

TWO NEW SPECIES OF SARCOPHAGID FLIES FROM NEPAL (Diptera: Sarcophagidae)

By Rokuro Kano and Satoshi Shinonaga¹

Abstract: Two new species of sarcophagid flies from Nepal are described and figured. These are *Iranihindia nepalensis* and *Sarcosolomonina shresthai*.

Iranihindia nepalensis Kano and Shinonaga, new species

♂. Body length 5-11 mm.

Head: Frons about 4/7 of one eye; frontal vitta black; parafrontals and parafacials with golden or silvery pruinescence; facial ridge reddish brown; face light brown with silvery pollen; antennae usually dark brown, and distal part of 2nd segment and basal part of 3rd segment reddish brown; length of 3rd antennal segment about 2.5× that of 2nd segment; arista plumose, along basal 3/5; gena black, of golden to silvery pollinosity, with numerous short black hairs on anterior 1/2 and numerous long white hairs on posterior 1/2; gena about 1/2 height of an eye; frontal bristles 7-9 and lower 2 or 3 pairs divergent; outer vertical bristles absent; 1st row of postocular setae black and regular; 2nd row of postocular setae black (sometimes mixing a few white setae) and irregular; other postocular setae white; palpi dark brown, slender and light brown at apices.

Thorax: Scutum with silvery to golden pruinescence, with 3 black longitudinal stripes; acrostichal bristles 0+1; dorsocentral bristles 5+5 (foremost one very fine, hind two strong); intra-alar bristles 1+2 (rarely 3); presutural bristle 1; humeral bristles 3; posthumeral bristles 2; notopleural bristles 4; supra-alar bristles 3; postalar bristles 2; sternopleural bristles 1+1+1; apicoscutellar and discoscutellar bristles 1 pair each; lateroscutellar bristles 2 pairs; upper part of propleuron bare; prosternum hairy posteriorly.

Wings: Hyaline; R₁ bare; R₄₊₅ with a row of about 10 short setae located dorsally extending more than half way from basal node to r-m; costal spines strong; length of section III of costa a little longer than that of section V; section V of costa with short spines along basal 3/4 to 4/5 of anterior margin; basicostal scale light brown to pale yellow; epaulet black; squamae creamy white; halter brown.

Legs: Black; fore femur with a pair of rows of long bristles on posterodorsal surface, a row of long bristles along posterior margin of ventral surface; fore tibia with 2 or 3 short bristles on basal 1/3 of anterodorsal surface, 1 bristle on posteroventral surface at 1/3 the distance from distal end; mid femur with a row of several short bristles on anterolateral surface, 2 short bristles on distal part of posterolateral surface, a row of short bristles along anterior margin of ventral surface, a row of short bristles along distal 1/2 of posterior margin of ventral surface, a row of long hairs along basal 1/2 of posterior margin of ventral surface; mid tibia

