

Review of the capsid bugs of the genus *Lepidargyrus* (Heteroptera: Miridae)

I.S. Drapolyuk

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A new species, *L. putshkovi*, is described from Azerbaijan. *Psallus seidenstueckeri* Wagner, *P. ibericus* Wagner, *P. ancorifer* (Fieber), *P. muminovi* Josifov, *P. syriacus* Wagner, *P. ancorifer lividus* Reuter, *P. a. pollinosus* (Horváth) and *P. a. senguni* Wagner (the last three upgraded to specific rank) are transferred to *Lepidargyrus* Muminov. A key to the species of *Lepidargyrus* is given.

I.S. Drapolyuk, Voronezh Pedagogical Institute, ul. Lenina 86, Voronezh 394651, Russia.

Introduction

Muminov (1962) described the genus *Lepidargyrus* for two species from Middle Asia and Iran: *Maurodactylus instabilis* Reuter, 1878 (type species) and *L. iranicus* sp. n. Examination of species of the so called "*Psallus ancorifer* group" shows that they do not belong to *Psallus*, as noticed already by Kerzhner (1962), and should be placed in *Lepidargyrus*. *Psallus muminovi* Josifov from Middle Asia and a new species from Azerbaijan, *L. putshkovi*, described below, belong to the same genus. All taxa considered by Wagner (1956, 1975) as subspecies of *Psallus ancorifer* are found to be good species. Thus, the number of species placed in *Lepidargyrus* is raised to eleven.

Wagner & Weber (1964) erroneously indicated that *Apocremnus ancorifer* Fieber, 1858 is the type species of *Apocremnus* Fieber, 1858. In fact the type species of *Apocremnus* (subgenus of *Psallus* Fieber, 1858) by subsequent designation (Kirkaldy, 1906) is *Lygaeus ambiguus* Fallén, 1807.

Lepidargyrus Muminov, 1962

Lepidargyrus Muminov, 1962: 43. Type species *Maurodactylus instabilis* Reuter, 1878, by original designation.

Description. Body more or less elongate, covered above with long dark hairs (sometimes

rubbed) and silvery scales. Coloration varies from light green, pale yellow or pink to brownish red, brown or black.

Head inclined, broader than long. Clypeus distinctly prominent, its base lying below middle of eye. Vertex distinctly broader than one eye; its hind margin not or indistinctly raised, usually light in dark-coloured specimens. Eyes large, oblong oval, feebly granulated, almost touching the fore margin of pronotum. Antennae covered with fine black and brown hairs, inserted close to lower margin of eyes. Antennal segment I thicker than II, short; segment II thicker than segments III and IV and shorter than these segments combined. Rostrum reaching at least to base of middle coxae, sometimes to apex of hind coxae.

Pronotum wide, trapeziform, with all margins straight and hind corners rounded; hind margin about twice longer than fore margin.

Scutellum triangular, with base not covered by hind margin of pronotum.

Hemelytra distinctly surpassing apex of abdomen, in males longer and more parallel-sided than in females. Membrane well-developed, unicolorous.

As a rule, femora concolorous with body. Tibiae dark or light, without dark spots (except *L. ibericus*), with thick black bristles of length about 1.5 times greater than width of tibiae. Second tarsal segment twice as long as first, slightly shorter to slightly longer than third segment. Pulvilli well-developed, fused with claws along the whole length.

Measurements of *Lepidargyrus* spp., mm

Species	Sex	N	Body length	Pronotum		Width of head vertex		Length of antennal segments		
				width	length	1	II	III	IV	
<i>L. putshkovi</i> sp.n.	♂	5	3.7-3.9	1.30	0.65	0.85	0.4	0.2	0.85-0.90	0.5
<i>L. seidenstueckeri</i>	♀	5	3.6-4.0	1.30	0.65	0.95	0.5	0.2	0.8	0.45
<i>L. ibericus</i>	♂	1	3.7	1.25	0.45	0.75	0.35	0.2	0.95	0.52
<i>L. lividus</i>	♂	1	2.8	1.10	0.52	0.8	0.4	0.25	0.85	?
<i>L. anchorifer</i>	♂	2	4.0-4.7	1.65	0.75	0.85	0.43	0.25	1.0	?
<i>L. instabilis</i>	♂	5	3.7-4.5	1.30-1.50	0.70-0.75	0.80-0.85	0.40-0.43	0.25-0.30	0.9-1.1	0.67-0.80
<i>L. muninovi</i>	♀	5	3.50-3.75	1.30-1.35	0.65	0.79-0.85	0.37-0.43	0.21	0.9-1.1	0.50-0.65
<i>L. syriacus</i>	♂	5	3.8-4.0	1.40-1.50	0.70-0.75	0.85-0.90	0.35-0.40	0.25	1.0-1.1	0.60-0.65
<i>L. pollinosus</i>	♂	2	3.9-4.3	1.30-1.45	0.7-0.75	0.85-0.90	0.40-0.45	0.22	0.95-1.15	0.62-0.78
<i>L. iranicus</i>	♂	5	4.5-4.8	1.35	0.65	0.85-0.94	0.4	0.21	1.10	0.52
Turkmenistan	♀	5	3.6-4.3	1.25	0.6	0.80	0.43	0.21	1.00	0.57
Azerbaijan	♂	1	4.4	1.45	0.7	0.92	0.35	0.2	1.00	?
<i>L. segnani</i>	♀	4	3.7-3.8	1.40	0.7	0.83-0.90	0.42	0.2	0.80-0.95	0.55
	♂	5	3.1-3.5	1.15-1.25	0.6-0.65	0.75-0.85	0.35-0.40	0.25	0.90-0.95	0.35
	♀	1	3.5	1.30	0.7	0.85	0.4	0.25	0.95	0.33-0.40
									0.7	0.45

Key to species

- 1(2). Antennal segment I yellow... *L. putshkovi* sp. n.
 2(1). Antennal segment I brown or black.
 3(6). Antennal segments III and IV black, often apical half of IV or basal half of segment III reddish brown to reddish yellow.
 4(5). Large (♂ 3.4-3.8, ♀ 2.8-3.4 mm), oblong. Hind tibiae without dark spots at base of bristles. Aedeagus as in Fig. 10... *L. seidenstueckeri* (E. Wagner)
 5(4). Smaller (♂ and ♀ 2.8-3.0 mm), oblong oval. Hind tibiae with dark spots at base of bristles. Aedeagus as in Figs 14-15..... *L. ibericus* (E. Wagner)
 6(3). Antennal segments III and IV light yellow or yellowish brown.

