Two new species of *Apteroscelio* Kieffer (Hymenoptera: Scelionidae) from India

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**Abstract**

Two new species of *Apteroscelio* Kieffer, a previously monotypic genus, are here described, illustrated and keyed. Affinities between *Apteroscelio* and other scelionine genera are discussed. The male of this genus is imaged and described for the first time.

**Key words:** Scelionidae, brachyptery, taxonomy

**Introduction**

*Apteroscelio*, and the type species, *A. montanus*, were described by Kieffer (1913) from specimens collected in Kijabe, located in the forests of the Kikuyu Escarpment, Kenya. *Apteroscelio montanus* was later keyed and redescribed by Kieffer (1926). There have been no further taxonomic treatments of *Apteroscelio*, but other brachypterous genera of Scelionidae with Scelio-type ovipositor systems have since been described: the African *Platyscelidris* Szabó, and two Australian genera, *Jarabambius* Galloway and *Lidgbirdius* Galloway.

**Materials and methods**


All specimens were collected by sweep netting (SN), pitfall traps (PFT) and yellow pan traps (YPT). The descriptions and imaging were carried out with a Leica M205A stereomicroscope, with 1× objective and Leica DFC-500 digital camera. SEM imaging was done with Jeol JCM-5000 NeoScope using specimens coated with gold. Full resolution images are archived at the image database at The Ohio State University (http://purl.oclc.org/NET/hymenoptera/specimage). Taxonomic synopses and matrix-based descriptions were generated from the Hymenoptera Online Database (hol.osu.edu) and the online program vSysLab (vsyslab.osu.edu) in the format of character: state.

The holotypes and paratypes with NBAIR registration numbers are deposited in the National Bureau of Agricultural Insect Resources, Bangalore, while those with ZSI/WGRC/IR/INV are deposited in the National Zoological Collection at Zoological Survey of India, Calicut. All specimens were collected by K. Veenakumari.
**Apteroscelio Kieffer**

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http://bioguid.osu.edu/xbiod_concepts/450

*Apteroscelio* Kieffer, 1913: 17 (original description. Type: *Apteroscelio montanus* Kieffer, by monotypy and original designation); Kieffer, 1926: 266, 275 (description, keyed); Muesebeck & Walkley, 1956: 331 (citation of type species); Johnson, 1992: 343 (cataloged, catalog of world species).

**Link to Distribution Map.** http://hol.osu.edu/map-full.html?id=450

**Diagnosis.** Wings severely reduced in female; facial striae present; malar striae present; antennae in both sexes with 12 antennomeres, female clava 5-merous; male antenna filiform, A5 with tyloid; notaulus absent; epomial carina absent; mesoscutellum transverse; metascutellum present as a narrow transverse strip beneath mesoscutellum and divided from propodeum by a clear suture; metascutellum simple, without spine or lamella; metapleural carina present as a flange; female with 6 tergites and sternites externally visible; males with 8 external tergites and 7 external sternites; ovipositor *Scelio*-type.

*Apteroscelio aureus* Veenakumari, Talamas & Rajmohana, sp. n.  
Figures 1–17

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http://bioguid.osu.edu/xbiod_concepts/399138

**Description.** Female body length: 1.05–1.21 mm (n=14). Male body length: 0.89–1.16 mm (n=8) Color: yellowish to dark brown; eyes grey; mandibular teeth dark brown; posterior margin of clypeus black; base of toruli with a black patch; apical tergites dark brown. A1 with orange tinge.


- **Metasoma:** Foveae along anterior margin of T1: anterior margin smooth. Sculpture of T1–T6: reticulate. Male similar to female; length and width of A1–A12 in ratio of 18.5:4.4, 3.9:3.8, 3.6:4.3, 3.2:4.1, 3.3:4.4, 3.6:4.5, 4.2:4.4, 4.2:4.6, 4.2:4.7, 4.3:4.5, 4.4:4.5, 7.1:3.7, respectively. Wings strip-like reaching mid length of T1; Metasoma (L:W=39.6:31.5) 1.25× as long as wide; length and width of visible tergites T1–T7 in ratio of 1.6:21.0, 8.5:21.7, 21.1:34.0, 1.8:30.9, 2.0:28.0, 1.8:20.5, 5.6:11.5, respectively.