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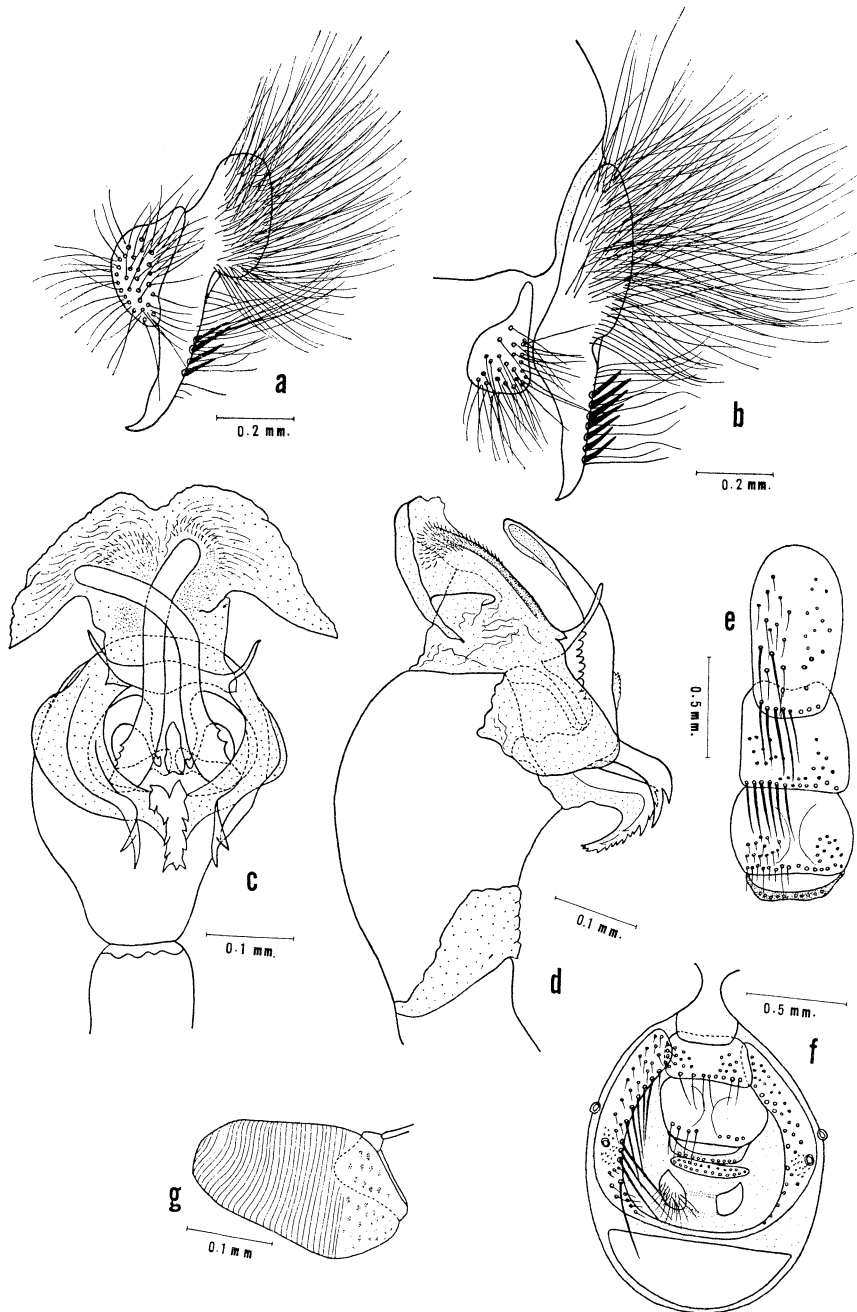


Fig. 1. *Iranihindia nepalensis* n. sp. a and b, inner and outer forceps; c, ventral view of penis; d, lateral view of penis; e, genital sternites of female; f, female genitalia; g, spermatheca.

with 2 bristles on anterolateral surface, 1 bristle on posterodorsal surface at 1/3 distance from distal end, 2 or 3 short bristles on basal 1/2 of posterolateral surface, 1 bristle each at distal 1/3 portion of anteroventral and posteroventral surfaces; hind femur with a pair of rows of long bristles on anterodorsal surface, 1 bristle each at distal part of dorsal and posterodorsal surfaces (rarely 2 bristles), numerous long hairs on ventral surface, 1 or several bristles along anterior margin of ventral surface; hind tibia with a row of bristles on anterodorsal surface, 2 bristles on posterodorsal surface, 1 bristle at distal 1/3 portion of anteroventral surface, several (in small specimens) or numerous (in large specimens) long hairs each along anterior and posterior margins of ventral surface.

Abdomen: Black and silvery gray checkered pattern; median marginal bristles on 3rd tergite strong; several pairs of marginal bristles on 4th and 5th tergites well developed; 1st genital tergite black with grayish pollen and marginal bristles absent or weak; 2nd genital tergite black with grayish pollen, but basal half of the dorsal surface shiny black; 1st to 4th sternites with numerous long hairs; 5th sternite V-shaped; outer forceps with numerous long hairs; inner forceps with numerous long hairs on basal part and 4 to 7 strong comb-like spines on distal part; anterior and posterior paramere approximately same length; anterior paramere bifurcate; posterior paramere with 1 long bristle at subapical part; genitalia as shown in fig. 1 (a-d).

