

THREE NEW SPECIES OF SALDIDAE (HEMIPTERA).

CARL J. DRAKE

Iowa State College, Ames, Iowa. USA.

LUDVÍK HOBERLANDT

Národní museum, entomologické oddělení, Praha.

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For the past two years, the authors have been studying the „shore bugs“ or *Saldidae* and *Leptopodidae* of the world. The objectives of the study are (1) to prepare a check list of species and (2), a little later, to publish descriptions and illustrated keys to genera and species. In order to make the publications as complete as possible, the authors would be glad to receive specimens for determinations from Museums, Universities and private individuals. They are also much interested in exchanging specimens.

The present paper contains the descriptions of three undescribed species of *Saldids*. The types will be deposited as indicated beneath each description. The check list of genera and species of *Saldidae* and *Leptopodidae* of the world is almost completed and will be published in the near future.

Saldula stoneri sp. n.

(Fig. 1.)

Moderately large, broadly ovate, blackish with flavous markings, the pubescence golden. Head very broad, black, with very short pubescence, a transverse spot between each ocellus and eye and also one on each side a little behind front margins of eyes yellowish, with four very long, upright, dark hairs (one on each of the pale spots in front and one just behind each pale spot between each ocellus and eye; front strongly raised at apex so as to form two transverse callosities, the latter dark fuscous above and yellowish in front; clypeus strongly convex, constricted near middle, yellowish, a small, raised, yellowish area on each side opposite the constriction; labrum yellowish, both labrum and clypeus without pale pubescence along middle; bucculae small, open, narrowly rounded apically,

brownish. Eyes very large, converging anteriorly, brownish, the subapical notch black. Rostrum very long, flavous, darker apically and beneath, extending between hind coxae. Antennae moderately long, very shortly pilose; first segment quite stout, testaceous, somewhat ferruginous beneath; second long, testaceous, darker above; third dark brown, with few bristly hairs; fourth wanting; proportions — I : II : III :: 12 : 26 : 18.

Pronotum black with explanate margins largely flavous, moderately narrowed anteriorly (proportions — width (base) 110, and (apex), 68; median length 40, deeply roundly excavated behind, the golden pubescence moderately wide, slightly rounded (almost straight), largely yellowish-orange, with thin border along outside margins dark; callus large, extending behind middle of pronotum, not extending on explanate margins, moderately convex, with the large discal impression in front of middle, thence deeply furrowed apically; collar distinct, narrow, slightly raised in front; hind lobe short, less than half as long as callus, broadly impressed and transversely rugulose longitudinally along median line. Scutellum black, subequal in width and length, with short, golden, reclining pubescence, with central impression in front of middle, thence posteriorly distinctly transversely rugulose. Legs testaceous with scattered brownish spots on femora, the hairs short and brown, beneath and on sides of femora longer and whitish, the anterior femora brownish apically; middle and hind tibiae with numerous, moderately long, stout, dark brown spines; third tarsal segment apically and claws dark fuscous; coxae becoming dark fuscous basally, front and middle acetabula black-fuscous, margined with yellow-white. Thorax beneath black, densely clothed with whitish hairs. Abdomen beneath testaceous, mostly brownish ventrally, densely clothed with grayish hairs.

Hemelytra brownish black with flavous markings, with considerable blueish bloom; clavus velvety brownish black, blueish at base and apex, with a whitish, subapical spot, the pubescence rather dense, golden, longer than on pronotum and scutellum; inner corium blueish fuscous, with two marginal spots on basal half and one or two apical spots whitish, the pubescence largely golden, mostly blueish in the pruinose areas; outer corium fuscous with considerable blueish bloom, a narrow, marginal stripe along most of basal half, a subapical marginal spot, three large spots within (one subbasal, one at middle and other subapical) flavous or whitish; membrane fuscous-brown, blueish within, non-hyaline, with a large fuscous spot near the middle of each cell, compound of four cells, the innermost cell projecting a little anteriorly at base, apically shortened and terminating about one-third of its length above the apex of cell number two. Last venter of female longer than two preceding segments. Hemelytra, brachypterous forms, extending a little beyond apex of abdomen.

Length, 3.90 mm; width, 2.00 mm.

Holotype (female), *brachypterous*, Hotorus, New Zealand, July 27, 1922, Dr. Dayton Stoner, U. S. National Museum.

This species is probably most closely related to *Saldula laelaps* BUCHANAN-WHITE but it is easily separated by the pale pronotal margins and differently colored hemelytra. Neither *stoneri* nor *laelaps* seem to be typical members of the genus *Salda* or *Saldula*, and their generic status will be discussed in a subsequent paper.

