Etymology.** The epithet is used as a noun in apposition derived from the Latin word for smallness, in reference to the body size.

**Link to distribution map.** [http://hol.osu.edu/map-full.html?id=363279]
Material examined. Holotype, female: BRAZIL: BA, Mata da Esperança, YPT T3, 14°46’S 39°04’W, Ilheus, 18.V–21.V.2002, yellow pan trap, A. M. Penteado-Dias et al., OSUC 433847 (deposited in MZSP). Paratypes: (23 females, 8 males) BRAZIL: 23 females, 7 males, OSUC 534541 (CNCI); OSUC 433803, 433818 (MZSP); OSUC 150797–150798, 150800, 150965, 150973, 322554–322556, 367440–367441, 378985, 427459–427460, 427462–427463, 433806–433807, 433820, 433822, 433826–433827, 433849–433851, 577073, 583209, 583246 (OSUC). COLOMBIA: 1 male, OSUC 193408 (OSUC).

Calliscelio paraglaber Chen & Johnson, sp. n.
http://zoobank.org/4C30C899-9BA9-429D-A1EB-C1D4DA175750
http://bioguid.osu.edu/xbiod_concepts/362057
Figures 178–183

Description. Body length of female: 1.73–2.27 mm (n=20). Body length of male: 1.60–1.63 mm (n=14). Color of head: black throughout. Color of antennal clava (A7–A12): dark brown to black. Shape of head: subglobose. Central keel of frons: absent. Setation of upper frons: with sparse, long setae. IOS/EH: IOS distinctly less than EH. Sculpture of ventrolateral frons: smooth. Sculpture of frons below median ocellus: smooth. Sculpture of posterior vertex: smooth. Hyperoccipital carina: absent. Occipital carina medially: weakly indicated, irregularly sculptured. Length of OOL: less than 0.5× ocellar diameter. Sculpture of postgena behind outer orbit: smooth. Ocular setae: absent. A4 in female: distinctly shorter than A3. A5 in female: shorter than A3, distinctly longer than wide. Shape of female A6: as long as wide. Form of male antennal flagellomeres: filiform, A11 approximately 4.0× longer than wide. Length of A5 tyloid in male: approximately 0.3× length of A5.

Color of mesosoma in female: black throughout. Color of mesosoma in male: black throughout. Sculpture of dorsal pronotal area: rugose. Sculpture of lateral pronotal area: smooth throughout. Sculpture of netrion: smooth. Notaulus: percurrent or nearly so. Sculpture of mesoscutum: smooth throughout. Shape of mesoscutellum: semiellipsoidal. Foveolae of scutoscutellar sulcus between notaulli: smaller than those along margin of axilla. Sculpture of mesoscutellum: smooth throughout. Shape of metascutellum: posterior margin somewhat rounded, approximately 4.0× wider than long. Sculpture of metascutellum in female: smooth. Sculpture of metascutellum in male: smooth. Dorsal propodeum in female: not excavate medially, lateral propodeal carinae meeting anteromedially. Sculpture of dorsal propodeum in female: rugose. Sculpture of dorsal propodeum in male: rugose. Median keels on propodeum in female: absent. Mesopleural carina: absent. Sculpture of meseptisternum below mesopleural depression: smooth. Sculpture of ventral metapleural area: smooth. Color of legs: pale yellow throughout. Sculpture of hind coxa: smooth.

Color of fore wing: hyaline. Rs+M: nebulose, weakly pigmented. Setae on R: long, erect, surpassing the margin of the wing. Length of R: approximately as long as r-rs. Length of R1: greater than 3.0× length of r-rs.
Figures 178-183. **Calliscelio paraglaber** sp. n., female, holotype (OSUC 532684). 178 Lateral habitus 179 Head and mesosoma, lateral view 180 Dorsal habitus 181 Head and mesosoma, dorsal view 182 Head, anterior view 183 Metasoma, dorsal view. Scale bars in millimeters.

Color of metasoma in female: T1 yellow, otherwise dark brown to black. Color of metasoma in male: brown throughout. Horn on T1 in female: weakly developed. Sculpture of T1 horn dorsally: smooth. Sculpture of posterior margin of T1 in female: longitudinally striate throughout. Sculpture of T1 in male: longitudinally striate. Development of longitudinal striae on T2 in female: reaching the middle of T2 medially; reaching posterior margin of T2. Sculpture of T3: smooth with longitudinal submedian striae. Shape of T6 in female: short, slightly longer than wide. Sculpture of S3: largely smooth with sparse and fine punctures.
**Diagnosis.** This species is most similar to *C. glaber* and *C. torqueo* in its smooth head and metascutellum. It may be separated from those two species by the complete occipital carina.

**Etymology.** The name refers to the high degree of similarity with *C. glaber* and is intended to be used as a noun in apposition.

**Link to distribution map.** [http://hol.osu.edu/map-full.html?id=362057]

**Material examined.** Holotype, female: **COSTA RICA:** Puntarenas Prov., 24km W Piedras Blancas, Golfo Dulce, 200m, VI.1989–VIII.1989, Hanson & Goulet, OSUC 532684 (deposited in CNCI). Paratypes: (41 females, 14 males) **COLOMBIA:** 3 females, OSUC 191100–191101, 269212 (OSUC). **COSTA RICA:** 32 females, 14 males, OSUC 532459–532460, 532462, 532491, 532507–532510, 532517, 532521, 532527–532530, 532533, 532551, 532553–532554, 532576, 532589, 532592–532594, 532597–532601, 532610, 532612–532613, 532667–532669, 532673, 532677, 532682, 532686, 532688–532689, 532691–532692, 532708, 532783, 532791, 532929 (CNCI). **GUYANA:** 2 females, OSUC 534274–534275 (CNCI). **MEXICO:** 2 females, OSUC 534013, 557255 (CNCI). **VENEZUELA:** 2 females, OSUC 557665, 557671 (CNCI).

**Calliscelio pararemigio** Chen & Masner, sp. n.
http://zoobank.org/D91754CD-B065-431B-B920-3428604B4DF5
http://bioguid.osu.edu/xbiod_concepts/362061
Figures 184–189

**Description.** Body length of female: 2.53–3.38 mm (n=10). Body length of male: 2.11–2.75 mm (n=5). Color of head: black throughout. Color of antennal clava (A7–A12): dark brown to black; A12 pale yellow, remainder dark brown to black. Shape of head: subglobose. Central keel of frons: absent. Setation of upper frons: with sparse, long setae. IOS/EH: IOS distinctly less than EH. Sculpture of ventrolateral frons: smooth with sparse punctures. Sculpture of frons below median ocellus: smooth. Sculpture of posterior vertex: smooth. Hyperoccipital carina: absent. Occipital carina medially: interrupted. Length of OOL: greater than 0.5× ocellar diameter. Sculpture of postgena behind outer orbit: smooth. Ocular setae: absent. A4 in female: as long as A3. A5 in female: shorter than A3, distinctly longer than wide. Shape of female A6: distinctly longer than wide. Form of male antennal flagellomeres: filiform, A11 approximately 3.0× longer than wide. Length of A5 tyloid in male: approximately 0.3× length of A5. Color of mesosoma in female: orange throughout; variably yellow to pale brown. Color of mesosoma in male: orange throughout. Sculpture of dorsal pronotal area: rugose. Sculpture of lateral pronotal area: smooth anteriorly, granulate posteriorly. Sculpture of metanotum: rugulate. Notaulus: percurrent or nearly so. Sculpture of mesoscum: smooth with sparse punctures; coriaceous; densely punctate. Shape of mesoscum: semiellipsoidal. Foveolae of scutocutellar sulcus between notauli: smaller than those along margin of axilla. Sculpture of mesoscum: smooth with sparse fine
Figures 184–189. Calliscelio pararemigio sp. n., female, holotype (OSUC 458239). 184 Lateral habitus 185 Head and mesosoma, lateral view 186 Dorsal habitus 187 Head and mesosoma, dorsal view 188 Head, anterior view 189 Metasoma, dorsal view. Scale bars in millimeters.
present. Sculpture of mesepisternum below mesopleural depression: smooth. Sculpture of ventral metapleural area: smooth. Color of legs: coxae to femur white, remainder of the legs pale yellow; pale yellow throughout. Sculpture of hind coxa: smooth.

Color of fore wing: hyaline. Rs+M: spectral. Setae on R: long, erect, surpassing the margin of the wing. Length of R: approximately as long as r-rs. Length of R1: approximately as long as 2.0× length of r-rs.

Color of metasoma in female: orange throughout; variably orange to pale brown. Color of metasoma in male: orange throughout; variably orange to pale brown. Horn on T1 in female: large and distinct. Sculpture of T1 horn dorsally: densely and concentrically striate anteriorly, smooth posteriorly. Sculpture of posterior margin of T1 in female: longitudinally striate throughout. Sculpture of T1 in male: longitudinally striate. Development of longitudinal striae on T2 in female: reaching posterior margin of T2. Sculpture of T3: smooth with longitudinal submedian striae. Shape of T6 in female: distinctly elongate, approximately 3.0× longer than wide. Sculpture of S3: largely smooth with sparse and fine punctures.

**Diagnosis.** This species is most similar to *C. remigio* but can be distinguished by its subglobose head and densely and concentrically striate T1 horn on anterior portion in female. In males, it can be separated from *C. remigio* by the subglobose head and the largely smooth S3.

**Etymology.** The specific epithet is a reference to the high degree of similarity with *C. remigio* and is intended to be used as a noun in apposition.

**Link to distribution map.** [http://hol.osu.edu/map-full.html?id=362061](http://hol.osu.edu/map-full.html?id=362061)

**Material examined.** Holotype, female: CUBA: Santiago de Cuba Prov., La Isabelica, environs of Gran Piedra Mountain, 1100m, 6.XII–7.XII.1995, screen sweeping, L. Masner, OSUC 458239 (deposited in CNCI). Paratypes: (9 females, 5 males) CUBA: 1 female, OSUC 458240 (CNCI). DOMINICAN REPUBLIC: 8 females, 5 males, CMNH-486,653, 490,811 (CMNH); OSUC 458302, 458315–458324 (CNCI).

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**Calliscelio prolixus** Chen & Johnson, sp. n.
http://zoobank.org/E287C8E0-BBF5-4850-914A-7B0C4BC1548F
http://bioguid.osu.edu/xbiod_concepts/384175
Figures 190–195

**Description.** Body length of female: 2.00–2.48 mm (n=11). Color of head: dark brown; orange to pale brown. Color of antennal clava (A7–A12): dark brown to black; A7 yellow, remainder dark brown to black. Shape of head: subglobose. Central keel of frons: present. Setation of upper frons: with dense, short setae. IOS/EH: IOS distinctly less than EH. Sculpture of ventrolateral frons: granulate. Sculpture of frons below median ocellus: smooth to coriaceous. Sculpture of posterior vertex: granulate. Hyperoccipital carina: absent. Occipital carina medially: complete, weakly crenulate throughout. Length of OOL: less than 0.5× ocellar diameter. Sculpture of postgena
behind outer orbit: smooth. Ocular setae: absent. A4 in female: distinctly longer than A3. A5 in female: longer than A3, distinctly longer than wide. Shape of female A6: distinctly longer than wide.

