

**TWO NEW SPECIES OF SALDIDAE FROM WEST PAKISTAN
(HEMIPTERA : HETEROPTERA)***

ABDUL HAMID and SHAHEEN SULTANA

Department of Zoology, University of Karachi, Karachi 32

(Received January 3, 1972; revised February 14, 1972)

Abstract. The family Saldidae has not been so far reported from West Pakistan. This study describes, for the first time, two new species of Saldidae, *Saldula korangiensis* and *S. minor* from Karachi, Sind Province, West Pakistan. The dorsal view of both species as well as male and female genitalia are illustrated and a key to Pakistani species is included.

Distant¹⁻³ described four species of Saldidae from British India, *Saldula dixonii* (Distant¹) from Burma, Rangoon, *S. fletcheri* (Distant²) from Ceylon, Madulsima, *S. pusana* (Distant²) from Bengal, Lebong and *S. inconstans* (Distant³) from the Punjab, Simla hills and Matiana. Distant³ recorded the Punjab, Simla hills, Calcutta, Ceylon as additional localities for *S. dixonii*. Thus present study records Saldidae for the first time from areas now included in West Pakistan. In view of the fact that this study is based exclusively on the material from Sind, it is our belief that more species would be added to the list as soon as material is available from other parts of West Pakistan.

Both species described here were collected near water, the type material of both species near Korangi Creek (salt-water) and other material of *S. minor* near fresh water. The best time for collecting these insects is a sunny day, morning or afternoon. Collecting adult Saldidae is a patience requiring job, because they defy insect nets. The best collecting device is an aspirator. Using it with swiftness and care not to throw shadow on the insect usually bears good results. Their nymphs can also be collected in the same vicinity, with the help of aspirator and much more easily. All specimens studied here were collected with an aspirator. Nymphs of both the species have also been collected from the same localities.

Key to the Species of *Saldula* from West Pakistan

1. Lateral and posterior margin of pronotum and a V-shaped area at apex of scutellum markedly lighter than other parts of pronotum and scutellum, parandria parallel (Fig. 4A).....
.....*S. korangiensis*
2. Lateral and posterior margin of pronotum and apex of scutellum concolorous with other parts of pronotum and scutellum, parandria semicircular (Fig. 4B).....*S. minor*

Saldula korangiensis, n. sp. (Fig. 1)

Form. Moderately large, oval, broadened posteriorly; dark brown to black with pale markings on

pronotum, scutellum and hemelytra; body covered with short depressed hairs; macropterous.

Head. Frons, tylus and labrum pale, vertex and area around ocelli black, frons with two dark brown streaks forming an inverted V, ocelli and eyes light brown, eyes sometimes dark brown; ocelli located at middle of vertex, separated from each other by approximate width of an ocellus, frons with one and vertex with two pairs of long erect black hairs; labium dark brown, extending between hind coxae; antenna moderately long, segment one pale, second to fourth light brown, except pale apex of segment two, segment one slightly larger in diameter than other segments, all segments with small dense setae and a few erect hairs.

Thorax. Pronotum with posterior margin strongly concave in median half, disk dark brown to black, lateral and posterior margins pale with wider area at shoulders, caller area elevated with a small median depression; scutellum black, apex with a V-shaped pale area extending along lateral margin, median area slightly depressed; thoracic sterna black with sclerites around coxae and anterior prosternal margin pale; legs except coxae pale, with a few brown spots on femora, coxae brown.

Abdomen. Venter black with posterior margin of each sternum pale, capsule with pale areas laterally.

Wings. Hemelytra well developed, clavus dark brown, apex pale; corium with outer margin pale with three fuscous areas in posterior half, area between claval margin and RM fuscous with four pale areas along inner side of RM, three along apical corial margin and one in middle, membrane nearly hyaline with basal part and veins fuscous, without hairs except basal part of outer margin, hindwing as in Fig. 3(A).

Genital and Other Structures. Parandria, paramere, spermatheca, coupling plate, endosomal sclerite and base of filum gonopori as depicted in Fig. 4(A, C, E, G, I, K).

Measurements. Male body length 3.47 mm, maximum width 1.7 mm, length antennal segments I, 0.35 mm, II, 0.75 mm, III, 0.60 mm, IV, 0.50mm; female body length, 4.0 mm.

