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Pseudopsis: Two New Species from India (Coleoptera, Staphylinidae, Pseudopsinae)

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ABSTRACT

Two new species of *Pseudopsis* (*susae* and *suchi*) from India are described and illustrated. They are part of the *sulcata* complex which is represented in the New World by 19 species and, until now,

in the Old World by five, only two of them from India. It is observed that further collecting will produce more species of the complex. A key to the eight Old World species of *Pseudopsis* is provided.

INTRODUCTION

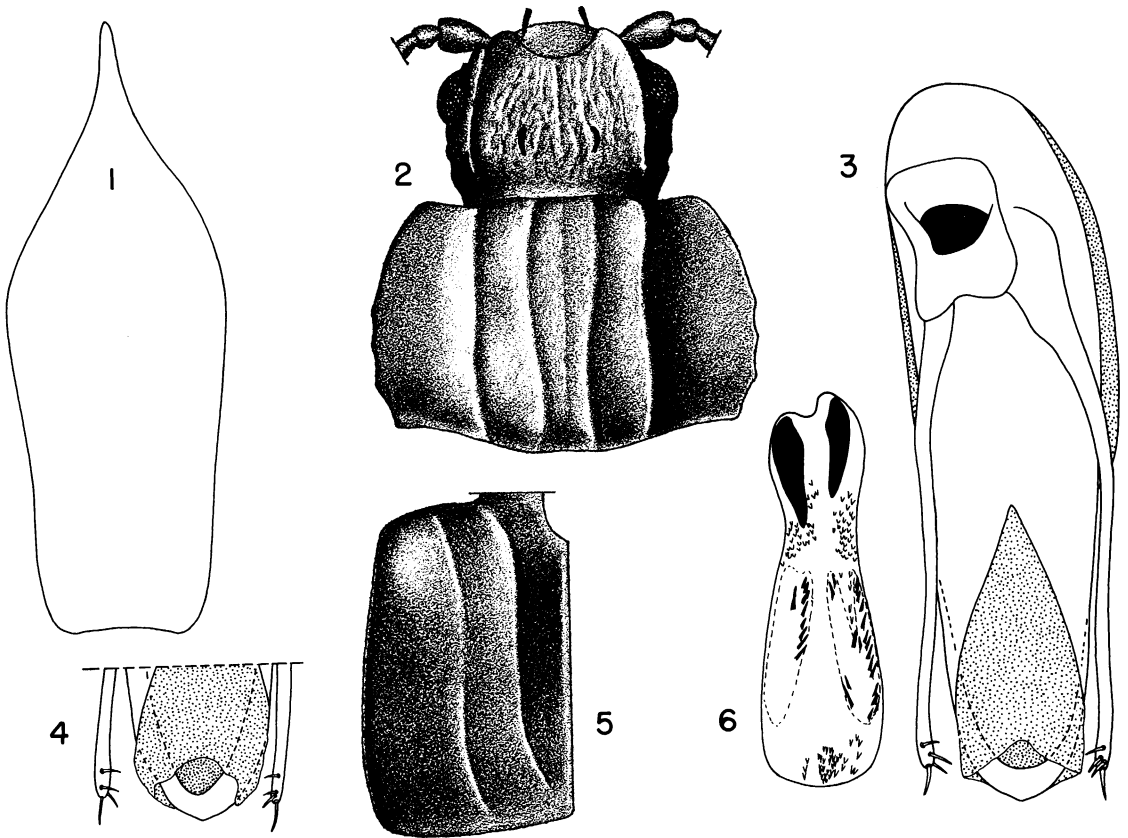
In a revision of *Pseudopsis* I showed that what formerly had been identified as *Pseudopsis sulcata* was actually a complex of many species of similar external appearance that are separated by characters of the aedeagus (Herman, 1975). Among the numerous features that define the *sulcata* complex, the most easily viewed are the carinae of the head, pronotum, and elytra (fig. 2), and the clubbed setae of the head (fig. 2) and abdomen.