Color of mesosoma in female: variably orange to pale brown. Sculpture of dorsal pronotal area: rugose. Sculpture of lateral pronotal area: smooth throughout. Sculpture of netrion: smooth. Notaulus: percurrent or nearly so. Sculpture of mesoscutum: coriaceous. Shape of mesoscutellum: semiellipsoidal. Foveolae of scutoscutellar sulcus between notauli: as large as those along margin of axilla. Sculpture of mesoscutellum:
smooth with sparse fine punctures. Shape of metascutellum: posterior margin straight, approximately 4.0× wider than long. Sculpture of metascutellum in female: rugose. Dorsal propodeum in female: not excavate medially, lateral propodeal carinae meeting anteromedially. Sculpture of dorsal propodeum in female: rugose with one or two longitudinal keels lateral median keel. Median keels on propodeum in female: absent. Mesopleural carina: present. Sculpture of mesepisternum below mesopleural depression: smooth. Sculpture of ventral metapleural area: smooth. Color of legs: variably orange to pale brown. Sculpture of hind coxa: smooth.

Color of fore wing: hyaline. Rs+M: nebulose, strongly pigmented. Setae on R: long, erect, surpassing the margin of the wing. Length of R: distinctly longer than r-rs. Length of R1: greater than 3.0× length of r-rs.

Color of metasoma in female: variably yellow to pale brown. Horn on T1 in female: absent. Sculpture of posterior margin of T1 in female: longitudinally striate throughout. Development of longitudinal striae on T2 in female: reaching the middle of T2 medially. Sculpture of T3: smooth. Shape of T6 in female: short, slightly longer than wide. Sculpture of S3: smooth.

Diagnosis. This species is most similar to *C. longius* in elongate antenna, color and habitus. It can be distinguished by the absence of T1 horn and the subtriangular T6 in female.

**Etymology.** The epithet is an adjective, Latin word for long, for reference to the elongate antenna.

**Link to distribution map.** [http://hol.osu.edu/map-full.html?id=384175](http://hol.osu.edu/map-full.html?id=384175)

**Material examined.** Holotype, female: COLOMBIA: Valle del Cauca Dept., 650m, 03°26′N, 76°48′W, Farallones de Cali Natural National Park, 19.XII–2.I.2001, Malaise trap, S. Sarria, OSUC 557587 (deposited in CNCI). Paratypes: (10 females) BRAZIL: 1 female, OSUC 322538 (OSUC). COLOMBIA: 4 females, OSUC 557588–557589, 557591 (CNCI); OSUC 268908 (OSUC). ECUADOR: 5 females, OSUC 553448, 553453, 553472, 553516, 553656 (CNCI).

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**Calliscelio punctatifrons** Chen & Johnson, sp. n.

http://zoobank.org/ACEE562D-FAE5-4C8C-8DE7-92FE3B7ADF08
http://bioguid.osu.edu/xbiod_concepts/363280

Figures 1–3, 196–201

**Description.** Body length of female: 1.80–2.56 mm (n=20). Body length of male: 1.45–1.88 mm (n=20). Color of head: black throughout. Color of antennal clava (A7–A12): black. Shape of head: subglobose. Central keel of frons: absent. Setation of upper frons: with dense, long setae. IOS/EH: IOS distinctly less than EH. Sculpture of ventrolateral frons: irregularly punctate. Sculpture of frons below median ocellus: densely punctate. Sculpture of posterior vertex: densely punctate. Hyperoccipital carina: absent. Occipital carina medially: complete, strongly crenulate throughout. Length of OOL: less than 0.5× ocellar diameter. Sculpture of postgena behind outer orbit: granulate with
Figures 196–201. *Calliscelio punctatifrons* sp. n., female, holotype (OSUC 191124). 196 Lateral habitus 197 Head and mesosoma, lateral view 198 Dorsal habitus 199 Head and mesosoma, dorsal view 200 Head, anterior view 201 Metasoma, dorsal view. Scale bars in millimeters.

sparse punctures. Ocular setae: dense, long. A4 in female: distinctly shorter than A3. A5 in female: shorter than A3, as long as wide. Shape of female A6: distinctly wide than long. Form of male antennal flagellomeres: filiform, A11 approximately 2.5× longer than wide. Length of A5 tyloid in male: greater than 0.5× length of A5.

Color of mesosoma in female: black throughout. Color of mesosoma in male: black throughout. Sculpture of dorsal pronotal area: areolate. Sculpture of lateral pronotal area: smooth throughout. Sculpture of netrion: striate. Notaulus: percurrent or nearly so. Sculpture of mesoscutum: smooth with sparse punctures; coriaceous anteriorly,
New World species of the genus Calliscelio Ashmead...

smooth with sparse fine punctures posteriorly. Shape of mesoscutellum: semiellipsoidal. Foveolae of scutoscutellar sulcus between notauli: as large as those along margin of axilla. Sculpture of mesoscutellum: smooth with sparse fine punctures. Shape of metascutellum: posterior margin straight, approximately 2.5× wider than long. Sculpture of metascutellum in female: rugose; rugose anteriorly, smooth posteriorly. Sculpture of metascutellum in male: rugose. Dorsal propodeum in female: shallowly excavate medially, with lateral propodeal carinae widely separated. Sculpture of dorsal propodeum in female: rugose. Sculpture of dorsal propodeum in male: rugose. Median keels on propodeum in female: absent. Mesopleural carina: present. Sculpture of mesepisternum below mesopleural depression: largely smooth with a row of foveae along mesopleural carina. Sculpture of ventral metapleural area: largely smooth, rugose ventrally. Color of legs: orange throughout; pale yellow throughout. Sculpture of hind coxa: smooth.

Color of fore wing: subhyaline. Rs+M: nebulose, weakly pigmented. Setae on R: long, erect, surpassing the margin of the wing. Length of R: distinctly shorter than r-rs. Length of R1: approximately as long as 2.0× length of r-rs.

Color of metasoma in female: orange throughout; reddish brown to black. Color of metasoma in male: variably orange to pale brown; brown throughout; reddish brown. Horn on T1 in female: present as a small bulge. Sculpture of T1 horn dorsally: smooth. Sculpture of posterior margin of T1 in female: longitudinally striate throughout. Sculpture of T1 in male: longitudinally striate. Development of longitudinal striae on T2 in female: reaching the middle of T2 medially. Sculpture of T3: smooth. Shape of T6 in female: short, slightly longer than wide. Sculpture of S3: largely smooth with sparse and fine punctures.

Diagnosis. This species (especially small specimens) is most similar to C. bisulcatus but can be distinguished by the long setae on upper frons and pigmented Rs+M.

Etymology. The specific epithet refers to the punctate frons and should be treated as a noun in apposition.

Link to distribution map. [http://hol.osu.edu/map-full.html?id=363280]

Material examined. Holotype, female: COLOMBIA: Bolívar Dept., La Suisris, M.617, 126m, 09°54’N 75°07’W, Los Colorados Fauna and Flora Sanctuary, 12.IX–15.IX.2000, Malaise trap, E. Deulufeut, OSUC 191124 (deposited in IAVH). Paratypes: (192 females, 55 males) BELIZE: 32 females, 13 males, OSUC 534198, 534201, 534204–534205, 534211–534213, 534219–534221, 534276, 534278, 534280–534282, 534285–534289, 534293–534300, 534309, 534312 (CNCI); OSUC 185848, 185852, 243690–243691, 48053, 91681, 91684, 91688, 91691, 91697–91698, 91701, 91704, 93637–93638 (OSUC). BOLIVIA: 4 females, OSUC 534185, 534187, 534190–534191 (CNCI). BRAZIL: 1 female, 7 males, OSUC 557160–557165, 557296 (CNCI); OSUC 133029 (OSUC). COLOMBIA: 20 females, 14 males, OSUC 557409–557413, 557422–557427, 557458–557470, 557609, 557611, 557619 (CNCI); OSUC 191128, 191140 (IAVH); OSUC 182753, 191123, 191125, 191142, 259758 (OSUC). COSTA RICA: 37 females, OSUC 532465, 532469–532470, 532474, 532487–532490, 532497, 532502, 532543, 532558–532560, 532563, 532580–532582, 532623, 532625, 532640–532641, 532644,
Calliscelio remigio Chen & Masner, sp. n.

http://zoobank.org/CB62A4C2-F171-4C23-B065-A63A0A197B7A
http://bioguid.osu.edu/xbiod_concepts/362059

Figures 202–207

**Description.** Body length of female: 2.56–2.96 mm (n=16). Body length of male: 2.45–2.70 mm (n=7). Color of head: black throughout. Color of antennal clava (A7–A12): dark brown to black. Shape of head: strongly transverse. Central keel of frons: absent. Setation of upper frons: with sparse, long setae. IOS/EH: IOS distinctly less than EH. Sculpture of ventrolateral frons: smooth with sparse punctures. Sculpture of frons below median ocellus: smooth. Sculpture of posterior vertex: smooth. Hyperoccipital carina: absent. Occipital carina medially: interrupted. Length of OOL: greater than 0.5× ocellar diameter. Sculpture of postgena behind outer orbit: smooth. Ocular setae: absent. A4 in female: as long as A3. A5 in female: shorter than A3, distinctly longer than wide. Shape of female A6: distinctly longer than wide. Form of male antennal flagellomeres: filiform, A11 approximately 3.0× longer than wide. Length of A5 tyloid in male: approximately 0.3× length of A5.

Color of mesosoma in female: orange with longitudinal, median black strip on anterior mesoscutum. Color of mesosoma in male: orange with longitudinal, median black strip on anterior mesoscutum. Sculpture of dorsal pronotal area: smooth. Sculpture of lateral pronotal area: smooth anteriorly, punctate rugulose posteriorly. Sculpture of netrion: rugulose. Notaulus: percurrent or nearly so. Sculpture of mesoscutum: smooth with sparse punctures; densely punctate. Shape of mesoscutellum: semiellipsoidal. Foveolae of scutoscutellar sulcus between notauli: smaller than those along margin of axilla. Sculpture of mesoscutellum: smooth with sparse fine punc-
New World species of the genus Calliscelio Ashmead...

Figures 202–207. Calliscelio remigio sp. n., female, holotype (OSUC 458296). 202 Lateral habitus 203 Head and mesosoma, lateral view 204 Dorsal habitus 205 Head and mesosoma, dorsal view 206 Head, anterior view 207 Metasoma, dorsal view. Scale bars in millimeters.