Holotype male, Karachi, 5 mi. before Korangi Creek, West Pakistan, 10 V 1971 (A. Hamid), deposited in U.S. National Museum, Washington, D.C. Paratypes, 11 males and 3 females, same data as holotype, in Zoological Museum, Karachi University and A. Hamid collection.

* This study was partly financed by University of Karachi, through a research grant to senior author.

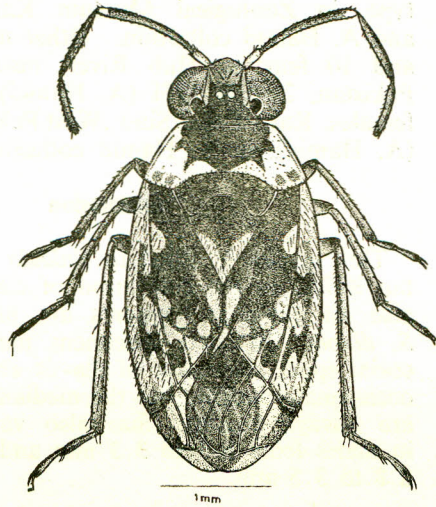


Fig. 1. Holotype, *Saldula korangiensis*, dorsal view.

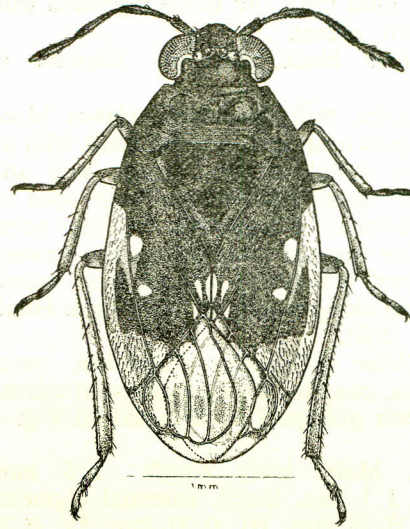


Fig. 2. Holotype, *S. minor*, dorsal view.

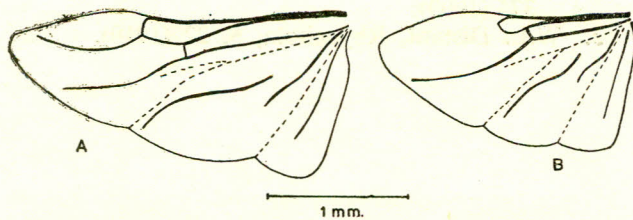


Fig. 3. Hindwings (A), *Saldula korangiensis*, (B), *S. minor*.

Discussion

This species is allied to *Saldula fletcheri* (Distant³) but differs in having apical angles of scutellum pale and also in the markings on the corium. The apical antennal segment and the wing membrane is also unlike *S. fletcheri*. In some paratypes the pale areas of corium between RM and claval margin are different and in some other specimens the pronotal margin is not uniformly pale as in the holotype.

Saldula minor, n. sp. (Fig. 2)

Form. Size small, slightly narrower posteriorly; pitchy black with pale markings on hemelytra; body sparsely clothed with short depressed hairs, macrop-terous..

Head. Black, eyes and ocelli dark red, eyes with a pale line on posterior margin from ocelli to about level of posterior margin of bucculae, area of eyes ventral to this line black, ocelli located at middle of vertex separated by approximate width of an ocellus, frons and vertex each with a pair of long erect black hairs, sometimes difficult to see due to black background, labium black, extending to middle of hind coxae; antenna moderately long, all segments unicolorous, segment one only slightly larger in diameter than other segments, all segments with hairs similar to other body parts.