♀. Body length 5-10 mm. Frons about the same width as one eye; 2 proclinate and 1 reclinate fronto-orbital bristles present; outer vertical bristles well developed; apicoscutellar bristles absent; mid and hind femora and hind tibia without long hairs; 1st to 4th sternites without long hairs; 4th and 5th sternites narrow; spermathecae ellipsoidal and with fine transversal sulcate; signum not pigmented; posterior margin of 6th tergite without strong bristles (only moderate bristles); 7th tergite wanting; 6th sternite quadrangular; 7th sternite round; 8th sternite short and its posterior margin heavily pigmented. Terminalia as shown in fig. 1 (e-f).

Holotype ♂, Pokhara, Nepal, 20-23.VI.1964, R. Kano.

Allotopotype ♀, same data as holotype.

Paratypes: 10♂♂, 10♀♀, same data as holotype; 2♂♂, Godavari, Kathmandu, Nepal, 27.VII.1964, Kano; 1♂, 2♂♂, Balaju, Kathmandu, Nepal, 27.VI.1964, Kano; 1♂, Daku-shin Kali, Kathmandu, Nepal, 2.VII.1964, Kano.

Remarks: This species was found on flowers, blossoms and grasses on the hillsides. It was never attracted to animal carcasses or human or animal feces. It is probably a parasite of Lepidoptera or other insects. *Iranihindia nepalensis* is closely related to *I. futilis* (Senior-White), but it differs from the latter in the color of the palpi and the shape of the phallosome. The apical part of the palp is light brown in this species. It is dark brown in *I. futilis*.

| Features | <i>I. futilis</i> | <i>I. nepalensis</i> |
|--------------------------------------|---|---|
| 1. Apical part of palp | dark brown | light brown |
| 2. Paraphallus | short and stout | long and slender |
| 3. Styli | short and stout | long and slender |
| 4. Subapical spines of inner forceps | moderately long and situated near one another | very long and widely separated from one another |

***Sarcosolomonina shresthai* Kano and Shinonaga, new species**

♂. Body length about 9 mm.

Head: Frons about 2/3 the width of an eye; frontal vitta black; parafrontals and parafacials with golden to silvery pruinescence; antennae dark brown, 3rd segment covered with silvery pollen, length of 3rd segment 2× that of 2nd segment; gena black, of silvery pollinosity, with numerous black hairs and 1/3 height of an eye; frontal bristles 10-11 pairs, with lower 2 or 3 pairs divergent; palpi black and slender; 1st row of black postocular setae regular, but 2 other behind rows black and irregular; metacephalon and posterior part of genae with numerous yellowish white hairs.

Thorax: Scutum with silvery to golden pruinescence, with 3 black longitudinal stripes; acrostichal bristles 4-5+1; dorsocentral bristles 4+3 or 4; intra-alar bristles 0 or 1 (fine)+2 or 3; humeral bristles 3; posthumeral bristles 2 or 3; notopleural bristles 4; supra-alar bristles 3; postalar bristles 2; sternopleural bristles 1+1+1; apicoscutellar and discoscutellar bristles 1 pair each; lateroscutellar bristles 2 pairs; upper part of propleuron bare; prosternum hairy.

Wings: Hyaline; R_1 bare; R_{4+5} with about 10 short setae located dorsally extending more than 1/2 way from basal node to r-m; several setae on the ventral surface of the basal node of R_{4+5} ; length of section III of costa 5/6 of section V; section V of costa with short spines along about basal 1/2 of anterior margin; basicostal scale light brown; epaulet black; squamae creamy white; halter brown.

Legs: Black; fore femur with a pair of rows of long bristles on posterodorsal surface, a row of long bristles on posterior margin of ventral surface; fore tibia with 2 or 3 short bristles on basal part of anterodorsal surface, 1 bristle on distal 1/3 of posterolateral surface; mid femur with several short bristles on middle portion of anterolateral surface, a row of short bristles extending 1/2 way from distal end on each of anterior and posterior margins of ventral sur-