7(14). Apical part of aedeagus without teeth or with one small tooth.

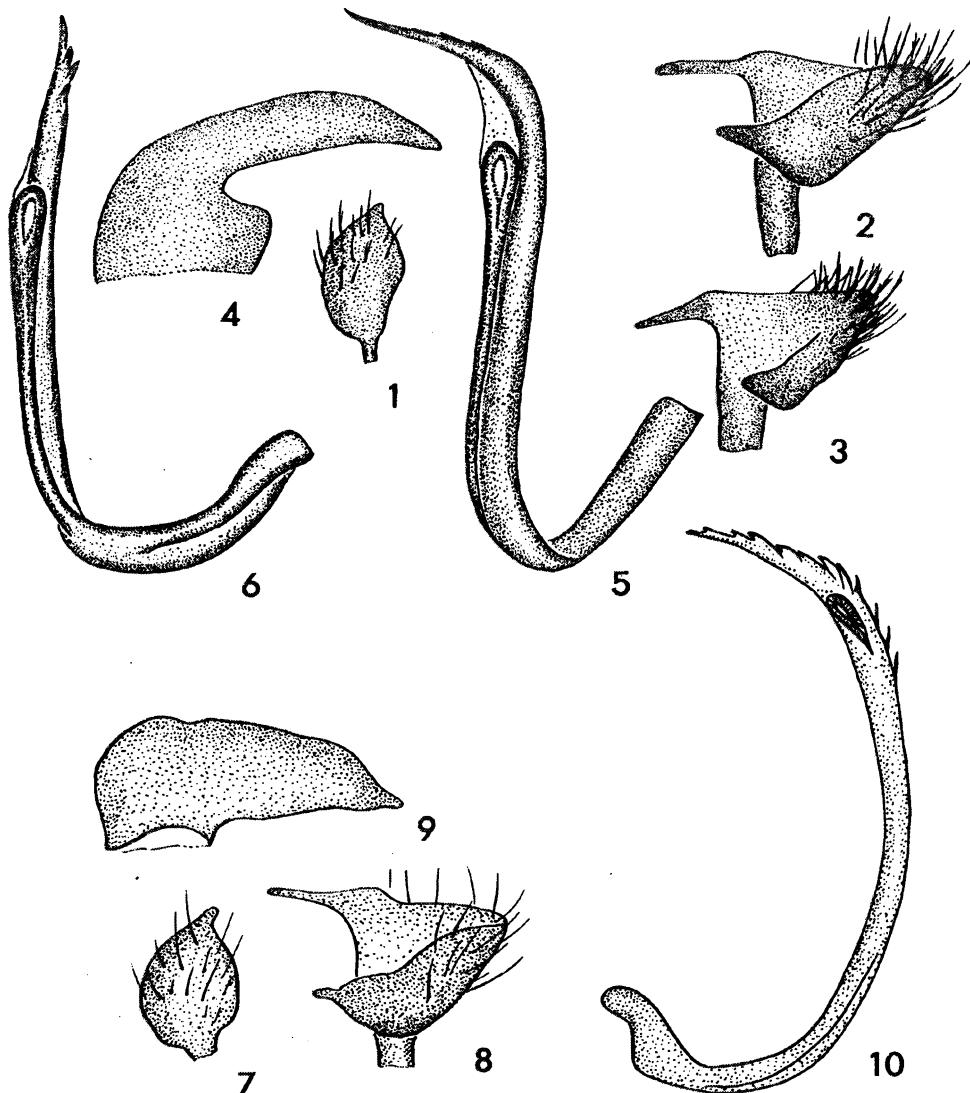
8(9). Apical part of aedeagus without teeth on lateral margin (Fig. 20)..... *L. lividus* (Reuter)

9(8). Apical part of aedeagus with a small tooth on lateral margin.

10(11). The tooth close to apex of aedeagus (Fig. 26)..... *L. anchorifer* (Fieber)

11(10). The tooth proximal to secondary gonopore in the area of the apical bend of aedeagus (Figs 30-31).

12(13). Body dirty whitish with greenish or yellowish hue, rarely reddish; sometimes ventral side and clypeus brown. Pronotum always more than twice wider than long. Deserts of Middle Asia and South Kazakhstan..... *L. instabilis* (Reuter)



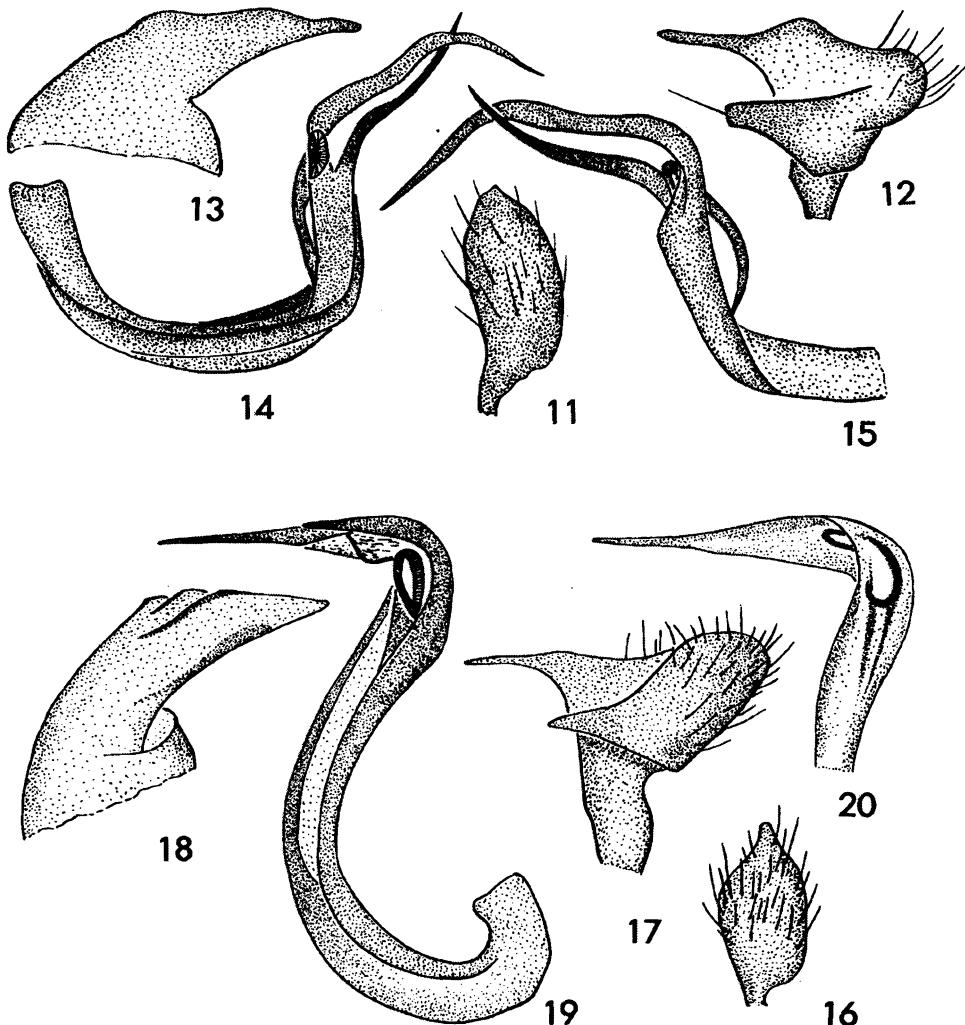
Figs 1-10. 1-6, *Lepidargyrus putshkovi* sp. n.: 1, right paramere; 2-3, left paramere; 4, theca; 5-6, aedeagus; 7-10, *L. seidenstueckeri* Wgn.: 7, right paramere; 8, left paramere; 9, theca; 10, aedeagus.