Shapes of metascutellum: posterior margin straight, approximately 3.0× wider than long. Sculpture of metascutellum in female: finely crenulate. Sculpture of metascutellum in male: finely crenulate. Dorsal propodeum in female: shallowly excavate medially, with lateral propodeal carinae widely separated. Sculpture of dorsal propodeum in female: rugose. Sculpture of dorsal propodeum in male: rugose with one or two longitudinal keels lateral median keel. Median keels on propodeum in female: absent. Mesopleural carina: present. Sculpture of mesepisternum below mesopleural depression: smooth. Sculpture of ventral metapleural area: smooth. Color of legs:
coxae to femur white, remainder of the legs pale yellow; pale yellow throughout. Sculpture of hind coxa: smooth.

Color of fore wing: hyaline. Rs+M: spectral. Setae on R: long, erect, surpassing the margin of the wing. Length of R: approximately as long as r-rs. Length of R1: approximately as long as 2.0× length of r-rs.

Color of metasoma in female: variably orange to pale brown. Color of metasoma in male: orange throughout; variably orange to pale brown. Horn on T1 in female: present as a small bulge. Sculpture of T1 horn dorsally: transversely striate. Sculpture of posterior margin of T1 in female: longitudinally striate throughout. Sculpture of T1 in male: longitudinally striate. Development of longitudinal striae on T2 in female: reaching posterior margin of T2. Sculpture of T3: smooth with longitudinal submedian striae. Shape of T6 in female: distinctly elongate, approximately 3.0× longer than wide. Sculpture of S3: densely punctate; punctate rugose.

**Diagnosis.** This species is most similar to *C. pararemigio* but can be distinguished by its strongly transverse head and transversely striate small T1 horn in female. In males, it can be separated from *C. pararemigio* by the strongly transverse head and the densely punctate or punctate rugose S3.

**Etymology.** The specific epithet refers to the locality, Mt. Remigio, on the label of the holotype and should be treated as a noun in apposition.

**Link to distribution map.** [http://hol.osu.edu/map-full.html?id=362059]

**Material examined.** Holotype, female: DOMINICAN REPUBLIC: Barahona Prov., Baoruco (Bahoruco) Mts., cloud forest, DR-13, Remigio Knoll, 800m, 26.III.1991, L. Masner, OSUC 458296 (deposited in CNCI). Paratypes: DOMINICAN REPUBLIC: 15 females, 7 males, CMNH-486,650, 486,686, 486,897 (CMNH); OSUC 458285–458295, 458297–458301, 458303, 534377–534378 (CNCI).

**Calliscelio rubriclavus** (Ashmead), **comb. n.**
http://zoobank.org/B78820F5-FCE1-4A15-BC59-12B9A1C1AAE4
http://bioguid.osu.edu/xbiod_concepts/4169
Figures 208–225

*Acolus rubriclavus* Ashmead, 1887: 99 (original description).

*Anteris nigriceps* Ashmead, 1893: 225, 226 (original description); Muesebeck 1958: 93 [junior synonym of *Ceratoteleia marlatti* (Ashmead)], **syn. n.**
http://zoobank.org/9C37051A-432A-4772-A8EC-C1345A2F32D4
http://bioguid.osu.edu/xbiod_concepts/8446

*Caloteleia Marlattii* Ashmead, 1893: 212, 214 (original description, keyed); Harrington 1900: 187 (variation); Brues 1903: 126 (emendation of male description), **syn. n.**
http://zoobank.org/91C406E3-85AA-4C93-8CE5-D160876C5847
http://bioguid.osu.edu/xbiod_concepts/8445

*Caloteleia rubriclava* (Ashmead): Ashmead 1893: 212, 214 (generic description, keyed).
Caloteleia grenadensis Ashmead, 1896: 798 (original description); Ashmead 1900: 327 (distribution), syn. n.
http://zoobank.org/E41DB9D7-F6E1-49BA-BB67-4C8A37430374
http://bioguid.osu.edu/xbiod_concepts/8437

Ceratoteleia Marlatti (Ashmead): Kieffer 1908: 121 (generic transfer, emendation).

Ceratoteleia grenadensis (Ashmead): Kieffer 1908: 121 (generic transfer); Kieffer 1926: 501, 505 (description, keyed).

Ceratoteleia rubriclava (Ashmead): Kieffer 1908: 121 (generic transfer); Kieffer 1926: 501, 504 (description, keyed).

Prosanteris nigriceps (Ashmead): Kieffer 1908: 136 (generic transfer); Kieffer 1926: 437, 438 (description, keyed).

Caloteleia rubriclavus (Ashmead): Brues 1908: 33 (emendation).

Prosanteris (Prosanteris) nigriceps (Ashmead): Kieffer 1910b: 87 (subgeneric assignment).

Caloteleia marlattii (Ashmead): Brues 1916: 554 (description); Masner and Muesebeck 1968: 33 (lectotype designation).

Macroteleia ruskini Girault, 1920: 179 (original description); Muesebeck 1958: 93 [junior synonym of Ceratoteleia marlattii (Ashmead)], syn. n.
http://zoobank.org/94B4FD7F-E840-437B-8E2B-46F87BE377DF
http://bioguid.osu.edu/xbiod_concepts/8447

Ceratoteleia marlattii (Ashmead): Kieffer 1926: 501, 504 (description, keyed).

Caloteleia grenadensis (Ashmead): Masner 1965: 70 (type information).

Caloteleia nigriceps (Ashmead): Masner and Muesebeck 1968: 33 (type information).

Caloteleia rubriclava (Ashmead): Masner and Muesebeck 1968: 33 (type information).

Caloteleia ruskini (Girault): Masner and Muesebeck 1968: 33 (type information, generic transfer).

**Description.** Body length of female: 1.80–2.55 mm (n=20). Body length of male: 1.60–2.35 mm (n=20). Color of head: black throughout; brown throughout. Color of antennal clava (A7–A12): dark brown to black. Shape of head: subglobose. Central keel of frons: absent. Setation of upper frons: with sparse, short setae. IOS/EH: IOS slightly less than EH; IOS slightly greater than EH. Sculpture of ventrolateral frons: granulate. Sculpture of frons below median ocellus: granulate. Sculpture of posterior vertex: granulate. Hyperoccipital carina: absent. Occipital carina medially: complete, weakly crenulate throughout. Length of OOL: less than 0.5× ocellar diameter; greater than 0.5× ocellar diameter. Sculpture of postgena behind outer orbit: granulate. Ocular setae: absent. A4 in female: distinctly shorter than A3. A5 in female: shorter than A3, as long as wide. Shape of female A6: distinctly wider than long. Form of male antennal flagellomeres: filiform, A11 approximately 2.0× longer than wide. Length of A5 tyloid in male: greater than 0.5× length of A5.

Color of mesosoma in female: orange throughout; black throughout; variably orange to pale brown. Color of mesosoma in male: orange throughout; variably orange to pale brown; black throughout. Sculpture of dorsal pronotal area: rugose. Sculpture of lateral pronotal area: rugose throughout. Sculpture of netrion: rugose. Notaulus:
Figures 208–213. 208–209 Acolus rubriclavus Ashmead, female, holotype (USNMENT00989042). 208 Mesosoma and metasoma, lateral view 209 Mesosoma and metasoma, dorsal view 211–213 Anteris nigriceps Ashmead, male, syntype (USNMENT00989028). 210 Mesosoma and metasoma, lateral view 211 Mesosoma, lateral view 212 Mesosoma and metasoma, dorsal view 213 Mesosoma, dorsal view. Scale bars in millimeters.

percurent. Sculpture of mesoscutum: granulate; densely punctate. Shape of mesoscutellum: semiellipsoidal. Foveolae of scutoscutellar sulcus between notauli: smaller than those along margin of axilla. Sculpture of mesoscutellum: granulate. Shape of metascutellum: posterior somewhat rounded or straight, approximately 3.0× wider than long. Sculpture of metascutellum in female: rugose. Sculpture of metascutellum in male: rugose. Dorsal propodeum in female: shallowly excavate medially, with lateral
propodeal carinae widely separated. Sculpture of dorsal propodeum in female: rugose. Sculpture of dorsal propodeum in male: rugose. Median keels on propodeum in female: absent. Mesopleural carina: absent. Sculpture of mesepecternum below mesopleural depression: densely punctate. Sculpture of ventral metapleural area: smooth dorsally, densely punctate ventrally. Color of legs: orange throughout; pale brown. Sculpture of hind coxa: smooth.

Color of fore wing: hyaline. Rs+M: spectral. Setae on R: short, decumbent, hardly exceeding the margin of the wing. Length of R: distinctly shorter than r-rs. Length of R1: approximately as long as r-rs.

Color of metasoma in female: black; orange throughout; variably orange to pale brown. Color of metasoma in male: orange throughout; variably orange to pale brown; black throughout. Horn on T1 in female: large and distinct. Sculpture of T1 horn dorsally: granulate; rugose. Sculpture of posterior margin of T1 in female: longitudinally striate throughout. Sculpture of T1 in male: longitudinally striate. Development of longitudinal striae on T2 in female: reaching the middle of T2 medially; reaching posterior margin of T2. Sculpture of T3: smooth; largely smooth with submedian longitudinal striae; longitudinally striate throughout. Shape of T6 in female: short, slightly longer than wide. Sculpture of S3: smooth to coriaceous.

**Diagnosis.** This species is easily identified by the combination of the following characters: eye bare; occipital carina complete medially; mesopleural carina absent; mesepecternum below mesopleural depression densely punctate; ventral metapleural area densely punctate ventrally; R1 approximately as long as r-rs.

**Link to distribution map.** [http://hol.osu.edu/map-full.html?id=4169]

**Material examined.** Holotype, female, *C. grenadensis*: GRENADA: Saint George Parish, leeward side, Mount Gay Estate, no date, H. H. Smith, B.M. TYPE HYM. 9.470 (deposited in BMNH). Lectotype, male, *C. Marlattii*: UNITED STATES: Riley Co., V, Marlatt, USNMENT00989024 (deposited in USNM). Syntype, male, *A. nigriceps*: UNITED STATES: VA, Arlington Co., Arlington, no date, USNMENT00989028 (deposited in USNM). Holotype, female, *A. rubriclavus*: FL, Duval Co., Jacksonville, ocean beach, Jacksonville Beach (San Pablo), no date, Ashmead, USNMENT00989042 (deposited in USNM). Holotype, female, *M. ruskinii*: UNITED STATES: IL, no date, USNMENT00989079 (deposited in USNM). Other material: (1106 females, 610 males) ARGENTINA: 11 females, 2 males, OSUC 534125–534131, 534437 (CNCI); OSUC 322989, 63153, 63155 (OSUC); OSUC 577255–577256 (UCRC). BAHAMAS: 2 females, 2 males, OSUC 458330–458331, 458383, 534560 (CNCI). BELIZE: 9 females, 3 males, OSUC 534193–534197, 534203, 534214–534218, 534222 (CNCI). BOLIVIA: 1 female, OSUC 534164 (CNCI). BONAIRE: 2 females, OSUC 458377, 458382 (CNCI). BRAZIL: 48 females, 15 males, OSUC 534527, 553607, 557180–557181, 557197, 557220, 557246, 557248, 557282–557283, 557337, 557342, 557349, 557361, 557375 (CNCI); OSUC 111348, 111698–111700, 111704–111705, 111714, 111810, 111938, 111957, 112073, 112184–112185, 112189–112190, 112194, 112792, 112797, 113088, 11925, 130662, 130709, 130719, 130755, 130849, 131119, 131431, 132407, 132409, 132411, 132413,
Figures 214–219. *Caloteleia grenadensis* Ashmead, female, holotype (B.M. TYPE HYM. 9.470).