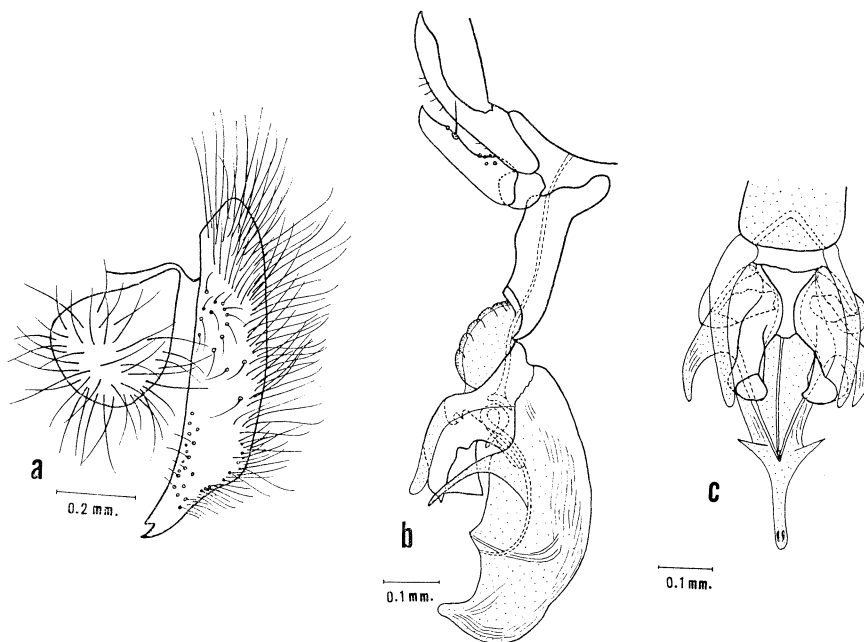


Fig. 2. *Sarcosolomonina shresthai* n. sp. a, inner and outer forceps; b, penis and paramere; c, ventral view of penis.

face, 3 bristles on basal 1/2 of anteroventral surface, a row of bristles on basal 1/2 of posteroventral surface, 2 bristles on distal part of posterolateral surface; mid tibia with 2 bristles on middle portion of anterodorsal surface, 2 bristles each on distal 1/3 and 2/3 of posterolateral surface, 1 bristle at distal 1/3 of ventral and posterodorsal surfaces respectively; hind femur with 2 rows of bristles on anterodorsal surface (1 row with long bristles and another row with short bristles), several long bristles both on anterior and posterior margins of ventral surface, 1 bristle each on distal part of posterodorsal and posterolateral surfaces, moderate hairs on ventral surface; hind tibia with a row of 2 long and several short bristles on anterodorsal surface, 2 bristles on posterodorsal surface, 2 bristles on anteroventral surface, without tuft of long hairs.

Abdomen: Black and silvery checkered pattern; median marginal bristles on 3rd tergite absent; several pairs of marginal bristles on 4th and 5th tergite well developed; 2nd to 4th sternites with numerous short hairs and without bristles and long hairs; 1st genital tergite black with grayish pollen; 2nd genital tergite shiny black; 1st and 2nd genital tergites with numerous black hairs, but without marginal bristles; 5th sternite V-shaped and with 3 or 4 long and strong bristles on hind margins of both arms; genitalia as shown in fig. 2.

Holotype ♂, Dakushin Kali, Nepal, 2.VII.1964, R. Kano.

Paratopotype ♂, same data as holotype.

Remarks: This species was collected on bushes and stones beside a mountain stream in Dakushin Kali, but was very rare. It seems that this fly was not attracted to animal carcasses and human feces.

Holotypes are deposited in the collection of the Department of Medical Zoology, Tokyo Medical and Dental University and paratypes are deposited in the collection of Instituto Oswaldo Cruz, Rio de Janeiro, Brazil.

Acknowledgments: We wish to express our sincere thanks to Dr H. S. Lopes, Instituto Oswaldo Cruz, Rio de Janeiro, for his kind suggestions throughout the course of this work; to Dr J. L. Gressitt, B. P. Bishop Museum, Honolulu, who gave us the opportunity to examine much Oriental material in the Bishop Museum collections; and to Mr H. Kurahashi for his kind help and suggestions.

The specimens upon which this study was based were collected by the senior author in Nepal from May to July in 1964. This trip was made under the Colombo Plan with the financial support from Overseas Technical Cooperation Agency of Japan. We wish to express our hearty thanks to Overseas Technical Cooperation Agency of Japan.

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