- 13(12). Body black, reddish brown or (rarely) red.
Pronotum twice or less than twice wider than long.
Foothills and mountains of Tadzhikistan
..... *L. muminovi* (Josifov)
14(7). Apical part of aedeagus with numerous teeth.
15(20). All teeth distal to secondary gonopore.
16(17). Apical part of aedeagus flattened, with spines
on margin and on upper surface (Fig. 39)
..... *L. syriacus* (E. Wagner)
17(16). Apical part of aedeagus not flattened.
18(19). Basal part of aedeagus shorter and wider (Fig.
53)..... *L. pollinosus* (Horváth)

- 19(18). Basal part of aedeagus long and slender (Fig.
60) *L. iranicus* Muminov
20(15). Some teeth situated proximal to secondary
gonopore (Figs 70-72) ... *L. senguni* (E. Wagner)

Lepidargyrus putshkovi sp. n.
(Figs 1-6)

Holotype. ♂, Azerbaijan, Nakhichevan Aut. Rep., Bilav, 19.VI.1977 (Putshkov), kept in the Zoological



Figs 11-20. 11-15, *Lepidargyrus ibericus* Wgn.: 11, right paramere; 12, left paramere; 13, theca; 14, aedeagus; 15, its apex; 16-20, *L. lividus* Reut.: 16, right paramere; 17, left paramere; 18, theca; 19, aedeagus; 20, its apex.

Institute, Russian Academy of Sciences, St.Petersburg.
Paratypes. Azerbaijan: 1 ♂, 2 ♀, as holotype; 1 ♂, 1 ♀, Dzhoni, 1700 m, 5.VII.1977 (Putshkov); 3 ♂, 8 ♀, Lerik, Gosmalyan, 10.VII.1983 (Drapolyuk); 4 ♂, 15 ♀, Zuvand, Lulakeran, 8.VII.1987 (Drapolyuk). Paratypes are kept in the Zoological Institute of the Russian Academy of Sciences (St.Petersburg), the Institute of Zoology of the Azerbaijan Academy of Sciences (Baku) and the Institute of Zoology of the Ukrainian Academy of Sciences (Kiev).

Description. Body oblong oval (♂) or oval (♀), black, shiny. Head inclined. Hind margin of vertex yellow. Basal corners of scutellum with

a light streak. Base of corium and clavus with a small whitish spot in the region of axillary plates. Membrane smoky; veins somewhat paler, in some females yellowish. Coxae, trochanters, basal third of femora, apices of tibiae, third segments of tarsi and claws dark brown to black. Apical part of femora, tibiae (except apex), first and second segments of tarsi yellow or orange-yellow. Antennae yellow or orange-yellow, covered with fine brown hairs; segment I with two black bristles on inner surface; segment II in male thicker than in female; segment

III and IV darkened. Body covered with sparse silvery scales intermixed with black hairs; hind margin of vertex with erect light hairs. Ventral surface of body with very fine adpressed light hairs. Head beneath with stout and long black hairs. Tibiae with long (longer than width of tibia) erect black bristles, without black spots at base of bristles. Second and third segments of hind tarsi subequal in length. Rostrum reaching beyond apex of hind coxae.

Male genitalia: Figs 1-6.

Distribution. Azerbaijan (Nakhichevan and Talysh).

Comparison. This species differs from other species of the genus in the pale antennal segment I.

***Lepidargyrus seidenstueckeri* (E. Wagner, 1956), comb. n.**
(Figs 7-10)

Psallus (Apocremnus) seidenstueckeri Wagner, 1956: 208; 1975: 169.

Material. Israel: 1 ♂, Zekkarya, 27.IV.1961 (D. Leston).

Description. Black or brown. Males elongately oval; females shorter and wider. Antennae black. Tibiae reddish brown to brown, without spots, with black setae. Third segment of hind tarsi black, slightly longer than second segment. Membrane smoky-brown; veins brown.

Male genitalia: Figs 7-10.

Note. I examined a single male, its measurements are indicated in the Table. The following additional characters are extracted from the description by Wagner (1975).

Length of body in male 3.0, in female 2.7 times pronotum width. Vertex in male 1.7, in female 2.15 times as wide as eye. Length of antennal segment II in male 1.25, in female 1.07 times head width. Third segment of hind tarsi 1.10-1.15 times as long as second segment. Rostrum reaching apex of hind coxae.

Distribution. Turkey, Syria, Israel.

***Lepidargyrus ibericus* (E. Wagner, 1957), comb. n.**
(Figs 11-15)

Psallus (Apocremnus) ibericus Wagner, 1957: 222; 1975: 169.

Material. Spain: 1 ♂ Sierra Nevada, Tal des Rio

Monachil, 1800-2300 m (H. Franz).