The species are found in cool temperate and cool montane regions. In the New World, 19 species of the complex are known but in the Old World only five are described. Inspection of the distribution of the species of the complex would lead to a prediction that more species will be discovered, particularly in the mountains of Mexico, Central and South America, and Asia. This suspicion, suggested earlier (Herman, 1975), is confirmed by material of two new species

from India sent to me by Ivan Löbl of the Museum d'Histoire Naturelle, Geneva. As more collections are made many more species will be found.

The two new Indian species show both aedeagal and external differences. *Pseudopsis susae* has crenulate lateral pronotal margins and a sinuate basal margin (fig. 2), and the elytral epipleural carina is invisible (fig. 5) when seen from above. Not having recorded significant external variation before, I reexamined the species of the *sulcata* complex (except *spicula*). The pronotum is weakly or feebly crenate in *obtusa* (United States), *vespina* (Mexico), *prolixa* (India), *himalayensis* (India), and *afra* (northern Africa) but the basal margin is broadly rounded (see Herman, 1975, fig. 1), not strongly sinuate. The elytral epipleural carina is invisible from above in *susae*; it is difficult to see in *petila*, *dilatata*, *sinuata*, *vespina*, and *wygodzinskyi* (all

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FIGS. 1-6. *Pseudopsis susae*. 1. Sternum IX, male, setae removed. 2. Head and pronotum. 3. Aedeagus, ventral view. 4. Aedeagus, apical portion, ventral view. 5. Elytron, left. 6. Internal sac, inverted.

New World species). The only species of the complex with a deeply emarginate posterior margin of the male's sternum IX (fig. 9) is the new Indian species *P. suchi*.

Coiffait (1977) published a partial list of species from Nepal. Among them were specimens from two localities of what he identified as *Pseudopsis sulcata*. Considering our knowledge of the nature of the *sulcata* complex it is probable that these specimens reported by Coiffait represent new species.

ACKNOWLEDGMENTS

Thanks are due Ivan Löbl, Museum d'Histoire Naturelle, Geneva, Switzerland, for sending the specimens used in this study.

Abbreviations used in this paper are: AMNH, American Museum of Natural His-

tory; GMNH, Museum d'Histoire Naturelle, Genève.

Pseudopsis susae, new species

Figures 1-7

HOLOTYPE: Male. **India:** Uttar Pradesh: Garhwal, 6 km. E Dhanolti (also Dhanaulti), 2300 m., October 21, 1979, I. Löbl. Deposited in the Museum d'Histoire Naturelle, Genève.

PARATYPES: Five males, 10 females. **India:** Meghalaya: Weilo Khasi Hills, 1700 m., October 27, 1978, Besuchet and Löbl (one male, one female, GMHN); Mawphlang, Khasi Hills, 1800 m., October 28, 1978, Besuchet and Löbl (two females GMHN; two females AMNH); Shillong, 1850-1950 m., October 30, 1978, Besuchet and Löbl (one