214 Lateral habitus 215 Head and mesosoma, lateral view 216 Dorsal habitus 217 Head and mesosoma, dorsal view 218 Head, anterior view 219 Specimen labels. Scale bars in millimeters.

132420–132421, 132433, 132446, 133028, 133046, 133050, 133067, 133130, 134362, 137997, 138091, 232034, 367498, 374725, 413, 583202 (OSUC). **CANADA:** 156 females, 68 males, OSUC 531695–531708, 531710–531720, 531725, 531728–531733, 531802–531865, 531867–531872, 531874–531917, 532076, 532103, 532123–532129, 534491–534493, 534495–534498, 534500, 534504–534507, 534509–534512, 554065–554117 (CNCI). **CHILE:** 16 females, OSUC 458265, 534444–534445, 534447, 534449, 534451–534452, 534454, 534456–534458 (CNCI); OSUC 441184–441187 (INHS); OSUC 576993 (OSUC). **COLOMBIA:** 2
New World species of the genus Calliscelio Ashmead...
Figures 220–225. 220–221 Caloteleia marlattii Ashmead, male, lectotype (USNMENT00989024). 220 Lateral habitus 221 Dorsal habitus 222–225 Macroteleia ruskini Girault, female, holotype (USNMENT00989079) 222 Mesosoma and metasoma, lateral view 223 Mesosoma and metasoma, dorsal view 224 Metasoma, dorsal view 225 Metasoma, ventral view. Scale bars in millimeters.

130513–130515, 130544, 130574, 142758–142787, 142789–142804, 142806, 142808–142809, 142811–142812, 182700, 182725, 18275, 207795–207796, 236917–236918, 236920, 24231, 25642, 256450–256451, 256513–256517, 256536–256538, 256557–256558, 256595, 256634–256644, 256745–256768, 332914–332916, 336798–336804, 336806–336812, 336814–336818, 33696–336986, 336988–337018, 397539–397562, 397641–397650, 410662, 55872–55879, 55881–55889, 5591–55906, 576987–576989, 577075–577089, 582301–582320, 583121,
New World species of the genus Calliscelio Ashmead...

Calliscelio rubriclavus exhibits variation in color, ranging from orange to black, in the shape of metascutellum, and in the sculpture of T1 horn and T3. Specimens collected from Central America tend to be darker, while the variation in the sculpture of T1 horn and T3 show no clear correlations among the distribution ranges.
**Calliscelio ruga** Chen & Johnson, sp. n.

http://zoobank.org/B725C08C-0768-4304-92AC-9004D072357D  
http://bioguid.osu.edu/xbiod_concepts/385082  
Figures 226–231

Description. Body length of female: 1.42–1.74 mm (n=20). Color of head: orange throughout. Color of antennal clava (A7–A12): A7, A8 brown, A9–A12 white to pale yellow. Shape of head: subglobose. Central keel of frons: absent. Setation of upper frons: glabrous. IOS/EH: IOS distinctly less than EH. Sculpture of ventrolateral frons: smooth to granulate. Sculpture of frons below median ocellus: smooth to granulate. Sculpture of posterior vertex: rugose. Hyperoccipital carina: absent. Occipital carina medially: interrupted. Length of OOL: less than 0.5× ocellar diameter. Sculpture of postgena behind outer orbit: largely smooth with small granulate area. Ocular setae: sparse, short. A4 in female: as long as A3. A5 in female: shorter than A3, distinctly longer than wide. Shape of female A6: distinctly longer than wide.

Color of mesosoma in female: orange throughout; variably orange to pale brown. Sculpture of dorsal pronotal area: rugose. Sculpture of lateral pronotal area: smooth throughout. Sculpture of netrion: rugose. Notaulus: percurrent or nearly so. Sculpture of mesoscutum: granulate. Shape of mesoscutellum: semiellipsoidal. Foveolae of scutoscutellar sulcus between notauli: smaller than those along margin of axilla. Sculpture of mesoscutellum: granulate. Shape of metascutellum: posterior margin rounded, approximately 3.0× wider than long. Sculpture of metascutellum in female: smooth with a longitudinal, median carina. Dorsal propodeum in female: not excavate medially, lateral propodeal carinae meeting anteromedially. Sculpture of dorsal propodeum in female: rugose; smooth to rugulose. Median keels on propodeum in female: absent. Mesopleural carina: present. Sculpture of mesepisternum below mesopleural depression: smooth. Sculpture of ventral metapleural area: largely smooth, rugose ventrally. Color of legs: orange yellow. Sculpture of hind coxa: smooth.

Color of fore wing: hyaline. Rs+M: nebulose, weakly pigmented. Setae on R: long, erect, surpassing the margin of the wing. Length of R: distinctly shorter than r-rs. Length of R1: approximately as long as 2.0× length of r-rs.

Color of metasoma in female: variably orange to pale brown. Horn on T1 in female: absent. Sculpture of posterior margin of T1 in female: longitudinally striate throughout; striate rugose. Development of longitudinal striae on T2 in female: reaching the middle of T2 medially; present on the anterior margin of T2. Sculpture of T3: smooth. Shape of T6 in female: short, wider than long. Sculpture of S3: largely smooth with sparse and fine punctures.

Diagnosis. This species is most similar to *C. extenuatus* and *C. suni* in size and habitus. It can be separated from *C. extenuatus* by the interrupted occipital carina and the elongate A6, and from *C. suni* by the hairy compound eyes.

Etymology. The epithet is used as a noun in apposition derived from the Latin word for wrinkle, in reference to the rugose posterior vertex.
New World species of the genus Calliscelio Ashmead...

Figures 226–231. *Calliscelio ruga* sp. n., female, holotype (OSUC 553881). **226** Lateral habitus **227** Head and mesosoma, lateral view **228** Dorsal habitus **229** Head and mesosoma, dorsal view **230** Head, anterior view **231** Metasoma, dorsal view. Scale bars in millimeters.

**Link to distribution map.** [http://hol.osu.edu/map-full.html?id=385082]

**Material examined.** Holotype, female: **PANAMA:** Chiriquí Prov., 1220m, 08°39’N, 82°12’W, La Suiza Farm, 16.VI.2000, flight intercept trap, H. Howden, OSUC 553881 (deposited in CNCI). Paratypes: (31 females) **ECUADOR:** 1 female, OSUC 553619 (CNCI). **PANAMA:** 29 females, OSUC 553758–553760, 553764, 553793, 553800–553803, 553825, 553827, 553829–553830, 553832, 553845, 553847, 553878–553880, 553882–553889, 553936–553937 (CNCI). **PUERTO RICO:** 1 female, OSUC 534561 (CNCI).
**Calliscelio rugicoxa** Chen & Masner, sp. n.

http://zoobank.org/ED46B60A-A31E-4165-AD10-C93BFA562781

http://bioguid.osu.edu/xbiod_concepts/362053

Figures 232–237

**Description.** Body length of female: 3.16 mm (n=1). Color of head: pale brown. Color of antennal clava (A7–A12): black. Shape of head: subglobose. Central keel of frons: present. Setation of upper frons: with dense, short setae. IOS/EH: IOS distinctly less than EH. Sculpture of ventrolateral frons: granulate to finely punctate. Sculpture of frons below median ocellus: granulate. Sculpture of posterior vertex: granulate. Hyperoccipital carina: absent. Occipital carina medially: complete, strongly crenulate throughout. Length of OOL: less than 0.5× ocellar diameter. Sculpture of postgena behind outer orbit: granulate. Ocular setae: dense, long. A4 in female: as long as A3. A5 in female: shorter than A3, distinctly longer than wide. Shape of female A6: distinctly longer than wide.

Color of mesosoma in female: pale brown. Sculpture of dorsal pronotal area: rugose. Sculpture of lateral pronotal area: smooth dorsally, rugulose ventrally. Sculpture of netrion: rugose. Notaulus: percurrent or nearly so. Sculpture of mesoscutum: rugose. Shape of mesoscutellum: semiellipsoidal. Foveolae of scutoscutellar sulcus between notauli: as large as those along margin of axilla. Sculpture of mesoscutellum: densely punctate. Shape of metascutellum: posterior margin straight, approximately 4.0× wider than long. Sculpture of metascutellum in female: smooth with a longitudinal, median carina. Dorsal propodeum in female: not excavate medially, lateral propodeal carinae meeting anteromedially. Sculpture of dorsal propodeum in female: rugose. Median keels on propodeum in female: present. Mesopleural carina: present. Sculpture of mesepisternum below mesopleural depression: rugose anteriorly, smooth posteriorly. Sculpture of ventral metapleural area: rugose. Color of legs: pale brown. Sculpture of hind coxa: rugose.

Color of fore wing: hyaline. Rs+M: nebulose, weakly pigmented. Setae on R: long, erect, surpassing the margin of the wing. Length of R: distinctly shorter than r-rs. Length of R1: greater than 3.0× length of r-rs.

Color of metasoma in female: variably yellow to pale brown. Horn on T1 in female: weakly developed. Sculpture of T1 horn dorsally: rugose. Sculpture of posterior margin of T1 in female: striate rugose. Development of longitudinal striae on T2 in female: reaching posterior margin of T2. Sculpture of T3: largely smooth with submedian longitudinal striae. Shape of T6 in female: distinctly elongate, 2.0× longer than wide. Sculpture of S3: smooth.

**Diagnosis.** This species is most similar to *C. bidens* but can be distinguished by its rugose hind coxa and rugose T1 horn in the female.

**Etymology.** The epithet refers to the rugose coxa in this species and is intended to be used as a noun in apposition.

**Link to distribution map.** [http://hol.osu.edu/map-full.html?id=362053]
**New World species of the genus Calliscelio Ashmead...**

**Material examined.** Holotype, female: COLOMBIA: Valle del Cauca Dept., 650m, 03°26’N, 76°48’W, Farallones de Cali Natural National Park, 8.V–19.VI.2001, Malaise trap, S. Sarria, OSUC 458325 (deposited in CNCI).

**Comments.** We generally avoided describing two or more new species based on single specimens when they were collected at the same locality and time, which is the case for *C. rugicoxa* and *C. bidens*, but these two species are easily distinguished from each other (see diagnoses of the two species), and we are convinced they are two different species.