Description. Small, black, elongately oval. Hind margin of head brown. Antennal segments I and II black; in male, segment II thickened; segments III and IV brown, base of III black. Membrane and its veins black. Coxae and femora dark brown, with black spots at base of black setae. Tibiae brown with black base, with black spots at base of black bristles. Tarsi black; third segment only slightly shorter than first and second segments combined.

Male genitalia: Figs 11-15.

Note. I examined a single male, its measurements are given in the Table. The following additional characters are extracted from the description by Wagner (1975).

Body length in male 2.9, in female 3.0 times pronotum width. Vertex in male 1.8, in female 2.1 times as wide as eye. Length of antennal segment II in male 0.7, in female 0.6 times pronotum width. Rostrum reaching apex of middle coxae.

Distribution. Spain (Sierra Nevada Mts.).

***Lepidargyrus lividus* (Reuter, 1894), comb. et stat. n.**
(Figs 16-20)

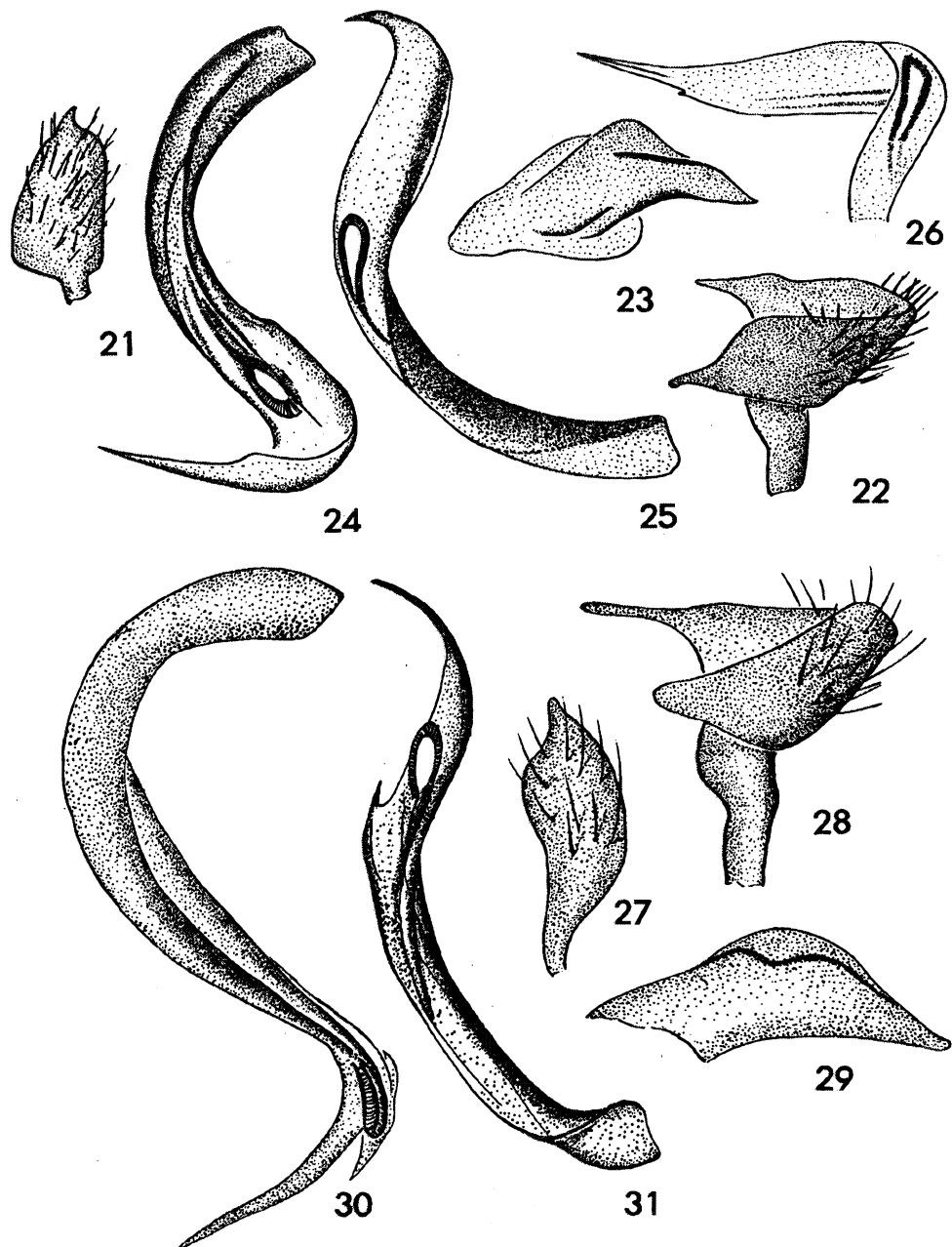
Psallus ancorifer var. *livida* Reuter, 1894: 143.

Plagiognathus mamorae Lindberg, 1940: 51.

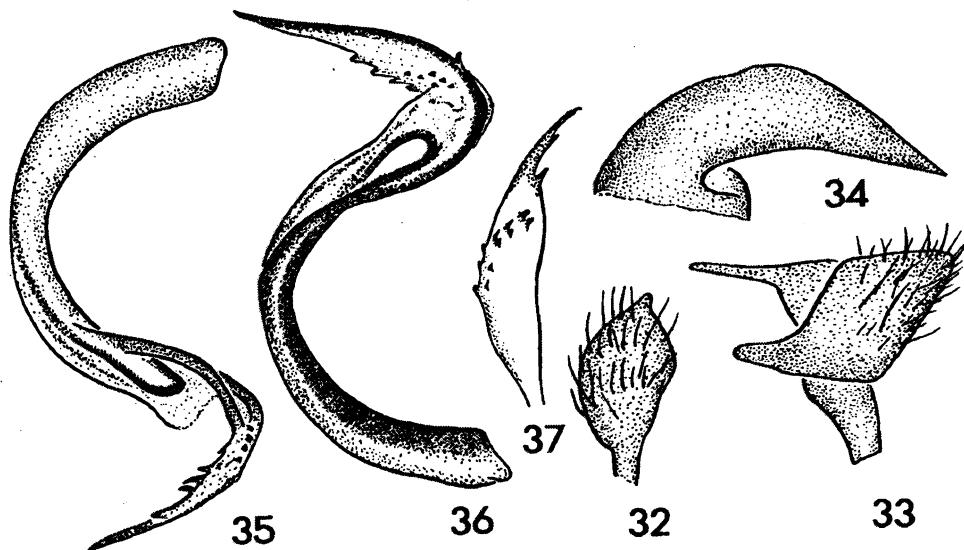
Psallus (Apocremnus) ancorifer lividus: Wagner, 1956: 205; 1975: 167.