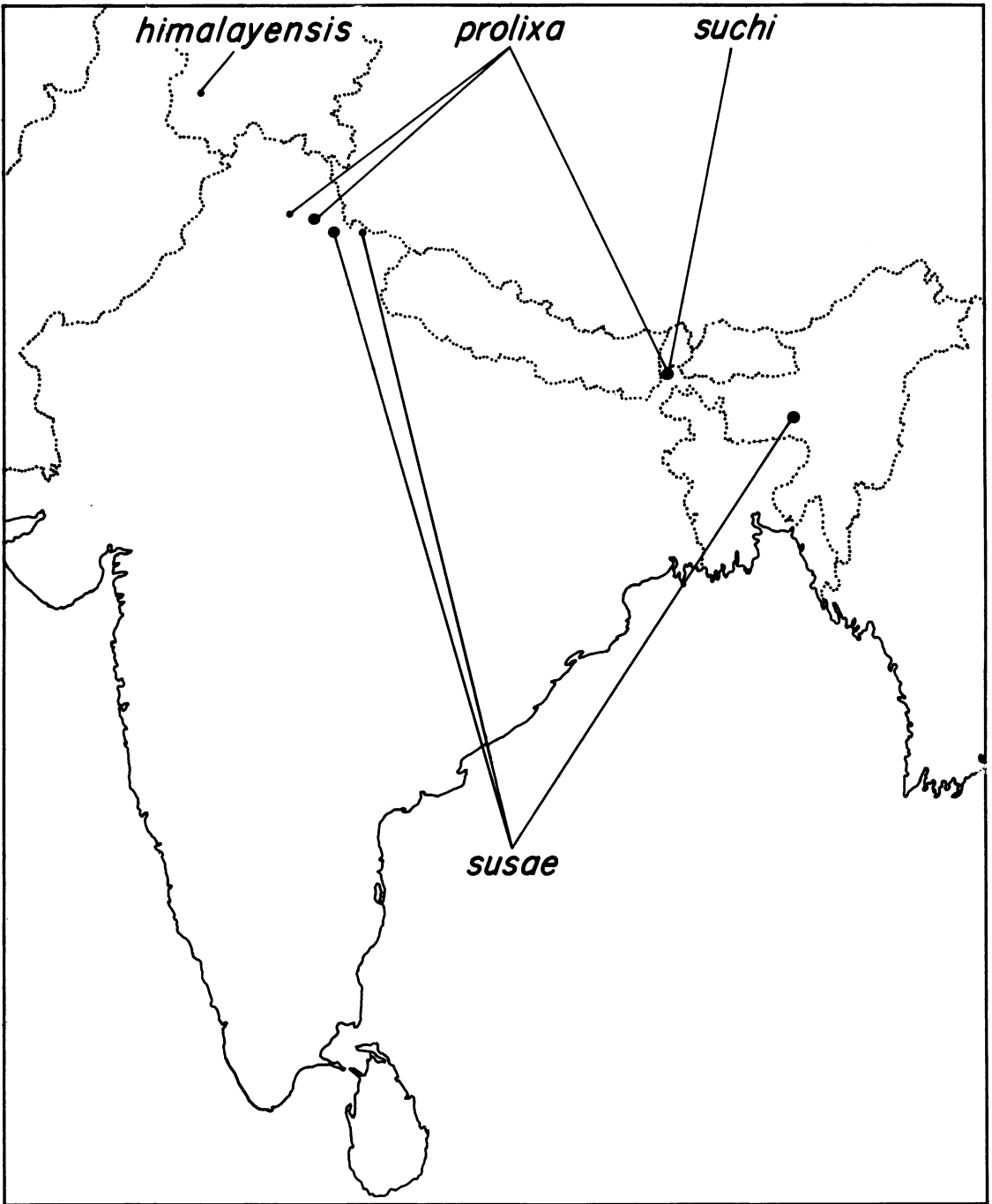


FIG. 7. Map of India showing distribution of *Pseudopsis*. Large dots indicate multiple localities; small dots represent one locality.

male, one female GMHN, two males AMNH). *Uttar Pradesh*: Barhwal, above

Joshimath, 2100 m., October 27, 1979, Löbl (one male, one female, GMHN); Garhwal, 2

km. E Dhanolti (also Dhanaulti), 2250 m., October 21, 1979, Löbl (two females GMHN, one female AMNH).

DIAGNOSIS: *Pseudopsis susae* can be separated from all other species of the genus by the presence of clubbed setae on the head (fig. 2) and abdomen, the crenate lateral pronotal margin (fig. 2), the invisibility of the elytral epipleural carina in dorsal aspect (fig. 5), the stout spines on the internal sac (fig. 6), and the rounded posterior margin of the median lobe (fig. 3).

DESCRIPTION: Length 3.6 to 5.0 mm.

Head (fig. 2) with weakly developed median carinae. Pronotum (fig. 2) with weakly developed midlongitudinal carina; lateral margin with basal half crenate; basal margin strongly sinuate. Elytral (fig. 5) epipleural carina invisible from above. Sternum IX (fig. 1) of male with sinuate posterior margin.