**Figures 232–237.** *Calliscelio rugicoxa* sp. n., female, holotype (OSUC 458325). 232 Lateral habitus 233 Head and mesosoma, lateral view 234 Dorsal habitus 235 Head and mesosoma, dorsal view 236 Head, anterior view 237 Metasoma, dorsal view. Scale bars in millimeters.
**Calliscelio sfina Chen & Johnson, sp. n.**

http://zoobank.org/17D52C03-F10C-4F1C-A73C-0C1C7FE5684C

http://bioguid.osu.edu/xbiod_concepts/363178

Figures 238–243

**Description.** Body length of female: 1.78–2.97 mm (n=20). Body length of male: 1.67–2.53 mm (n=20). Color of head: orange throughout. Color of antennal clava (A7–A12): dark brown to black. Shape of head: subglobose. Central keel of frons: absent. Setation of upper frons: with sparse, long setae. IOS/EH: IOS distinctly less than EH. Sculpture of ventrolateral frons: transversely rugulose to granulate. Sculpture of frons below median ocellus: granulate. Sculpture of posterior vertex: granulate. Hyperoccipital carina: absent. Occipital carina medially: interrupted. Length of OOL: less than 0.5× ocellar diameter. Sculpture of postgena behind outer orbit: granulate. Ocular setae: absent. A4 in female: distinctly shorter than A3. A5 in female: shorter than A3, as long as wide. Shape of female A6: distinctly wider than long. Form of male antennal flagellomeres: filiform, A11 approximately 2.0× longer than wide. Length of A5 tyloid in male: greater than 0.5× length of A5.

Color of mesosoma in female: orange throughout. Color of mesosoma in male: orange throughout. Sculpture of dorsal pronotal area: rugose. Sculpture of lateral pronotal area: smooth throughout. Sculpture of netrion: smooth. Notaulus: percurrent or nearly so. Sculpture of mesoscutum: granulate. Shape of mesoscutellum: semiellipsoidal. Foveolae of scutoscutellar sulcus between notauli: smaller than those along margin of axilla. Sculpture of mesoscutellum: granulate. Shape of metascutellum: posterior margin rounded, approximately 2.5× wider than long. Sculpture of metascutellum in female: rugose. Sculpture of metascutellum in male: rugose. Dorsal propodeum in female: shallowly excavate medially, with lateral propodeal carinae widely separated. Sculpture of dorsal propodeum in female: rugose. Sculpture of dorsal propodeum in male: rugose. Median keels on propodeum in female: absent. Mesopleural carina: present. Sculpture of mesepisternum below mesopleural depression: smooth. Sculpture of ventral metapleural area: rugose. Color of legs: orange throughout; pale yellow throughout. Sculpture of hind coxa: smooth.

Color of fore wing: hyaline. Rs+M: nebulose, weakly pigmented; spectral. Setae on R: long, erect, surpassing the margin of the wing. Length of R: distinctly shorter than r-rs. Length of R1: approximately as long as 2.0× length of r-rs.

Color of metasoma in female: orange throughout; yellow with variable pale brown patches. Color of metasoma in male: orange throughout; variably orange to pale brown. Horn on T1 in female: present as a small bulge. Sculpture of T1 horn dorsally: with V-shaped striae. Sculpture of posterior margin of T1 in female: longitudinally striate throughout. Sculpture of T1 in male: longitudinally striate. Development of longitudinal striae on T2 in female: reaching posterior margin of T2. Sculpture of T3: smooth medially, longitudinally striate laterally; longitudinally striate throughout. Shape of T6 in female: short, slightly longer than wide. Sculpture of S3: densely punctate medially, longitudinally striate laterally.
Diagnosis. This species is most similar to _C. carinigena_ and _C. crater_ in color, size and habitus but it can be distinguished by the absence of the hyperoccipital carina (hyperoccipital carina are absent in _C. carinigena_ and _C. crater_).

Etymology. The specific epithet is Greek for wedge and should be treated as a noun in apposition. It refers to the “wedge-like” horn on T1 in the female.

Link to distribution map. [http://hol.osu.edu/map-full.html?id=363178]

Material examined. Holotype, female: BRAZIL: ES, Duas Bocas Biological Reserve, pt.8, 20°16'21"S 40°28'40"W, Cariacica, 30.IV–1.V.2005, yellow pan trap, A. P.
Aguiar et al., OSUC 376920 (deposited in MZSP). Paratypes: (194 females, 236 males) **BOLIVIA**: 2 females, OSUC 534160, 534182 (CNCI). **BRAZIL**: 172 females, 226 males, OSUC 534518, 534525-534526, 557200, 557205-557207 (CNCI); OSUC 577145, 577296, 577309, 577303, 577369-577370, 577378 (MNHN); OSUC 127850, 150156, 150159, 150785, 150795-150796, 150799, 150803, 150836-150838, 150920, 150957-150958, 150960, 150963, 150980-150983, 150986-150987, 151646, 322521-322524, 322528, 322987, 322999-323000, 323100, 323261-323263, 323267-323268, 323272, 323280, 323282, 323287, 323292-323293, 323298, 323302, 323305-323307, 323309-323310, 323317, 323323, 323325, 323329-323331, 323337, 323513, 323518-323519, 323521, 323527-323528, 323531-323532, 323538, 323542, 323544, 323546-323547, 323549, 323551, 323558-323560, 323563, 323566, 323915-323917, 363868, 363881-363882, 363888, 366644, 366646, 366665-366655, 366658, 372529, 372535, 375247, 375251, 375253, 375263, 375269, 375289, 375291-375292, 375294, 375298, 375302, 376549, 376554, 376917-376919, 376943, 376955, 376962-376963, 381087-381088, 427461, 433802, 433804, 433808, 433810-433811, 433828, 433831, 463311-463312, 576981, 577014, 577032-577033, 577037-577038, 577060-577061, 577070, 577090, 577094, 577096, 577099, 577101, 577103-577108, 577116-577121, 577199-577203, 577220, 577224-577227 (MZSP); OSUC 110064, 111443, 111648, 11923, 131098, 131107, 131280, 131320, 131673, 132179, 136374, 136540, 136832, 136847, 136857, 136867, 136882, 136934, 136937, 137137, 137182, 137237, 137377, 137430, 137433, 137583, 137599, 137698, 137708, 138539, 138781, 147789, 147791-147792, 151400, 151551, 151563, 235891, 235955, 235957-235959, 236824, 236826-236827, 237004, 322553, 323515, 323517, 347615, 357224-357225, 357246, 357255-357256, 357271, 357314, 357321-357322, 357324, 358792, 358940, 358975-358978, 358985-358986, 362661-362664, 362678, 366001, 367437-367438, 367442-367444, 375299, 376923, 378584, 378586-378590, 40192, 427453, 427456-427458, 433805, 433809, 433812-433817, 433825, 433829-433830, 433833-433836, 433838-433841, 433843, 433846, 433848, 435143, 436603, 477161-477162, 510908, 55933, 55938-55940, 55942, 55944, 55954, 576994-576999, 577211, 577272-577275, 577287, 583210-583212, 583226-583227, 583230-583232, 583236, 583290-583292, 583296, 61314-61315, 61317, 61322, 61335, 61341, 61357-61358, 61364, 61366, 61370, 61375-61376, 61380, 61383, 61407-61408, 61411, 61425, 61430, 61436, 61441, 61443, 61451-61452, 61460-61461, 61463, 61467, 61476, 61502, 61505, 61511, 61521-61522, 61527-61528, 61535, 61540, 61553, 61558, 63282, 63284, 63291, 63301, 63306, 63322, 63325, 63333, 63348, 63352, 63354, 63381, 63387, 63391-63392, 63401, 63419, 63422, 63428, 63446, 63451, 63491, 63516, 63521, 63565, 63579, 63615, 63663 (OSUC). **COLOMBIA**: 11 females, 2 males, OSUC 170496, 178186, 178198, 193393, 76994 (IAVH); OSUC 170505, 178020, 178168, 182297, 188679, 188946, 188949, 269347 (OSUC). **ECUADOR**: 2 females, 4 males, OSUC 458483 (CNCI); OSUC 534677, 534680-534681 (MAIC); OSUC 534669, 534676 (OSUC).
NEW WORLD SPECIES OF THE GENUS CALLISCELIO ASHMED... 115

FRENCH GUIANA: 1 female, OSUC 534552 (CNCI). GUYANA: 2 females, OSUC 534261–534262 (CNCI). PARAGUAY: 1 male, OSUC 278677 (OSUC). PERU: 3 females, 1 male, OSUC 323939, 323944, 323946, 323948 (OSUC). TRINIDAD AND TOBAGO: 1 female, OSUC 546026 (CNCI). UNITED STATES: 1 male, OSUC 61320 (OSUC). VENEZUELA: 1 male, OSUC 367474 (USNM).

Calliscelio storea Chen & Johnson, sp. n.
http://zoobank.org/ED068E67-CE26-42A0-8DD1-26FD78DD0C72
http://bioguid.osu.edu/xbiod_concepts/384799
Figures 14, 244–249

Description. Body length of female: 1.76–2.15 mm (n=20). Color of head: black throughout; variably brown to black. Color of antennal clava (A7–A12): black. Shape of head: subglobose. Central keel of frons: absent. Setation of upper frons: with sparse, long setae. IOS/EH: IOS distinctly less than EH. Sculpture of ventrolateral frons: granulate. Sculpture of frons below median ocellus: granulate. Sculpture of posterior vertex: granulate. Hyperoccipital carina: absent. Occipital carina medially: complete, weakly crenulate throughout. Length of OOL: less than 0.5× ocellar diameter. Sculpture of postgena behind outer orbit: granulate. Ocular setae: sparse, short. A4 in female: distinctly shorter than A3. A5 in female: shorter than A3, as long as wide. Shape of female A6: as long as wide.

Color of mesosoma in female: orange throughout; variably orange to pale brown. Sculpture of dorsal pronotal area: rugose. Sculpture of lateral pronotal area: smooth anteriorly, granulate posteriorly. Sculpture of netrion: rugose. Notaulus: percurrent or nearly so. Sculpture of mesoscutum: granulate. Shape of mesoscutellum: semiellipsoidal. Foveolae of scutoscutellar sulcus between notauli: smaller than those along margin of axilla. Sculpture of mesoscutellum: granulate. Shape of metascutellum: posterior margin straight, approximately 4.0× wider than long. Sculpture of metascutellum in female: rugose. Dorsal propodeum in female: shallowly excavate medially, with lateral propodeal carinae widely separated. Sculpture of dorsal propodeum in female: rugose. Median keels on propodeum in female: absent. Mesopleural carina: present. Sculpture of mesepisternum below mesopleural depression: largely smooth with a row of foveae along mesopleural carina. Sculpture of ventral metapleural area: largely smooth, rugose ventrally. Color of legs: orange throughout. Sculpture of hind coxa: smooth.

