

Two new species of *Ischiolepta* Lioy
(Diptera, Sphaeroceridae)

By

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Two new species of *Ischiolepta* Lioy (Diptera: Sphaeroceridae). – *Ischiolepta indica* sp. n. (India, Uttar Pradesh) and *I. minuscula* sp. n. (Tanzania) are described with taxonomical notes. With 11 original figures.

The species of *Ischiolepta* Lioy, 1864 are small sphaerocerine flies with epistoma enlarged to a pentagonal plate, mesonotum covered by small blunt tuberculated setae, of which 2 to 4 irregular rows of acrostichals distinctly separated from dorsocentral rows, scutellum with 6 to 10 strong marginal tubercles, vein M straight, apices of vein R₄₊₅ and M divergent. Han and Kim (1990) published an excellent revision of the genus recently. By the aid of this revision, some unnamed material in the Zoological Department, Hungarian Natural History Museum, Budapest (HNHM) was identified and two new species were found, from the Oriental and from the Afrotropical region.

Hackman (1977) listed only one species (*I. orientalis* (de Meijere, 1908)) in his catalogue of the Diptera of the Oriental Region. Papp (1978) reported some new records and *I. scabricula* (Haliday, 1836) as new to the region. Roháček and Papp (1984) described *I. loebli* from North India (Uttar Pradesh) and from North Pakistan. In the Australasian Region there is only one species (*I. pusilla*, introduced, cf. Marshall 1989).

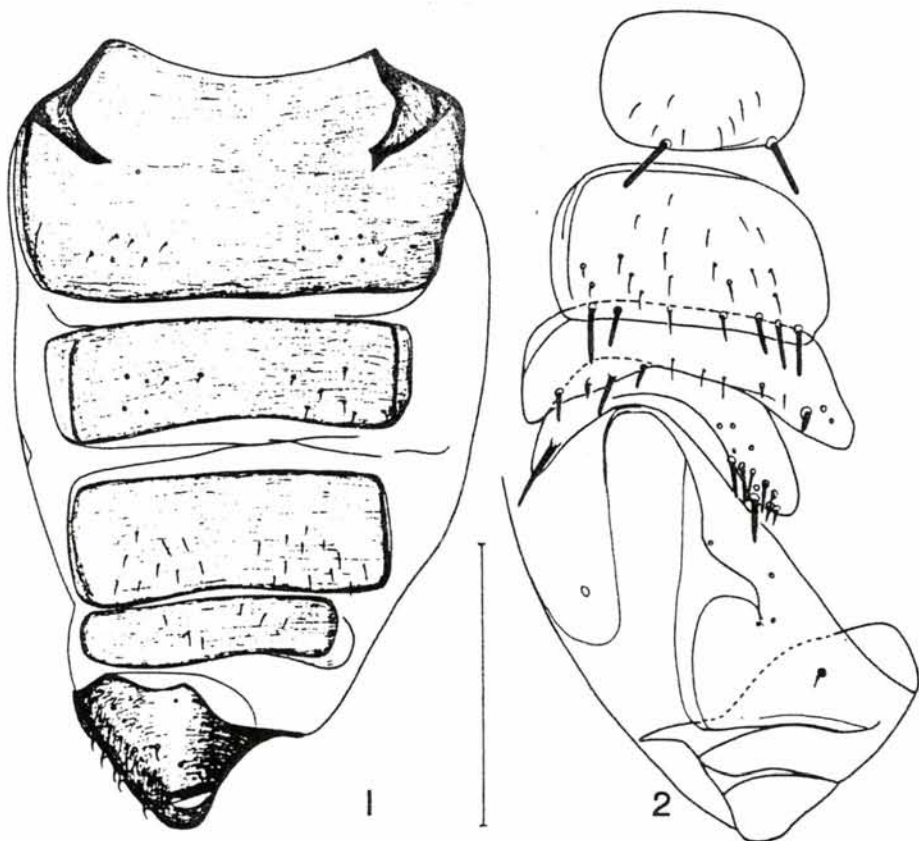
Quite contrarily, the Afrotropical species of *Ischiolepta* are more numerous (Han and Kim 1990): five species are known, including *I. scabricula*, which seems to occur in many parts of the Old World. Though this study was obviously facilitated by Han and Kim's revision, the species described below as new are not close relatives of the known species, where all the good illustrations of that revision would serve as basis for comparison, but they are surprisingly unique in some features.

Ischiolepta indica sp. n.
(Figs 1-5)

Holotype male (HNHM): India: Uttar Pradesh, Nainital, Governor's House Park, ca. 2050 m – singled with aspirator on soil from under stones and fallen leaves, 3.XII.1989, leg. Papp. Paratype: 1 ♀ (HNHM): same data.