Thorax. Pronotum pitchy black, posterior margin strongly concave in median half, caller area elevated

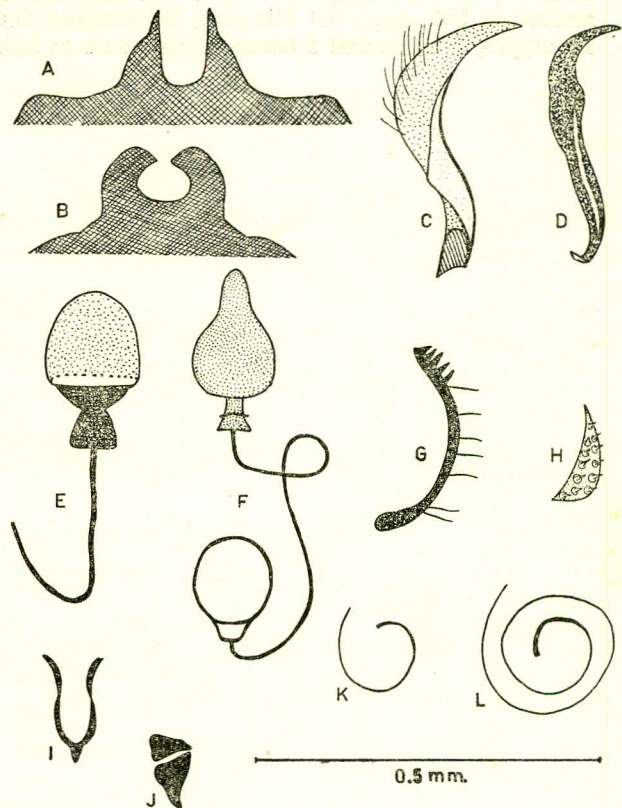


Fig. 4. (A.) Parandria, *Saldula korangiensis*, (B) same, *S. minor*; (C). Paramere, *S. korangiensis*, (D) same, *S. minor*; (E). Sperma theca, *S. korangiensis*, (F) same, *S. minor*; (G). Coupling plate, *S. korangiensis*, (H) same, *S. minor*; (I). Endosomal sclerite, *S. korangiensis*, (J) same, *S. minor*; (K). Base of filum gonopori, *S. korangiensis*, (L) same, *S. minor*.

with a small median depression; scutellum pitchy black, with an arch-shaped depressed transverse line in middle; all thoracic sterna black; basal portion of coxae dark brown, distal portion of coxae, trochanters and basal half of femora pale, remaining portions of

legs light brown, hind tibia and tarsal segments with stout dark brown spines.

Abdomen. Venter black, seventh sternum in female pale.

Wings. Hemelytra well developed, clavus black except two pale spots near apex, corium black with an irregular area on costal margin, except base and apex, two median spots and another near apex of clavus pale, membrane of hemelytra hyaline, occasionally with a few fuscous spots or streaks between veins, veins fuscous, membrane without hairs except at outer margin all along length of fourth cell. Hindwing as in Fig. 3(B).

Genital and Other Structures. Parandria, paramere, spermatheca, coupling plate, endosomal sclerite and base of filum gonopori as depicted in Fig. 4 (B,D,F,H,J, L).

Measurements. Male, body length 2.5 mm, maximum width 1.1 mm, length antennal segments I, 0.25 mm, II, 0.38 mm, III, 0.37 mm, IV, 0.37 mm; female, body length, 3.37 mm.

Holotype, male, Karachi, 5 mi. before Korangi Creek, West Pakistan, 10 V 1971 (A. Hamid), deposited in U.S. National Museum, Washington D.C. Paratypes, 5 males and 5 females, same data as holo-

type, in Zoological Museum Karachi University, and A. Hamid collection. Other material, 20 males and 10 females, Hub River, near Karachi, West Pakistan, 25 VII 1971 (A. Hamid); 5 males and 5 females, Kalri Lake, Sind, West Pakistan, 27 XI 1971 (A. Hamid), in A. Hamid collection.

Discussion

This species is allied to *Saldula dixonii* (Distant¹) but differs in the coloration of clavus and corium, also all antennal segments are unicolorous unlike *S. dixonii*. In some specimens the pale claval and corial spots near apex of clavus are very small and occasionally lacking but the median spots on corium are always present. Size also varies considerably in males from 2.3 to 3.3 mm and in females from 2.8 to 3.5 mm.

References

1. W.L. Distant, *Rhynchota*, **2**, 405 (1904).
2. W.L. Distant, *Ann. Soc. Entomol. Belg.*, **53**, 375 (1909).
3. W.L. Distant, *Rhynchota*, **5**, 222(1910).