Color of fore wing: hyaline. Rs+M: spectral. Setae on R: long, erect, surpassing the margin of the wing. Length of R: distinctly shorter than r-rs. Length of R1: approximately as long as 2.0× length of r-rs.

Color of metasoma in female: variably orange to pale brown. Horn on T1 in female: present as a small bulge. Sculpture of T1 horn dorsally: rugulose. Sculpture of posterior margin of T1 in female: longitudinally striate throughout. Development of longitudinal striae on T2 in female: present on the anterior margin of T2. Sculpture of T3: smooth. Shape of T6 in female: short, slightly longer than wide. Sculpture of S3: smooth.
Figures 244–249. Calliscelio storea sp. n., female, holotype (OSUC 546117). 244 Lateral habitus 245 Head and mesosoma, lateral view 246 Dorsal habitus 247 Head and mesosoma, dorsal view 248 Head, anterior view 249 Metasoma, dorsal view. Scale bars in millimeters.

**Diagnosis.** This species is most similar to *C. bisulcatus* and *C. virga* in the hairy compound eyes, size and habitus. It can be separated from *C. bisulcatus* by the granulate mesoscutellum and the broad and short metascutellum, and from *C. virga* by the rugose metascutellum and the rugulose T1 horn in the female.

**Etymology.** The epithet is used as a noun in apposition derived from the Latin word for mat or rug, in reference to the rugulose T1 horn in female.

**Link to distribution map.** [http://hol.osu.edu/map-full.html?id=384799]
**Material examined.** Holotype, female: FRENCH GUIANA: Cayenne Arrond., 04°33.562’N, 52°12.425’W, Kaw Mountains, 3.III–27.III.2007, Malaise trap, K. Sarv, OSUC 546117 (deposited in CNCI). Paratypes: (30 females) BOLIVIA: 1 female, OSUC 534184 (CNCI). BRAZIL: 4 females, OSUC 534619–534620 (CNCI); OSUC 12187, 374720 (OSUC). ECUADOR: 11 females, OSUC 458517, 458520, 458524–458527, 534244, 553400, 553623, 553648, 553716 (CNCI). FRENCH GUIANA: 3 females, OSUC 546118, 546120, 546123 (CNCI). MEXICO: 1 female, OSUC 534622 (CNCI). SURINAME: 1 female, OSUC 534580 (CNCI). VENEZUELA: 9 females, OSUC 545882–545883, 545885–545886, 545889–545890, 545894, 545895, 545941 (CNCI).

### Calliscelio suni Chen & Johnson, sp. n.

http://zoobank.org/7EAA3B0E-69F9-4155-AEE1-58042D054D4A
http://bioguid.osu.edu/xbiod_concepts/364057
Figures 250–255

**Description.** Body length of female: 1.80–2.18 mm (n=20). Body length of male: 1.70–2.16 mm (n=20). Color of head: brown throughout; yellow throughout; orange throughout. Color of antennal clava (A7–A12): A7–A9 brown, A10–A12 white; A7–A9 brown, A10–A12 yellow; brown. Shape of head: subglobose. Central keel of frons: absent. Setation of upper frons: with sparse, short setae. IOS/EH: IOS distinctly less than EH. Sculpture of ventrolateral frons: smooth. Sculpture of frons below median ocellus: smooth. Sculpture of posterior vertex: smooth; granulate; transversely striate; granulate to rugulose above hyperoccipital carina, smooth below. Hyperoccipital carina: absent; present. Occipital carina medially: interrupted. Length of OOL: greater than 0.5× ocellar diameter. Sculpture of postgena behind outer orbit: smooth. Ocular setae: absent. A4 in female: as long as A3. A5 in female: shorter than A3, distinctly longer than wide. Shape of female A6: as long as wide. Form of male antennal flagellomeres: filiform, A11 approximately 4.0× longer than wide. Length of A5 tyloid in male: approximately 0.3× length of A5.

Color of mesosoma in female: orange throughout; yellow throughout. Color of mesosoma in male: orange throughout; variably orange to pale brown; yellow throughout. Sculpture of dorsal pronotal area: rugose. Sculpture of lateral pronotal area: smooth throughout. Sculpture of netrion: smooth. Notaulus: percurrent or nearly so. Sculpture of mesoscutum: smooth with sparse punctures; granulate. Shape of mesoscutellum: semiellipsoidal. Foveolae of scutoscutellar sulcus between notauli: smaller than those along margin of axilla. Sculpture of mesoscutellum: anterior half granulate, posterior half smooth. Shape of metascutellum: posterior marging rounded, approximately 3.0× wider than long. Sculpture of metascutellum in female: smooth; rugose. Sculpture of metascutellum in male: rugose. Dorsal propodeum in female: not excavate medially, lateral propodeal carinae meeting anteromedially. Sculpture of dorsal...
Figures 250–255. *Calliscelio suni* sp. n., female, holotype (OSUC 182752). 250 Lateral habitus 251 Head and mesosoma, lateral view 252 Dorsal habitus 253 Head and mesosoma, dorsal view 254 Head, anterior view 255 Metasoma, dorsal view. Scale bars in millimeters.

propodeum in female: rugose; smooth to rugulose. Sculpture of dorsal propodeum in male: rugose. Median keels on propodeum in female: absent. Mesopleural carina: absent. Sculpture of mesepisternum below mesopleural depression: smooth. Sculpture of ventral metapleural area: largely smooth, rugose ventrally. Color of legs: orange throughout; pale yellow throughout. Sculpture of hind coxa: smooth.

Color of fore wing: hyaline. Rs+M: nebulose, weakly pigmented. Setae on R: long, erect, surpassing the margin of the wing. Length of R: distinctly shorter than r-rs. Length of R1: approximately as long as 2.0× length of r-rs.
Color of metasoma in female: variably orange to pale brown; yellow throughout. Color of metasoma in male: variably orange to pale brown; brown throughout. Horn on T1 in female: absent. Sculpture of posterior margin of T1 in female: longitudinally striate throughout. Sculpture of T1 in male: longitudinally striate. Development of longitudinal striae on T2 in female: reaching the middle of T2 medially; present on the anterior margin of T2. Sculpture of T3: smooth. Shape of T6 in female: short, wider than long or as long as wide. Sculpture of S3: smooth.

**Diagnosis.** This species is similar to *C. absum*, *C. extenuatus*, *C. minutia* and *C. ruga* in size and habitus. It can be separated from *C. absum* by the percurrent notaulus, from *C. extenuatus* and *C. ruga* by the bare compound eyes and from *C. minutia* by the smooth frons and the entirely hyaline fore wing.

**Etymology.** The epithet is derived from the name of a famous character in the Chinese classical novel Journey to the West, Sun Wukong, who knows 72 transformations. It refers the remarkable polymorphism of this species and should be treated as a genitive noun.

**Link to distribution map.** [http://hol.osu.edu/map-full.html?id=364057]

**Material examined.** Holotype, female: COLOMBIA: Chocó Dept., visitor’s center, M.815, 2m, 06°01’N 77°20’W, Utría Natural National Park, 28.IX–15.X.2000, Malaise trap, J. Perez, OSUC 182752 (deposited in IAVH). Paratypes: (1756 females, 235 males)

**BOLIVIA:** 19 females, OSUC 534033, 534045–534047, 534060–534062, 534147–534148, 534152–534155, 534158, 534162–534163, 534183, 534188–534189 (CNCI). **BRAZIL:** 1297 females, 41 males, OSUC 534534, 534542, 557198-557199, 557203, 557362, 557376-557377 (CNCI); OSUC 251769-251773, 252075-252081, 252083-252085, 252088, 252090-252091, 252093, 252095-252096, 252098-252104, 252107-252108, 252110, 252112-252114, 252116-252126, 252128-252129, 252131-252136, 252138, 252140, 252142-252144, 252146-252147, 322153, 322372-322376, 322378-322380, 322382, 322384, 322533, 322540, 322544, 322549, 322667-322669, 322672-322675, 323006, 323008, 323079, 323082, 323085, 323552, 323929, 323952-323957, 323960-323961, 326190, 326221, 326223, 326225, 326227, 326231-326234, 326236-326243, 326245-326247, 326396, 326398-326403, 326500, 326504, 326506-326520, 326534-326537, 326539-326542, 326544-326545, 337162-337166, 343651-343653, 346126, 346135, 346141, 346161, 346166-346167, 346176, 346185, 346855, 346872-346873, 346881, 346887, 346948, 346951, 347026, 347031, 347042, 347044, 347061, 347072, 347077, 347091, 347955-347957, 347959, 347962, 347971-347972, 347977-347978, 347980, 347986-347987, 347989, 347995, 347997-347999, 348002-348003, 348006, 348010, 348012, 348066-348067, 348069, 348076, 348101-348102, 348104, 348106, 348116, 348125, 348134, 348139, 348141, 348144, 348147-348148, 348150, 348153-348154, 348264, 348273, 348275, 348278, 348286, 348336, 348347-348348, 348486, 348503, 348506, 348510-348511, 348633, 348640, 348658, 348665, 352050, 352052-352054, 352057, 352060, 352069, 352080-352082, 352360, 352362-352364, 353037, 353040-353044, 353046, 353421-353425, 353428, 353555-353569, 354762, 354793.
New World species of the genus Calliscelio Ashmead...
Comments. This species is well supported by many characters, although the sculpture of the posterior vertex and the color of the female antennal clava is extremely
variable. The posterior vertex varies from smooth to transversely striate. The hyperoccipital carina also can be present or absent. The female antennal clava varies from entirely brown to having the last two or three segments white. These variations are gradual among specimens. Therefore we consider them as intraspecific rather than interspecific.

**Calliscelio telum** Chen & Johnson, sp. n.
http://zoobank.org/390805B1-95C4-48E8-8A4A-AAC99C389894
http://bioguid.osu.edu/xbiod_concepts/364059
Figures 256–261

**Description.** Body length of female: 2.00–2.89 mm (n=20). Body length of male: 1.99–2.42 mm (n=9). Color of head: orange to pale brown; variably brown to black. Color of antennal clava (A7–A12): dark brown to black. Shape of head: subglobose. Central keel of frons: absent. Setation of upper frons: with dense, long setae. IOS/EH: IOS distinctly less than EH. Sculpture of ventrolateral frons: granulate. Sculpture of frons below median ocellus: granulate. Sculpture of posterior vertex: granulate. Hyperoccipital carina: absent. Occipital carina medially: complete, weakly crenulate throughout. Length of OOL: less than 0.5× ocellar diameter. Sculpture of postgena behind outer orbit: granulate. Ocular setae: dense, short. A4 in female: distinctly shorter than A3. A5 in female: shorter than A3, as long as wide. Shape of female A6: distinctly wider than long.