Material. Morocco: 1 ♀, Oujda, June 1938; 1 ♂, Fes, 2.VI.1941 (H. Otin); 1 ♂, Sidi Tajeb, 9.V.1937 (coll. Rungis); 1 ♀, Korifla (Alluaud); Algeria: 1 ♀, "Algérie", 1860 (C. Morawitz).

Description. Yellowish brown to brownish black; cuneus darker, reddish in light-coloured specimens. Hind margin of vertex usually pale, greyish yellow. Sometimes pronotum, fore corners of scutellum, and hind part of head also pale. Antennal segments I and II black in basal half or entirely, segments III and IV light yellow. Legs brown or dirty yellow, tibiae darkened at apex. Bristles on tibiae black, slightly longer than width of tibiae. Membrane smoky-brown; veins pale. Body densely covered with silvery bristles intermixed with adpressed black hairs; head with erect hairs. Ventral side of head and fore margin of fore coxae with black bristles. Ventral side of body with fine, light, shining hairs intermixed on genital segment of male with long black hairs. Rostrum reaching beyond hind coxae.



Figs 21-31. 21-26, *Lepidargyrus ancorifer* Fieb.: 21, right paramere; 22, left paramere; 23, theca; 24-25, aedeagus; 26, its apex; 27-31, *L. instabilis* Reut.: 27, right paramere; 28, left paramere; 29, theca; 30-31, aedeagus.



Figs 32-37. *Lepidargyrus syriacus* Wgn., male from Gosmalyan: 32, right paramere; 33, left paramere; 34, theca; 35-36, aedeagus; 37, its apex.

Male genitalia: Figs 16-20.

Distribution. North Africa (Algeria, Morocco).

Lepidargyrus ancorifer (Fieber, 1858), comb. n.
(Figs 21-26)

Apocremnus ancorifer Fieber, 1858: 336.

Atractotomus nigripes Fieber, 1861: 295.

Atractotomus fuscinervis Reuter, 1875: 46.

✓ *Psallus ancorifer* var. *minor* Reuter, 1886: 460 (nom. n. pro *fuscinervis*).

✓ *Psallus puberulus* Montandon, 1887: 68.

✓ *Psallus ancorifer* f. *nigellata* Stichel, 1933: 260.

✓ *Psallus ancorifer* f. *marginata* Stichel, 1933: 262.

Psallus (*Apocremnus*) *ancorifer ancorifer*: Wagner, 1956: 204; 1975: 167.

Material. Germany: 1 ♂ 2 ♀, Achern in Bayern, 22.VII.1930; France: 1 ♀, locality not indicated, from Jakovlev's collection; Italy: 1 ♂, 1 ♀, Rome, 4-5. VII.1933 (Jenjourist); 1 ♀, Sicily, Achireale, 10. VI.1947 (Rubzov); 3 ♀, Sardinia, Oristano (Krausse); 1 ♂, Sardinia, Asuni, III-IV (A. Krausse); 1 ♂, Sardinia, Sorgono, 1913 (Krausse); Greece: 4 ♂, 14 ♀, Athens, 22.V.1914 (Pastukhov); Turkey: 1 ♂, 4 ♀, Bdikule near Istanbul, 31.V.1909 (Pliginskii); 1 ♀, Prince's Islands, the Sea of Marmora, 2.VI.1909 (Pliginskii).

Description. Coloration variable. Body black; elytra sometimes brownish, cuneus sometimes reddish. Membrane black; veins black or grey-

ish. Hind margin of vertex usually yellowish brown.

Antennal segment I and basal third to half of segment II (in male, sometimes entire segment II) black, apical part of segment II and segments III and IV dirty yellow. Femora black or dark brown; apex of fore femora often dirty yellow. Tibiae dirty yellow; fore and middle ones with black apex; hind ones black in apical half or entirely. Tarsi black; segments I and II sometimes brown; segments II and III of subequal length. Rostrum reaching apex of middle coxae.

Male genitalia: Figs 21-26.

Distribution. Southern and partly central part of Western Europe.

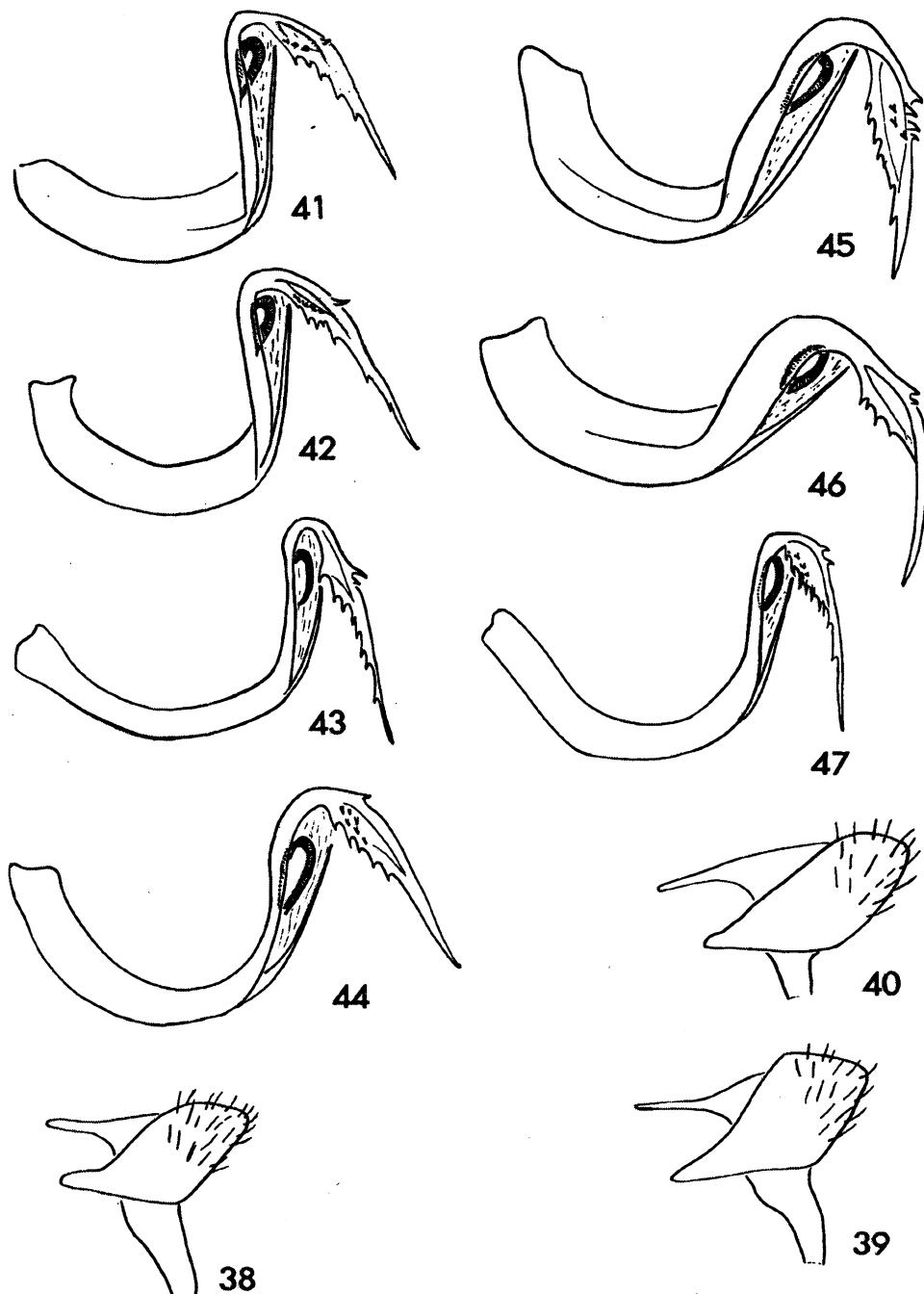
Biology. Recorded from various herbaceous plants (*Trifolium*, *Echium*, etc.), overwintering as egg; imago from June to August (Wagner & Weber, 1964).