Measurements in mm: body length 2.83 (holotype), 2.75, wing length 2.41 (holotype), 2.18, wing width 0.93 (holotype), 0.85.

Body subshining. Head as long as high; lunule rather large, subtriangular, inner vertical setae indistinct, outer vertical setae short thick on small tubercles, 2 pairs of comparatively

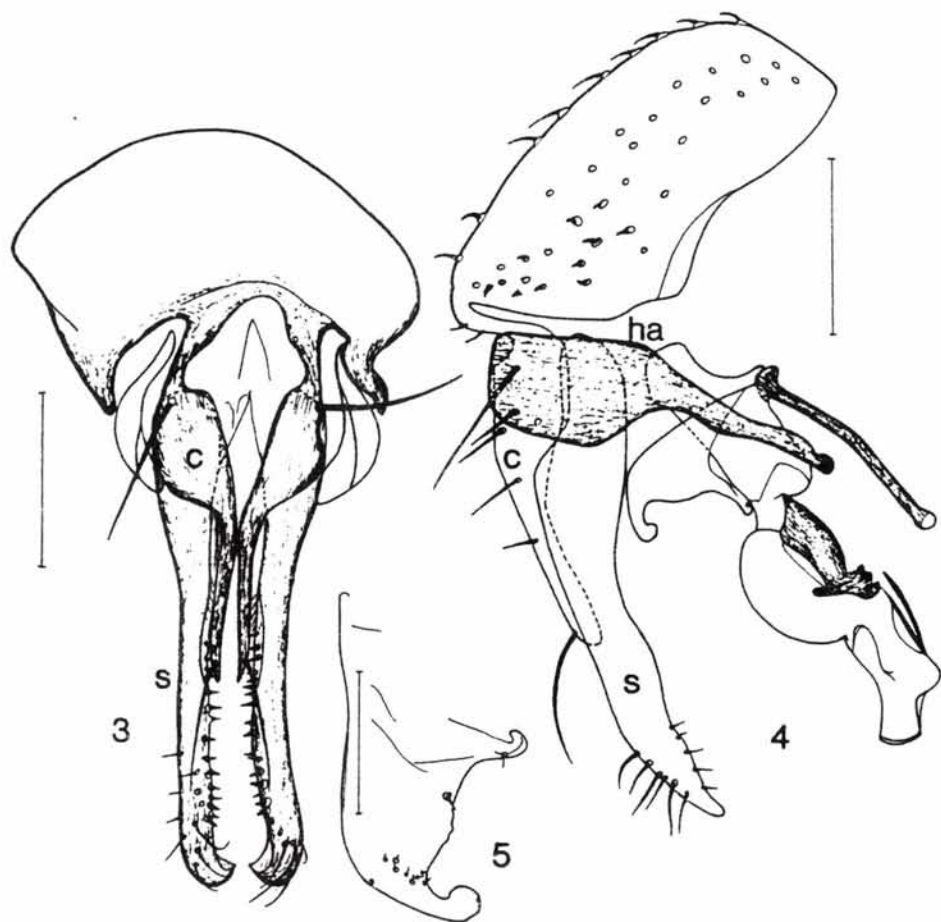


Figs 1-2. *Ischiolepta indica* sp. n., holotype male, abdomen. 1: abdomen in dorsal view; 2: sternites in ventral view. Scale: 0.5 mm

short proclinate upper orbital (fronto-orbital) setae on weak tubercles; epistoma (facial plate) pentagonal, granulate, clypeus less than twice as wide as high, dull with dense microchaetae; supragena and infragena shining, gena and facial ridge subshining (granulate); facial ridge with thick but only slightly flattened vibrissa, in male 2, in female 3 long subvibrissal setae and some short setae beneath them; eye round, globular.

Thorax rather long; acrostichal setae in 4 (or more) irregular rows; dorsocentral rows distinctly separate from acrostichal rows bare area between them subshining; scutellum twice as wide as long with 6, more or less bifid, scutellar marginal tubercles in both sexes (marginal tubercles are actually bifid or they seem to be so: their short apical setae pale on the apex of dark tubercle); katepisternum with very sparse hairs ventrally. Legs mainly dark brown, apex of fore coxa, trochanters and tarsi partly ochreous; fore femur not much thickened; hind femur only 1.2 times as thick as middle femur; hind femur and tibia almost straight *not* bent dorsally. Wings not hyaline but light brownish, veins brown. Knob of halteres rather thin, pale yellow.