***Saldula katonai* sp. n.**

(Fig. 2.)

Very small, ovate, black with prominent, whitish, hemielytral markings, the pubescence short, appressed, golden. Head very broad, black; the pubescence very short; pair of very long, erect black hairs, one on each side, a little behind front margins of the eyes; a yellowish spot between each ocellus and eye; front distinctly furrowed along the median line from near ocelli to callosities, the callosities large, strongly convex, transverse, yellowish white, contiguous within; clypeus whitish, strongly convex, about twice as long as wide; labrum whitish, rounded apically; ocelli reddish brown, separated by about the diameter of one of them. Eyes very large, brownish, slightly converging anteriorly, their top surfaces not much raised above the dorsal surface of head. Rostrum very long, yellowish, extending between hind coxae. Antennae very long, slender, shortly pilose, testaceous, the two apical segments entirely dark brown or fuscous; proportions I : II : III : IV :: 18 : 36 : 35 : 35. Legs testaceous, clothed with short, brownish hairs, the spines of hind tarsi dark brown. Abdomen beneath reddish brown, the thorax beneath black.

Pronotum black, very strongly narrowed anteriorly, not very deeply excavated behind, three times as wide at base as median length, with sides slightly rounded, the pubescence brownish or grayish brown, somewhat decumbent; callus moderately raised, convex, not extending on lateral margins, with very large discal pit, the transverse furrow behind callus arcuate, shallow, not very distinctly pitted at bottom; hind lobe short, about three-fourths as long as callus. Scutellum black, subequal in width and length, transversely rugulose behind the impressed area before middle. Hemielytra brown-fuscous, with whitish markings, gradually, roundly narrowed posteriorly from middle; the pubescence short, semi-reclining, golden; clavus black-fuscous, with subapical whitish spot; inner clavus dark brown to fuscous, the exocorium mostly whitish testaceous, with base and apex narrowly and an irregular, very wide, transverse band behind the middle extending to the outer margin dark fuscous; membrane embrowned, non-transparent, with four cells, the apical portion of each cell whitish, the veins faintly darker.

Length, 2,55 mm.; width, 1,10 mm.

Holotype (male), Assab, Eritrea, Oriental Africa, collected by Katona, after whom the insect is named, in collection of Hungarian National Museum, Budapest, Hungary. *Paratype* (male), slightly teneral, taken with type, in collection of C. J. Drake.

Separated from *S. ornatula* (REUTER) by the strongly anteriorly narrowed pronotum, more swollen callus and differently marked hemielytra. The pronotum of *S. ornatula* (REUT.) is much flatter and distinctly wider in front.

Saldula niveo-limbata (REUTER) is about the same size, but it has hemielytra differently marked and shorter antennae. It also has the pronotum strongly narrowed anteriorly. The femora are broadly, apically banded with brown or fuscous, but entirely testaceous in *katonai*.

Chartoscirta edita sp. n.

(Fig. 3.)

Moderately large, elongate-ovate, black, the hemielytra largely yellowish brown; dorsal clothing of hairs brownish, semierect, moderately dense, moderately long. Head black, rather densely clothed with short, decumbent hairs, the latter slightly longer and paler on the swollen yellowish areas, in front with a deep, longitudinal median furrow extending from ocelli almost to frontal callosities; callosities strongly swollen, strongly convex, becoming narrower and contiguous within; clypeus yellowish white, convex, less than twice as long as wide; labrum rather short, narrowed apically, whitish, about one-half longer than wide; bucculae short, open, dark ferrugineous. Rostrum long, reaching to hind coxae, pale stramineous. Antennae long, densely pilose, the last two segments with a few scattered long hairs; first segment short, swollen, dark stramineous, dark brownish fuscous; third dark on basal fourth, the rest pale testaceous with a faint tinge of orange; fourth pale testaceous with slight tinge of orange; proportions — I : II : III : IV :: 13 : 32 : 19 : 22. Head with two pairs of extremely long, erect, dark hairs, the front pair (one on each side near an eye) placed a little behind the front margins of the eyes, the other pair (one on each side) on the yellowish spots between each ocellus and eye. Ocelli approximate, placed on slightly raised area, yellowish brown. Eyes very large, converging anteriorly, the subapical deeply roundly notched, black.