***Lepidargyrus instabilis* (Reuter, 1878)**
(Figs 27-31)

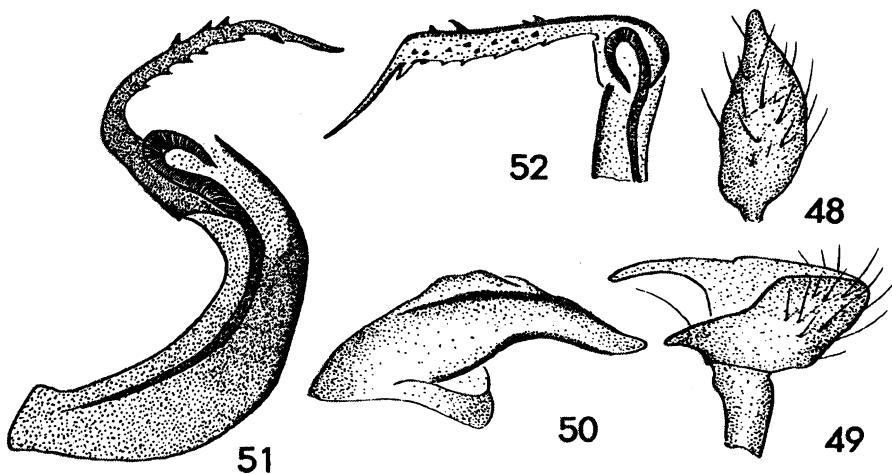
Maurodactylus instabilis Reuter, 1878: 28; 1887: 37.

Lepidargyrus instabilis: Muminov, 1962: 43; Putshkov, 1975: 948.

Material. Turkmenistan: 144 ♂ and ♀, Repetek,



Figs 38-47. *Lepidargyrus syriacus* Wgn. 38-40, left paramere: 38, Armenia; 39, Turkey; 40, "Palestine"; 41-47, aedeagus: 41, Lugansk, Ukraine; 42, Crimea; 43, Inaklu, Armenia; 44, Gosmalyan, Azerbaijan; 45, Gülek, Bodhaz, Turkey; 46, "Palestine"; 47, Shamkhor, Azerbaijan.



Figs 48-52. *Lepidargyrus pollinosus* Horv.: 48, right paramere; 49, left paramere; 50, theca; 51, aedeagus; 52, its apex.

11.V.1913 (A. Hohlbeck); 1 ♂, 1 ♀, Chuli, Kopetdag, 21-25.V.1913 (A. Hohlbeck); 1 ♂, 1 ♀, Ashgabat (Ahnger); 1 ♂, Serakhs (Ahnger); 2 ♂, Akhcha-Kuyma, 4.V.1978 (Putshkov); Tadzhikistan: 1 ♂, 1 ♀, Shaartuz - Ayvadzh, 24.IV.1959 (Muminov); Uzbekistan, Bukhara Prov.: 1 ♂, 4 ♀, Ayakguzhumdy, 19-21.V.1966 (Kerzhner, Nartshuk); 2 ♂, 2 ♀, Karykata, 80 km SSW Tamdy, 9.V.1966 (Kerzhner); 1 ♀, 70 km S Tamdy, 2.V.1965 (Kerzhner); Kazakhstan: 1 ♂, env. of Shymkent, 24.V.1966 (Kerzhner).

Description. Body in male elongate, almost parallel-sided, in female shorter and more oval. Coloration dirty white with yellow or green hue, sometimes red. Underside sometimes darker, brownish or red-brown. In some specimens, clypeus and lorae brownish; sometimes a narrow transverse black stripe present between frons and clypeus. Antennal segments I and II rather thick, dark brown to black; segments III and IV slender, light yellow. Membrane light grey, colourless along apex of cuneus; vein bordering the smaller cell whitish. Legs pale; tarsi brown with third segment black. Dorsal side of body covered with adpressed silvery scales and thin, long, brownish hairs. Body on ventral side and legs with fine yellowish hairs; tibiae with black bristles. Rostrum reaching or surpassing the apex of middle coxae.

Male genitalia: Figs 27-31.

Distribution. Desert regions of South Kazakhstan and Uzbekistan (Kyzylkum Desert), Turkmenistan (Karakum Desert and foothills

of Kopetdag Mts), Tadzhikistan (sands between Ayvadzh and Shaartuz).

Biology. According to Putshkov (1975), in Turkmenistan the species is common and widespread, living on *Erodium oxyrrhynchum* M.B., *Arnebia transcaspica* A.Pop. and many other plants, overwintering as eggs, imagines in May. Muminov (1962) indicated *Calligonum* as the food plant in Tadzhikistan, but probably this information refers to *Voruchiella pallida* Reut., which was mixed with *L. instabilis* in material identified by him.