Preabdomen rather weakly sclerotized: in male tergites do not cover abdomen completely (Fig. 1), in female though tergites complete, obviously not strongly sclerotized. Male tergite 1+2 large, tergites 3 and 4 transverse rectangular (Fig. 1); tergite 5 weak and short; sternite 1



Figs 3-5. *Ischiolepta indica* sp. n., holotype male, genitalia. 3: male terminalia caudally; 4: genitalia in lateral view; 5: postgonite (c: cercus, ha: hypandrium, s: surstylus). Scales: 0.2 mm for Figs 3-4 and 0.1 mm for Fig. 5

indistinct, sternite 2 subquadratic with a pair of blunt thick marginal setae, sternite 3 slightly asymmetrical (Fig. 2) with five shorter blunt submarginal setae, sternite 4 strongly asymmetrical with asymmetrically placed marginal setae, sternite 5 asymmetrical and distorted by postabdominal structures. Male terminalia (Figs 2-5) very large, strongly asymmetrical, postabdomen much tapering caudally; hypandrium with large and wide subepandrial part (Fig. 4), its apical fork small and thin; surstylus extremely long (Figs 3, 4) with medially directed apex, medial edge with short and pointed thornlets, in profile surstylus slightly proclinate with several medium-long subapical bristles; cerci very long, pointed in caudal view with a pair of long apical setae; basal part of cerci fused through well sclerotized, hairy bridges with epandrium. Postgonite (Fig. 5) wide with proclinate blunt and rounded apical part, distiphallus not very long, dorsal sclerite with some blunt teeth.

Female tergite 5 and sternite 5 not divided, though tergite 5 with a sagittal emargination (depression). Sternites 2-5 with a pair of long blunt and thick setae.

Ischiolepta indica sp. n. does not fit in the key of Han and Kim (1990): its acrostichals are in 4 or more irregular rows but its body is not shining. One can easily distinguish it from congeners by its 6 bifid marginal scutellar tubercles. Its male genitalia are quite unique with extremely long surstylus and long cerci, which are fused with epandrium; this is a unique feature in this genus.

Etymology. The types were collected in North India (Kumaon district) and though we do not think, it would occur only there, it was named as "indica".

***Ischiolepta minuscula* sp. n.**
(Figs 6-11)

Holotype male (HNHM): Tanzania: Morogoro region, Mikumi National Park, Mikumi Tented Camp – Netting over excrement of elephant, Feb 1, 1987, leg. S. Mahunka-T. Pócs-A. Zicsi, No. 8. Paratypes: 2 ♀♀ (HNHM): same data.

Measurements in mm: body length 1.15 (holotype), ca. 1.20 (abdomen down curved on both paratypes), wing length 1.10 (holotype), 1.10-1.19, wing width 0.46 (holotype), 0.51-0.53.

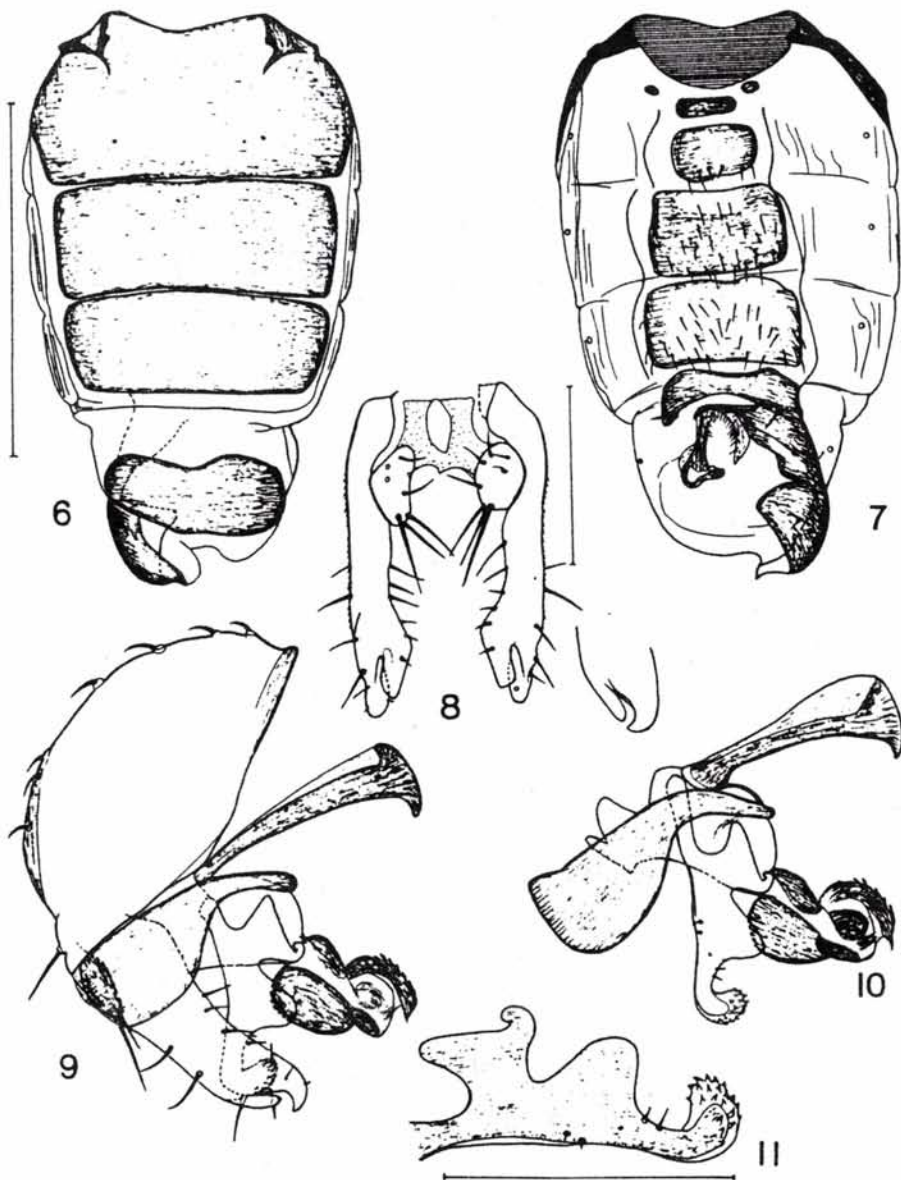
Body dull dark brown, tubercles and setae all very short. Head somewhat higher than long (19 : 17); frons flat and elongate, lunule small triangular, inner and outer vertical setae and 2 pairs of proclinate upper orbital (fronto-orbital) setae all very short, their basal tubercles indistinct; epistoma wide and low, not much higher than clypeus, clypeus microtomentose; gena, supragena, infragena and facial ridge all dull; facial ridge with thick flat inclinate vibrissa, several comparatively long subvibrissal hairs; eye round.