Color of mesosoma in female: orange throughout. Color of mesosoma in male: orange throughout. Sculpture of dorsal pronotal area: rugose. Sculpture of lateral pronotal area: smooth anteriorly, granulate posteriorly. Sculpture of neratorion: smooth. Notaulus: percurrent or nearly so. Sculpture of mesoscutum: granulate. Shape of mesoscutellum: transverse. Foveolae of scutoscutellar sulcus between notauli: as large as those along margin of axilla. Sculpture of mesoscutellum: granulate. Shape of metascutellum: posterior margin straight, approximately 4.0× wider than long. Sculpture of metascutellum in female: granulate. Sculpture of metascutellum in male: rugose. Dorsal propodeum in female: deeply excavate medially, with lateral propodeal carinae widely separated, running subparallel to accommodate T1 horn. Sculpture of dorsal propodeum in female: rugose. Sculpture of dorsal propodeum in male: rugose with one or two longitudinal keels lateral median keel. Median keels on propodeum in female: absent. Mesopleural carina: present. Sculpture of mesepisternum below mesopleural depression: smooth. Sculpture of ventral metapleural area: largely smooth, rugose ventrally. Color of legs: orange yellow. Sculpture of hind coxa: smooth. Form of male antennal flagellomeres: filiform, approximately 3.0× greater than width. Length of A5 tyloid in male: longer than 0.5× length of A5.

Color of fore wing: hyaline. Rs+M: spectral. Setae on R: long, erect, surpassing the margin of the wing. Length of R: distinctly shorter than r-rs. Length of R1: approximately as long as 2.0× length of r-rs.
Color of metasoma in female: orange throughout; variably orange to pale brown. Color of metasoma in male: T5–T7 brown to black, otherwise orange. Horn on T1 in female: large and distinct. Sculpture of T1 horn dorsally: rugulose. Sculpture of posterior margin of T1 in female: longitudinally striate throughout. Sculpture of T1 in male: longitudinally striate. Development of longitudinal striae on T2 in female: reaching posterior margin of T2. Sculpture of T3: smooth; smooth with longitudinal submedian striae. Shape of T6 in female: distinctly elongate, at least 2.0× longer than wide. Sculpture of S3: smooth.
**Diagnosis.** This species is most similar to *C. granulatus* in its hairy compound eyes and habitus but can be distinguished by the smooth netrion and rugulose T1 horn.

**Etymology.** The epithet is used as a noun in apposition derived from the Latin word for sword, in reference to the elongate T6 in female.

**Link to distribution map.** [http://hol.osu.edu/map-full.html?id=364059](http://hol.osu.edu/map-full.html?id=364059)

**Material examined.** Holotype, female: BRAZIL: RO, Rancho Grande Farm, XI.1991, yellow pan trap, S. Passoa, OSUC 48550 (deposited in OSUC). Paratypes: (52 females, 9 males) ARGENTINA: 7 females, OSUC 534132–534136 (CNCI); OSUC 577260–577261 (UCRC). BOLIVIA: 3 females, OSUC 534031, 534180–534181 (CNCI). BRAZIL: 26 females, OSUC 557243, 557338 (CNCI); OSUC 111811, 11920–11922, 11924, 11926, 130907, 131117, 131476, 48560 (MZSP); OSUC 111725, 112704, 130635, 130718, 130750, 130752, 131118, 131188, 132434, 132437, 132572, 374723–374724, 48583 (OSUC). PARAGUAY: 12 females, 9 males, OSUC 534116 (CNCI); OSUC 276697, 276699, 276702, 322995, 322998, 323038, 323048, 323071 (MNHNPy); OSUC 276692–276695, 276698, 276700–276701, 276704, 363635, 434081, 583312–583313 (OSUC). PERU: 1 female, OSUC 323938 (OSUC). URUGUAY: 3 females, OSUC 534607, 534615–534616 (CNCI).

**Calliscelio torqueo** Chen & Johnson, sp. n.
http://zoobank.org/97273934-B929-447B-84BE-4E9F0BB09F55
http://bioguid.osu.edu/xbiod_concepts/384798

**Figures 262–267**

**Description.** Body length of female: 1.27–2.54 mm (n=20). Body length of male: 1.39–2.10 mm (n=16). Color of head: black throughout; brown throughout; orange throughout. Color of antennal clava (A7–A12): A7–A10 dark brown, A11 and A12 white to pale yellow. Shape of head: subglobose. Central keel of frons: absent. Setation of upper frons: with sparse, short setae. IOS/EH: IOS distinctly less than EH. Sculpture of ventrolateral frons: smooth to rugulose. Sculpture of frons below median ocellus: smooth. Sculpture of posterior vertex: smooth. Hyperoccipital carina: absent. Occipital carina medially: interrupted. Length of OOL: greater than 0.5× ocellar diameter. Sculpture of postgena behind outer orbit: smooth. Ocular setae: absent. A4 in female: distinctly longer than A3. A5 in female: shorter than A3, distinctly longer than wide. Shape of female A6: distinctly longer than wide. Form of male antennal flagellomeres: filiform, A11 approximately 4.0× longer than wide. Length of A5 tyloid in male: approximately 0.3× length of A5.

Color of mesosoma in female: orange throughout; black throughout; variably orange to pale brown. Color of mesosoma in male: orange throughout; variably orange to pale brown; black throughout. Sculpture of dorsal pronotal area: smooth. Sculpture of lateral pronotal area: smooth throughout. Sculpture of netrion: smooth. Notaulus: percurrent or nearly so. Sculpture of mesoscutum: coriaceous; smooth throughout. Shape of mesoscutellum: semiellipsoidal. Foveolae of scutoscutellar sulcus between notauli: smaller than those along margin of axilla. Sculpture
of mesoscutellum: smooth with sparse fine punctures. Shape of metasclerite: posterior margin somewhat rounded, approximately 2.5× wider than long. Sculpture of metasclerite in female: smooth. Sculpture of metasclerite in male: smooth. Dorsal propodeum in female: not excavate medially, lateral propodeal carinae meeting anteromedially. Sculpture of dorsal propodeum in female: rugose. Sculpture of dorsal propodeum in male: rugose. Median keels on propodeum in female: absent. Mesopleural carina: absent. Sculpture of mesepisternum below mesopleural depression: smooth. Sculpture of ventral metapleural area: smooth. Color of legs: fore coxa

Figures 262–267. Calliscelio torqueo sp. n., female, holotype (OSUC 553598). 262 Lateral habitus 263 Head and mesosoma, lateral view 264 Dorsal habitus 265 Head and mesosoma, dorsal view 266 Head, anterior view 267 Metasoma, dorsal view. Scale bars in millimeters.
New World species of the genus Calliscelio Ashmead...

pale yellow, otherwise variably yellow to pale brown; coxae pale yellow, otherwise orange. Sculpture of hind coxa: smooth.

Color of fore wing: hyaline. Rs+M: nebulose, weakly pigmented. Setae on R: long, erect, surpassing the margin of the wing. Length of R: approximately as long as r-rs. Length of R1: greater than 3.0× length of r-rs.

Color of metasoma in female: orange throughout; variably orange to pale brown. Horn on T1 in female: weakly developed. Sculpture of T1 horn dorsally: smooth. Development of longitudinal striae on T2 in female: present on anterior margin of T2 medially, reaching posterior margin of T2 laterally. Sculpture of T3: smooth with longitudinal submedian striae. Shape of T6 in female: short, slightly longer than wide. Sculpture of S3: smooth.

Diagnosis. This species is most similar to C. glaber and C. paraglaber in the smooth head and metascutellum. It can be separated from C. glaber by its pigmented Rs+M and smooth small horn, from C. paraglaber by the absence of an occipital carina and T4 is distinctly longer than A3.

Etymology. The epithet is used as a noun in apposition derived from the Latin word for torch, in reference to female antennal club color.

Link to distribution map. [http://hol.osu.edu/map-full.html?id=384798]

Material examined. Holotype, female: ECUADOR: Pichincha Prov., 1540m, 00°00'23"N 78°40'36"W, Nanegalito, 27.X–31.X.1999, flight intercept trap, Z. H. Falin, OSUC 553598 (deposited in CNCI). Paratypes: (218 females, 88 males) COLOMBIA: 36 females, 16 males, OSUC 557420–557421, 557471–557472, 557476, 557488, 557497, 557502, 557510, 557515, 557518, 557526, 557566, 557608, 557612, 557614–557616 (CNCI); OSUC 188727–188728, 188731, 193127, 193692, 202074–202075, 202079, 202081, 202084, 269216, 279912, 279916, 279919–279923, 279927, 280183, 280203, 280206, 377411, 377415–377416, 377418–377422, 377425–377426 (OSUC). COSTA RICA: 120 females, 38 males, OSUC 232067, 232070, 532346–532347, 532471–532473, 532475, 532477–532478, 532496, 532498, 532500–532501, 532504, 532511–532515, 532520, 532522, 532531, 532534, 532536, 532538, 532540–532542, 532544–532548, 532550, 532555, 532557, 532561–532562, 532564, 532566, 532571, 532579, 532584, 532595–532596, 532609, 532615, 532629, 532642, 532645, 532652, 532654–532655, 532659, 532661–532662, 532671, 532674, 532683, 532690, 532703–532705, 532707, 532727, 532729, 532731, 532733, 532736, 532742–532745, 532747–532748, 532754–532755, 532758–532764, 532768, 532770, 532772, 532776, 532779–532780, 532782, 532793–532795, 532797–532801, 532803–532822, 532826–532830, 532832, 532835–532840, 532918, 532920–532923, 532926–532927, 532931–532934, 534139–534141, 534236 (CNCI); OSUC 244741, 245170, 245172, 245174, 245237–245238, 246300, 246354–246355, 358624, 374055 (OSUC). ECUADOR: 14 females, 8 males, OSUC 534252, 553354, 553475, 553489, 553495,
Calliscelio virga Chen & Johnson, sp. n.
http://zoobank.org/D2DB314F-6D8F-44B6-BB3C-912BD3DC0029
http://bioguid.osu.edu/xbiod_concepts/364058
Figures 268–273

Description. Body length of female: 1.68–2.10 mm (n=20). Body length of male: 1.64–2.07 mm (n=20). Color of head: brown throughout; variably brown to black. Color of antennal clava (A7–A12): black. Shape of head: subglobose. Central keel of frons: absent. Setation of upper frons: with sparse, long setae. IOS/EH: IOS slightly less than EH. Sculpture of ventrolateral frons: smooth to granulate. Sculpture of frons below median ocellus: largely smooth with sparse fine punctures. Sculpture of posterior vertex: granulate. Hyperoccipital carina: absent. Occipital carina medially: complete, weakly crenulate throughout. Length of OOL: less than 0.5× ocellar diameter. Sculpture of postgena behind outer orbit: largely smooth with small granulate area. Ocular setae: sparse, short. A4 in female: distinctly shorter than A3. A5 in female: shorter than A3, as long as wide. Shape of female A6: distinctly wider than long. Form of male antennal flagellomeres: filiform, A11 approximately 2.0× longer than wide. Length of A5 tyloid in male: greater than 0.5× length of A5. Color of mesosoma in female: orange throughout; variably orange to pale brown. Color of mesosoma in male: variably orange to pale brown. Sculpture of dorsal pronotal area: rugose. Sculpture of lateral pronotal area: smooth throughout. Sculpture of netrion: rugose. Notaulus: percurrent or nearly so. Sculpture of mesoscutum: smooth with sparse punctures; coriaceous. Shape of mesoscutellum: semiellipsoidal. Foveolae of scutoscutellar sulcus between notauli: as large as those along margin of axilla. Sculpture of mesoscutellum: smooth with sparse fine punctures; granulate. Shape of metascutellum: posterior margin straight, approximately 4.0× wider than long. Sculpture of metascutellum in female: smooth. Sculpture of metascutellum in male: smooth. Dorsal propodeum in female: shallowly excavate medially, with lateral propodeal carinae widely separated. Sculpture of dorsal propodeum in female: rugulose. Sculpture of dorsal propodeum in male: rugose. Median keels on propodeum in female: absent.
Mesopleural carina: absent. Sculpture of mesepisternum below mesopleural depression: smooth. Sculpture of ventral metapleural area: smooth. Color of legs: orange throughout. Sculpture of hind coxa: smooth.