Lepidargyrus muminovi (Josifov, 1973), comb. n.

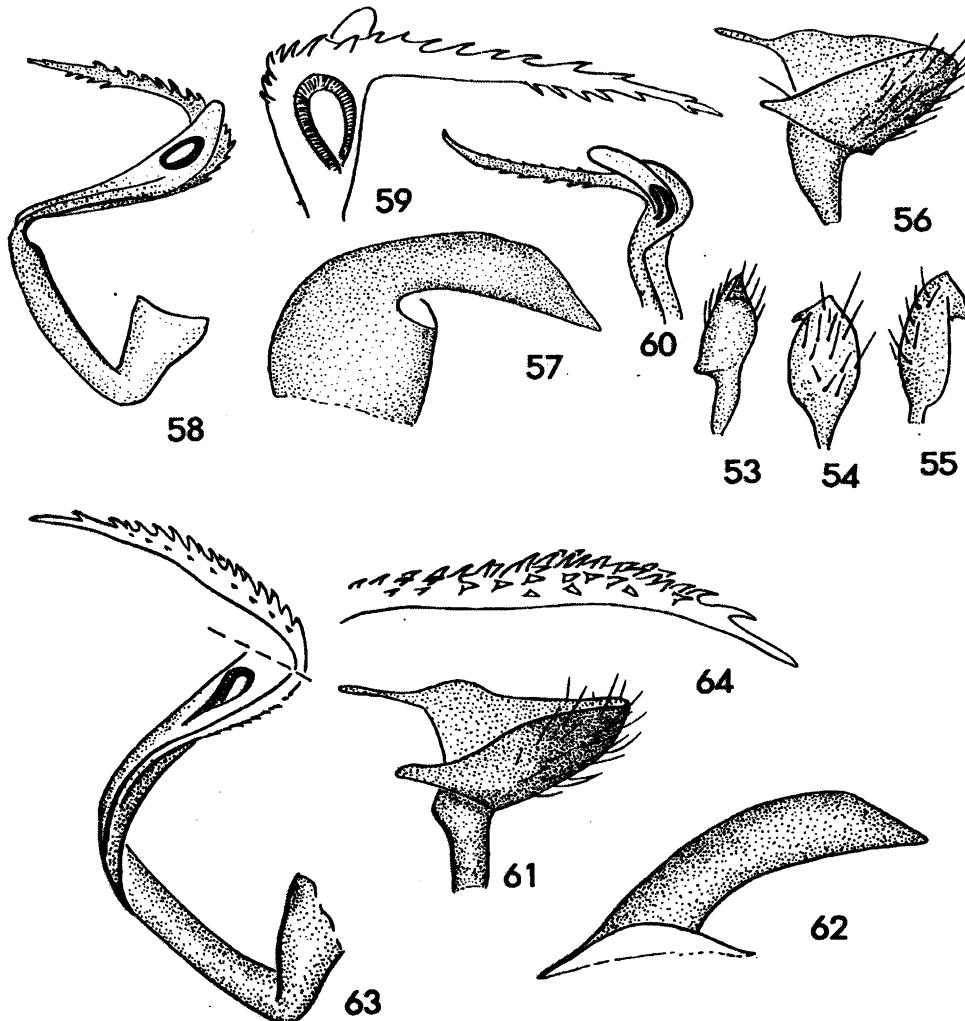
Psallus varicolor (nomen nudum): Kiritshenko, 1964: 232.

Psallus (*Mesopsallus*) *muminovi* Josifov, 1973: 245.

Material. About 360 specimens from various localities in Tadzhikistan.

Description. Closely related to the preceding species. Male genitalia indistinguishable from those of *L. instabilis* in structure, but slightly smaller. The main differences between these species concern coloration and some measurements and ratios (see Table).

Elongately oval. Coloration very variable. In dark specimens, body black, cuneus reddish black (red colour better seen in transmitted

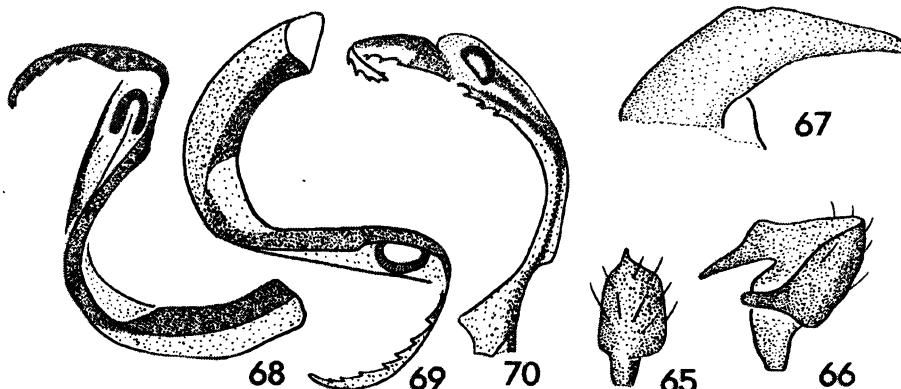


Figs 53-64. *Lepidargyrus iranicus* Mum. 53-60, male from Turkmenistan: 53-55, right paramere; 56, left paramere; 57, theca; 58, aedeagus; 59-60, its apex; 61-64, male from Azerbaijan: 61, left paramere; 62, theca; 63, aedeagus; 64, its apex.

light), hind margin of vertex usually yellow. In paler specimens, ground colour becomes brown-red; in most pale specimens, all the body red with corium and clavus lighter, dirty yellow-red, cuneus bright red, clypeus usually dark brown. Antennal segments I and II black, III and IV yellowish. Membrane dark grey, slightly paler near apex of cuneus; veins grey or at least partly reddish or yellowish. Legs black, red, or reddish yellow; tibiae sometimes paler than femora; fore and middle legs often

paler than hind legs. Tarsi always black or brown; third segment darker than other segments, distinctly shorter than second segment; claws with black apex and brown base, moderately curved; pulvilli narrow, shorter than distance from their apices to apices of claws. Dorsal side of body covered with adpressed white scales and semierect black hairs. Rostrum not reaching base of hind coxae.