Parameres (fig. 3) gradually deflexed ventrally and sinuate in ventral view; apex of paramere nearly reaching apex of median lobe and with moderately long seta extending to or just beyond apex of median lobe; apical seta unpigmented. Median lobe (fig. 3) moderately long, moderately broad, and weakly tapered toward apex; apical margin (figs. 3, 4) broadly rounded with blunt, median point; apical region elliptical; dorsal sclerotization moderately broad at apex and inner margin broadly rounded; apical portion of ventral surface with V-shaped membranous region occupying between one-third and one-half of median lobe; membranous region without lightly sclerotized lateral plates; ventral surface without depression; apical portion of dorsal surface without spicules or spines. Internal sac (fig. 6), in repose, slightly more than one-half as long as median lobe and broad and with numerous small slender spines and two large, stout, darkly pigmented spines lying near basal half; sac with two long patches of small pigmented setae anterior to stout spines (fig. 6 indicates the location, shape, and size of the patches by the area enclosed by broken lines, the pigmented setae are only a few of the many present).

DISCUSSION: *Pseudopsis susae* is known from two widely separated regions, the Himalayas northeast of Dehra Dun and the Khasi Hills near Shillong in Assam. The specimens from Dhanolti (NE of Dehra Dun) were

collected from a forest on a northern slope. The species was collected at elevations of 5577 to 7546 ft. (1700 to 2300 m.).

Pseudopsis susae is one of the few species that can be identified by external features.

MATERIAL EXAMINED: One holotype and 15 paratypes.

ETYMOLOGY: I name this species for my dear friend Sue who is enamored of India.

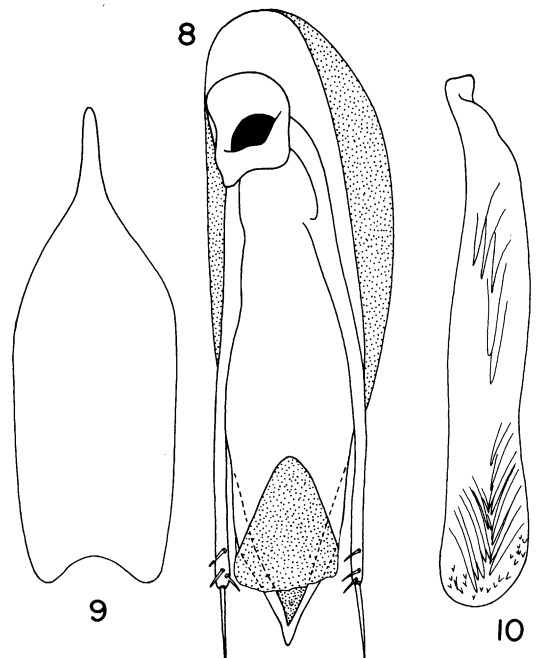
***Pseudopsis suchi*, new species**

Figures 7–10

HOLOTYPE: Male. **India:** *West Bengal:* Darjeeling District, Tigerhill, 2200–2300 m., October 13, 1978, Besuchet and Löbl. Deposited in the Museum d'Histoire Naturelle, Genève.

PARATYPES: None.

DIAGNOSIS: *Pseudopsis suchi* can be separated from all species of the *sulcata* complex in the Old World by the deeply emarginate sternite IX of the males (fig. 9), the long, stout, unpigmented apical seta on the paramere (fig. 8), the pointed apex of the median lobe (fig.



FIGS. 8–10. *Pseudopsis suchi*. 8. Aedeagus, ventral view. 9. Sternum IX, male, setae removed. 10. Internal sac, inverted.

8), and the rows of long spines on the internal sac (fig. 10).

DESCRIPTION: Length 3.5 mm.

Head with weakly developed median carinae. Pronotum with moderately well-developed midlongitudinal carina, entire lateral margin and broadly round basal margin (feebly sinuate near lateral region). Elytral epipleural carina visible from above. Sternum IX of male with deeply emarginate posterior margin (fig. 9).