Thorax dull; acrostichal setae in 4 nearly regular rows; dorsocentral rows distinctly separate from acrostichal rows, bare area between them pollinose; scutellum twice as wide as long with 8 i.e. 4 pair of normal marginal scutellar tubercles, each with medially directed small setae; katepisternum with sparse ventral hairs only. Legs dull dark brown without any modifications; fore femur 0.380 mm long, 0.121 mm wide, ratio 3.14; hind femur much thickened, 0.483 mm long 0.155 mm wide, ratio 3.12; hind tibia 0.388 mm long, 0.069 mm wide; hind femur strongly, hind tibia slightly bent dorsally. Hind tibia with strong ventroapical spur in both sexes. Wings with some brownish infukation, veins light brown.

Preabdomen well sclerotized. Male tergite 1+2 normal, tergites 3 and 4 transverse rectangular; tergite 5 small and asymmetrical (Fig. 6); sternite 1 consists of two very small round sclerites, sternite 2 divided into two (Fig. 7), sternites 3 and 4 comparatively large, latter slightly asymmetrical, sternite 5 very short with a pair of short lateral marginal bristles. Male terminalia (Figs 8-11) very characteristic, hypandrium short but high (wide) placed ventrally to epandrium, surstylus bifid apically (Figs 9-10), cerci rather small and laterally placed with 3 pairs of long apical bristles. Postgonite (Fig. 11) unique with a very wide apex, which bears very small thornlets in 3 rows, medially with a large rounded process, subbasally with another process of upcurving blunt apex; distiphallus (Fig. 10) with serrate dorsal sclerite, basiphallus with a caudally directed small ventrobasal process.

Female abdomen not dissected; sternites each with a pair of long blunt marginal setae.

Ischiolepta minuscula sp. n. is far the smallest species in the genus, *I. scabricula* (Haliday, 1836), which was thought to be the smallest, is 1.5 times bigger; I do not think any of the hitherto known species is closely related to this new one: its bifid surstylus and unique postgonite make it easily distinguishable from any other species. Based on outer morphological



Figs 6-11. *Ischiolepta minuscula* sp. n., holotype male, abdomen and genitalia.
 6: preabdomen in dorsal view; 7: abdomen without genitalia, ventral view;
 8: cerci and surstyli caudally; 9: epandrium and genitalia laterally;
 10: aedeagal complex and hypandrium laterally; 11: postgonite laterally.
 Scales: 0.5 mm for Figs 6-7, 0.2 mm for Figs 8-10, 0.1 mm for Figs. 11.

features only, it seems related to some species in the *pusilla* species-group (*draskovitsae*, *horrida*, *oedopoda*) where the fore and hind femora of males are thickened.

Etymology. It is named *minuscula* in Latin with a meaning of "very small".

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