**Diagnosis.** *Apteroscelio aureus* can be separated from *A. montanus* and *A. shyamala* by the absence of ocelli and the small size of the eyes (maximum eye height less than length of malar sulcus).

**Etymology.** The species is named ‘*aureus*’ meaning golden in Latin, referring to the color of the entire body.

**Link to Distribution Map.** http://hol.osu.edu/map-large.html?id=399138

**Apteroscelio aureus** Veenakumari, Talamas & Rajmohana, sp. n.

Figures 18–25

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http://bioguid.osu.edu/xbiod_concepts/399139

**Description.** Female body length: 0.95–1.21 mm (n=6). Color: mandibles, basal antennomeres and legs yellow to brown; otherwise dark brown to black.


**FIGURES 9–13.** *Apteroscelio aureus* 9 Head, mesosoma, metasoma, ovipositor, dorsal view (ICAR/NBAIR/P249) 10 Metasoma, dorsal view (ICAR/NBAIR/P249) 11 Head, mesosoma, metasoma, dorsal view (ICAR/NBAIR/P260) 12 Head and antennae, ventral view (ICAR/NBAIR/P260) 13 Mesosoma and metasoma, dorsal view (ICAR/NBAIR/P260)

Metasoma: Foveae along anterior margin of T1: present. Sculpture of T1–T6: reticulate.

**Diagnosis.** *Apteroscelio shyamala* has T2 as the largest metasomal tergite. In *A. aureus* and *A. montanus* T3 is the largest.

**Etymology.** The species is named ‘shyamala’ meaning black in Sanskrit, referring to the color of this species. The name is treated as a noun in apposition and is also intended as a tribute to the first author’s friend, Dr. Radha Shyamala.

**Link to Distribution Map.** [http://hol.osu.edu/map-large.html?id=399139](http://hol.osu.edu/map-large.html?id=399139)

FIGURES 18–25. Apteroscelio shyamala female holotype 18 Head, mesosoma, metasoma, dorsolateral view 19 Head, anterior view 20 Metasoma, dorsal view 21 Head and mesosoma, dorsal view 22 Head and mesosoma, dorsal view 23 Head and mesosoma, lateral view 24 Head and antennae, dorsolateral view 25 Head, anteroventral view

Key to species of Apteroscelio (females)

1) Ocelli absent (Figs 5, 7, 14); maximum distance across compound eye less than or equal to length of malar sulcus (Figs 2, 14) .................................................. A. aureus Veenakumari, Talamas & Rajmohana sp. n. - Ocelli present (Figs 18, 21); maximum distance across compound eye distinctly greater than length of malar sulcus (Fig. 23) .
2. T2 the longest tergite (Fig. 20) ........................................ A. shyamala Veenakumari, Talamas & Rajmohana sp. n.
- T3 the longest tergite ..................................................... A. montanus Kieffer

Comments. *Lidgbirdius* can be separated by the presence of a distinct skaphion, but we are not yet aware of reliable generic characters that separate *Apteroscelio, Platyscelidris* and *Jarabambius*. Among these, *Apteroscelio* is the oldest available name and at present we consider it to be the appropriate placement for the species here described based on characters presented in our diagnosis of *Apteroscelio*. Treatment of the generic status of *Apteroscelio* in relation to other genera is beyond the scope of this paper and is currently under study by EJT and others. We consider it best to defer decisions about the fate of these genera until they are analyzed in a broader geographic and taxonomic context. Given that delimitation of genera is based on the morphological diversity of their constituent species, our description of *A. shyamala* contributes to the generic concept of *Apteroscelio* by expanding it to include species in which T2 is the longest tergite.

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References


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https://doi.org/10.4039/entm112113fv


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