Parameres gradually deflexed ventrally and in ventral view feebly sinuate; apex of paramere (fig. 8) not reaching apex of median lobe and with long seta extending to just beyond apex of median lobe; apical seta stout and unpigmented. Median lobe (fig. 8) moderately long, moderately broad, and moderately strongly tapered toward apex; apical region slightly more strongly tapered to pointed apex; apical region triangular in ventral view; lateral margins near apex feebly sinuate; dorsal sclerotization narrow at apex of median lobe and inner margin acutely V-shaped; apical portion of ventral surface with elliptical membranous region occupying about one-fourth of median lobe; apical portion of membranous region without lightly sclerotized plates laterally; ventral surface without depression; apical portion of dorsal surface without spicules or spines. Internal sac (fig. 10), in repose, nearly as long as median lobe, moderately broad and with two (or more?) rows of long stout spines; spines with apices pigmented.

DISCUSSION: This species was collected at an elevation of 7217 to 7546 ft. (2200 to 2300 m.) in northeastern India.

MATERIAL EXAMINED: Holotype.

ETYMOLOGY: From the Sanskrit *suchi* for needle, referring to the rows of numerous long, slender spines of the internal sac.

Pseudopsis prolixa Herman

Pseudopsis prolixa Herman, 1975, p. 274.

NEW MATERIAL: Four specimens. **India:** *West Bengal:* Darjeeling district, Ghoom, 1500 m., October 15, 1978, Besuchet and Löbl (one male GMHN). *Himachal Pradesh:* Gahan, Simla Hill, 7000 ft., September, 1921, Cameron (three AMNH).

DISCUSSION: The specimen from north-eastern India is larger and broader, the aedeagus longer and broader, and the internal sac shorter and broader than for those of the type series from Uttar Pradesh in northwestern India². The male from the Simla Hills also has a larger and broader internal sac than do the specimens of the type series. Since the specimens are so similar to the types, I regard them as conspecific despite the differences.

The specimen from West Bengal substantially enlarges the known geographical range of the species.

KEY TO THE SPECIES OF *PSEUDOPSIS*
OF THE OLD WORLD

(Modified from Herman, 1975)

1. Head and abdomen without prominent clubbed setae; pronotum with four longitudinal costae (Herman, 1975, fig. 179) New Zealand *arrowi*
Head and abdomen with prominent clubbed seta (fig. 2; Herman, 1975, fig. 1); pronotum with four longitudinal carinae (fig. 2) 2
- 2(1). Internal sac coiled and at least one half longer than median lobe (Herman, 1975, figs. 48, 56) 3
Internal sac curved at base of median lobe and shorter than or as long as or only slightly longer than median lobe (figs. 6, 10) 4
- 3(2). Apical seta of paramere dark reddish brown (Herman, 1975, fig. 47); internal sac more than twice length of median lobe (Herman, 1975, fig. 48); northern Africa *afra*
Apical seta of paramere unpigmented; internal sac (Herman, 1975, fig. 56) one-half longer than median lobe; northern India *prolixa*
- 4(2). Apex of median lobe convergent to acute apex (figs. 6) 6
Apex of median lobe convergent to rounded apical margin and with blunt median point (figs. 3, 4; Herman, 1975, fig. 54) 5
- 5(4). Internal sac, in repose, with two large, stout, darkly pigmented spines at base (fig. 6); northern India *susae*
Internal sac, in repose, with two rows of short stout spines (Herman, 1975, fig. 53) Japan *watanabei*
- 6(4). Sternum IX of male with posterior margin deeply emarginate (fig. 9); paramere with

² I have reexamined only one paratype of *prolixa*.

- long, stout apical seta (fig. 8); northern India *suchi*
- Sternum IX of male with posterior margin sinuate (Herman, 1975, fig. 24) paramere with short to long, slender apical seta (Herman, 1975, figs. 31, 50) 7
- 7(6). Apical portion of ventral surface of median lobe with pair of lightly sclerotized plates (Herman, 1975, figs. 31) Europe, northern Africa, the Near East *sulcata*
- Apical portion of ventral surface of median lobe entirely membranous (Herman, 1975, fig. 50); northern India .. *himalayensis*

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