Color of fore wing: hyaline. Rs+M: spectral. Setae on R: long, erect, surpassing the margin of the wing. Length of R: approximately as long as r-rs. Length of R1: approximately as long as r-rs.
Color of metasoma in female: orange throughout; variably orange to pale brown. Color of metasoma in male: variably orange to pale brown. Horn on T1 in female: present as a small bulge. Sculpture of T1 horn dorsally: smooth. Sculpture of posterior margin of T1 in female: longitudinally striate throughout. Sculpture of T1 in male: longitudinally striate. Development of longitudinal striae on T2 in female: present on the anterior margin of T2. Sculpture of T3: smooth. Shape of T6 in female: short, wider than long. Sculpture of S3: smooth.

**Diagnosis.** This species is most similar to *C. bisulcatus* and *C. storea* in the hairy compound eyes, size and habitus but can be easily recognized by its narrow and smooth metascutellum.

**Etymology.** The specific epithet is Latin for rod or wand and should be treated as a noun in apposition. It refers to the narrow smooth metascutellum of this species.

**Link to distribution map.** [http://hol.osu.edu/map-full.html?id=364058](http://hol.osu.edu/map-full.html?id=364058)

**Material examined.** Holotype, female: BOLIVIA: Santa Cruz Dept., Andrés Ibáñez Prov., B-21, pools, 375m, 17°40’S, 63°27’W, El Hondo, 14.V–17.V.1997, yellow pan trap, L. Masner, OSUC 534034 (deposited in CNCI). Paratypes: (169 females, 98 males) BRAZIL: 15 females, OSUC 534523, 557298 (CNCI); OSUC 48514, 48520, 55945, 55947, 55952, 583247, 583250, 583252–583255, 583257–583258 (OSUC). CANADA: 8 males, OSUC 531726–531727, 531734–531737, 532035, 532077 (CNCI). COLOMBIA: 1 female, 1 male, OSUC 557585, 557623 (CNCI). COSTA RICA: 1 female, OSUC 532651 (CNCI). DOMINICAN REPUBLIC: 2 males, OSUC 534361, 534375 (CNCI). ECUADOR: 3 females, OSUC 458516, 458518, 553369 (CNCI). GUATEMALA: 1 male, OSUC 534434 (CNCI). MEXICO: 5 males, OSUC 534018–534020, 534477–534478 (CNCI). PARAGUAY: 3 females, 4 males, OSUC 150470, 534684, 577155, 577191–577192, 577195–577196 (OSUC). SURINAME: 4 females, OSUC 534568, 534572, 534587, 553621 (CNCI). TRINIDAD AND TOBAGO: 2 females, OSUC 546029, 546085 (CNCI). UNITED STATES: 138 females, 76 males, OSUC 531682, 531688, 531750, 531776–531780, 531786, 531792, 531918, 531940–531947, 532061, 532064, 532100, 532119, 532121, 532131–532177, 532180–532246, 532340–532390, 534347–534360 (CNCI); OSUC 142805, 142807, 142810, 207785, 236919, 272939–272940, 576980, 62904, 62907, 62927 (OSUC). VENEZUELA: 2 females, 1 male, OSUC 557676 (CNCI); OSUC 55924–55925 (OSUC).

**Acknowledgments**

Thanks to E. Talamas (USNM) for discussion and to L. Musetti, J. Cora, and S. Hemly (OSUC) for critical assistance with specimen handling, software, and databasing. This material is based upon work supported in part by the U.S. National Science Foundation under grant No. DEB-0614764 to N.F. Johnson and A.D. Austin.
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Appendix I

URI Table matching terms and concepts used in this revision with the Hymenoptera Anatomy Ontology database.

| Term                  | URI                                      |
|-----------------------|------------------------------------------|
| antenna               | http://purl.obolibrary.org/obo/HAO_0000107 |
| antennomere           | http://purl.obolibrary.org/obo/HAO_0000101 |
| area                  | http://purl.obolibrary.org/obo/HAO_0000146 |
| body                  | http://purl.obolibrary.org/obo/HAO_0000182 |
| carina                | http://purl.obolibrary.org/obo/HAO_0000188 |
| central keel          | http://purl.obolibrary.org/obo/HAO_0000109 |
| cervical pronotal area| http://purl.obolibrary.org/obo/HAO_0000194 |
| clava                 | http://purl.obolibrary.org/obo/HAO_0000203 |
| clypeus               | http://purl.obolibrary.org/obo/HAO_0000212 |
| compound eye          | http://purl.obolibrary.org/obo/HAO_0000217 |
| coxa                  | http://purl.obolibrary.org/obo/HAO_0000228 |
| depression            | http://purl.obolibrary.org/obo/HAO_0000241 |
| dorsal pronotal area  | http://purl.obolibrary.org/obo/HAO_0000267 |
| egg                   | http://purl.obolibrary.org/obo/HAO_0000286 |
| epomial carina        | http://purl.obolibrary.org/obo/HAO_0000307 |
| eye                   | http://purl.obolibrary.org/obo/HAO_0000217 |
| femur                 | http://purl.obolibrary.org/obo/HAO_0000327 |
| fore wing             | http://purl.obolibrary.org/obo/HAO_0000351 |
| frons                 | http://purl.obolibrary.org/obo/HAO_0001523 |
| gena                  | http://purl.obolibrary.org/obo/HAO_0000371 |
| head                  | http://purl.obolibrary.org/obo/HAO_0000397 |
| hind coxa             | http://purl.obolibrary.org/obo/HAO_0000587 |
| hind tibia            | http://purl.obolibrary.org/obo/HAO_0000631 |
| hind wing             | http://purl.obolibrary.org/obo/HAO_0000400 |
| inner orbit           | http://purl.obolibrary.org/obo/HAO_0000419 |
| interantennal process | http://purl.obolibrary.org/obo/HAO_0000422 |
| lateral lobe of mesoscutum | http://purl.obolibrary.org/obo/HAO_0000466 |
| lateral ocellus       | http://purl.obolibrary.org/obo/HAO_0000481 |
| lateral ocular line   | http://purl.obolibrary.org/obo/HAO_0000480 |
| lateral pronotal area | http://purl.obolibrary.org/obo/HAO_0000543 |
| malar sulcus          | http://purl.obolibrary.org/obo/HAO_0000504 |
| mandible              | http://purl.obolibrary.org/obo/HAO_0000506 |
| lpa               | mesepisternum | http://purl.obolibrary.org/obo/HAO_0001872 |
|------------------|---------------|------------------------------------------|
| mesopleural depression | http://purl.obolibrary.org/obo/HAO_0000326 |
| mesopleuron      | http://purl.obolibrary.org/obo/HAO_0000566 |
| mesoscutellum    | http://purl.obolibrary.org/obo/HAO_0000574 |
| mesoscutum       | http://purl.obolibrary.org/obo/HAO_0001490 |
| mesosoma         | http://purl.obolibrary.org/obo/HAO_0000576 |
| metapleuron      | http://purl.obolibrary.org/obo/HAO_0000621 |
| metascutellum    | http://purl.obolibrary.org/obo/HAO_0000625 |
| metasoma         | http://purl.obolibrary.org/obo/HAO_0000626 |
| midlobe of mesoscutum | http://purl.obolibrary.org/obo/HAO_0000520 |
| netrion          | http://purl.obolibrary.org/obo/HAO_0000644 |
| notauli (notaulus) | http://purl.obolibrary.org/obo/HAO_0000647 |
| occipital carina | http://purl.obolibrary.org/obo/HAO_0000653 |
| ocellus          | http://purl.obolibrary.org/obo/HAO_0000661 |
| ocel lar triangle | http://purl.obolibrary.org/obo/HAO_0000430 |
| OOL              | ocular ocellar line | http://purl.obolibrary.org/obo/HAO_0000662 |
| process          | http://purl.obolibrary.org/obo/HAO_0000822 |
| propodeum        | http://purl.obolibrary.org/obo/HAO_0001248 |
| S1               | http://purl.obolibrary.org/obo/HAO_0001997 |
| S2               | http://purl.obolibrary.org/obo/HAO_0001829 |
| S3               | http://purl.obolibrary.org/obo/HAO_0001831 |
| S4               | http://purl.obolibrary.org/obo/HAO_0001832 |
| S5               | http://purl.obolibrary.org/obo/HAO_0001833 |
| S6               | http://purl.obolibrary.org/obo/HAO_0001834 |
| S7               | http://purl.obolibrary.org/obo/HAO_0002185 |
| sculpture        | http://purl.obolibrary.org/obo/HAO_0000913 |
| sternite         | http://purl.obolibrary.org/obo/HAO_0001654 |
| sulcus           | http://purl.obolibrary.org/obo/HAO_0000978 |
| T1               | http://purl.obolibrary.org/obo/HAO_0000053 |
| T2               | http://purl.obolibrary.org/obo/HAO_0000056 |
| T3               | http://purl.obolibrary.org/obo/HAO_0000057 |
| T4               | http://purl.obolibrary.org/obo/HAO_0000058 |
| T5               | http://purl.obolibrary.org/obo/HAO_0000059 |
| T6               | http://purl.obolibrary.org/obo/HAO_0000060 |
| T7               | http://purl.obolibrary.org/obo/HAO_0000061 |
| tergite          | http://purl.obolibrary.org/obo/HAO_0001783 |
| tibia            | http://purl.obolibrary.org/obo/HAO_0001017 |
| tyloid           | http://purl.obolibrary.org/obo/HAO_0001199 |
| vein             | http://purl.obolibrary.org/obo/HAO_0001095 |
| vertex           | http://purl.obolibrary.org/obo/HAO_0001077 |
| vertical epomial carina | http://purl.obolibrary.org/obo/HAO_0000307 |
| wing             | http://purl.obolibrary.org/obo/HAO_0001089 |