Pronotum black, moderately shining, moderately clothed with semierect brownish hairs, strongly narrowed anteriorly, narrowly explanate with sides nearly straight (slightly sinuate), deeply, broadly, roundly excavated behind, one and one-half times wider at base than median length (30 : 20); callus large, strongly convexly raised, projecting laterally nearly to outer margins, extending posteriorly beyond middle of pronotum, with the large, deep, discal pit just in front of middle, thence posteriorly furrowed along median line, with deep, arcuate sulci in front behind hind margins, pitted at bottom of both furrows; collar narrow, transverse, not raised; hind lobe short, convex, about half as long as callus.

Hemielytra dull, largely yellowish brown, dark fuscous within, moderately densely clothed with semi-erect, rather short, brownish hairs; widest near the middle, slightly constricted behind the base; clavus dark fuscous, an elongate spot within near the base and a smaller subapical spot yellowish or brownish; corium dark fuscous within, yellowish brown externally, the embolium pale yellowish or yellowish white, semitransparent; nervures dark fuscous; membrane pale yellowish, with four semitranslucent cells without dark spots, the veins darkened. Abdomen beneath densely clothed with pale hairs, entirely testaceous in female, the genital segments dark fuscous in male. Sternum black, furnished with whitish hairs, the pleura of mesothorax black, very shining, almost denuded.

Legs testaceous, femora sometimes becoming a little infusate apically, clothed with short, yellowish brown hairs; tips of all femora above with a pair of dark brown, bristly spines; hind tarsi with long, dark brown

spines; second segment of hind tarsi pale testaceous, the third darker and slightly shorter.

Length, 4,20 mm.; width, 1,75 mm.

Holotype (male) and *allotype* (female), Oriental India, Matheran, elevation 800 meters, collected by Biro, in Hungarian National Museum. The *allotype* has the last two antennal segments wanting. One *paratype*, slightly teneral, collection of C. J. Drake, is dull and not shining. The dull color is probably due to immaturity at the time the specimen was placed in the killing bottle.

Most closely allied to *Saldula fletcheri* (DISTANT), but easily separated from it by the pale apical three-fourths of third and entirely pale fourth antennal segments. The terminal segment of *fletcheri* is testaceous and the corium is almost entirely dark and pale spotted. The embolium is pale ochraceous in both species.



Fig. 1. *Saldula stoneri* sp. n., female (holotype).

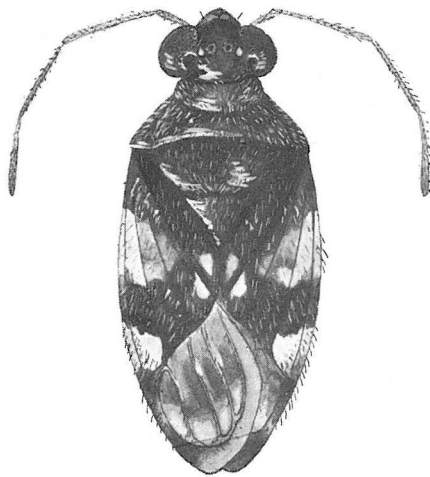


Fig. 2. *Saldula katonai* sp. n., male (holotype).

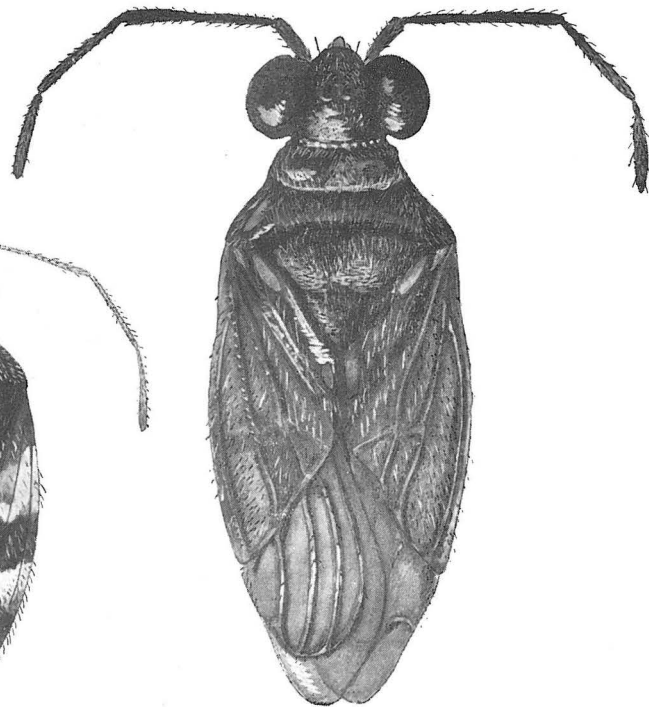


Fig. 3. *Chartoscirta edita* sp. n., male (holotype).