Distribution. Tadzhikistan, mainly in Gissar and Zeravshan mountain ranges, but also in



Figs 65-70. *Lepidargyrus senguni* Wgn.: 65, right paramere; 66, left paramere; 67, theca; 68-70, aedeagus.

some adjacent ranges as Aktau, Teriklitau (Karaatau), Peter the First, Khozratishokh. Collected at altitudes up to 2200 m.

Biology. The species was described from 2 specimens collected from *Acer regelii*. According to observations of I.M. Kerzhner in the vicinity of Gandzhino, it lives on herbaceous plants. Imagines are collected from end of May to August.

***Lepidargyrus syriacus* (E. Wagner, 1956), comb. n.
(Figs 32-47)**

Psallus (Apocremnus) ancorifer syriacus Wagner, 1956: 206; 1975: 168.

✓ *Plagiognathus alyssi* Putshkov, 1959: 442.
Psallus syriacus: Kerzhner, 1964: 756.

Material. Ukraine, Crimea: 2 ♂, 2 ♀, Privol'noe, 1.VI.1955 (V. Putshkov); 2 ♀, Glubokiy Yar, 17. VII.1956 (V. Putshkov); 2 ♂, 2 ♀, Simferopol', 26. VI.1956 (V. Putshkov); Armenia: 1 ♂, Inaklu, Alagez Mt., 25.VII.1934 (Ryabov); 1 ♂, Arpacachay (eastern) River near Pashalu bridge, 2-6.VII.1937 (Ryabov); Azerbaijan: 2 ♂, Tirkesh, Nakhichevan' Rep., 18-26.VII.1937 (Ryabov); 2 ♂, Germachatakh, 27-30. VI.1937 (Ryabov); 1 ♂, Shamkhor, 29.VI.1988 (Davidjan); 1 ♂, 1 ♀, Lerik, Gosmalyan, 2.VII.1983 (Drapolyuk); Syria: 6 ♂ (incl. holotype of *P. a. syriacus*), 4 ♀, Tartus, 15-18.V.1952 (Seidenstücker); 1 ♂, 1 ♀, Hama, 24-28.V.1962 (Seidenstücker); Jordan: 1 ♀, Abu-Obede, Nahr, 9.V.1897 (Davydov); 1 ♂, "Palestine" (coll. R. Linnavuori).

Description. Large; coloration varies from black or dark brown to brownish yellow. In dark specimens, hind margin of vertex yellowish. In light-coloured specimens, head entirely

brownish yellow. In some dark specimens, cuneus reddish. In pale specimens, cuneus and outer apical corner of corium ochre-red. Antennal segments I and II black or dark brown, in some specimens apical half of segment II light brown; segment II slightly broadened to apex; segments III and IV brown or yellowish brown. Femora and tibiae brown or reddish brown; apices of tibiae usually black; tarsi black. Membrane dark brown with more or less paler veins; in light-coloured specimens, membrane dark smoky or smoky with yellowish veins. Third segment of hind tarsi slightly shorter than second. Dorsal side of body covered with adpressed black hairs and silvery scales. Black hairs on head and pronotum longer and semierect. Tibiae with black bristles. Rostrum reaching base of hind coxae.

Male genitalia: Figs 32-47. Form of aedeagus and parameres slightly differing in specimens from different localities.

Distribution. Ukraine, Armenia, Azerbaijan, Turkey, Syria, Jordan.

Biology. In the Crimea (Putshkov, 1959), the species inhabits foothills and southern slopes of mountains, where it develops on *Alyssum tortuosum*; larvae are recorded from mid May, imagines from the beginning of June.

***Lepidargyrus pollinosus* (Horváth, 1906), comb. n.
(Figs 48-52)**

Sthenarus pollinosus Horváth, 1906: 186.

✓ *Psallus (Apocremnus) ancorifer vesicatus* Wagner, 1956: 206.

Psallus (Apocremnus) ancorifer pollinosus: Wagner, 1973: 106; 1975: 169.

Material. Turkey (Asia Minor): 1 ♂ (holotype of *P. a. vesicatus*), 2 ♀, Iskenderum, 9-14.VI.1952 (Seidenstücker); 3 ♂, 1 ♀, Posanti, Taurus, 2-3.VII.1952 (Seidenstücker); 1 ♂, Ulukischa, 4-9.VII.1952 (Seidenstücker); 1 ♀, Marash, 15-19.VI.1952 (Seidenstücker); Syria: 3 ♀, Aleppo, Es Sabcha, 29.V-3.VI.1952 (Seidenstücker).

Description. Body large, black or dark brown. Antennal segments I and basal third of II black, segments III and IV and apical part of II yellow; segment II slightly broadened to apex. Femora brownish red; tibiae brownish red (especially, in females), brown, or dirty yellow. Tarsi and apices of tibiae black. In specimens with reddish tibiae, only third segment of tarsi black, first and second segments brownish. Membrane, including veins, black. Dorsal side of body densely covered with adpressed black hairs and silvery scales. Rostrum reaching apex of middle coxae.

Male genitalia: Figs 48-52.

Distribution. Turkey, Syria.

Biology. Linnavuori (1965) recorded "*Psallus ancorifer* probably ssp. *vesicatus*" from *Amygdalus*, but it could hardly be the food plant.

Lepidargyrus iranicus Muminov, 1962 (Figs 53-64)

Lepidargyrus iranicus Muminov, 1962: 46; Putshkov, 1975: 948.

Material. Azerbaijan, Nakhichevan Rep.: 1 ♂, 3 ♀, 10 km NE of Dzhulfa, 17.VI.1985 (Podlipaev); 1 ♀, Buzgov, 35 km N of Nakhichevan, 19.VI.1985 (Podlipaev). Turkmenistan: many specimens. North East Iran: Upper Shahkuh (type series).

Description. Elongately oval; females more oval than males. Coloration light yellow or ochre-yellow; head, pronotum, and scutellum sometimes with reddish areas. Cuneus usually bright red, its base colourless. Lower half of head, ventral side of thorax and abdomen, and all coxae black or dark brown. Antennal segments I and II dark brown or black, segments III and IV light brown or yellowish. Femora and tibiae yellow or slightly reddish. Tibiae with black bristles. Membrane light grey with yellowish or reddish veins. Dorsal side of body covered with semierect black hairs and silvery scales. Rostrum reaching apex of middle coxae or base of hind coxae.

Male genitalia: Figs 53-64.

Variability. Specimens from Azerbaijan are characterized by more intense brownish red coloration and slightly differ in measurements (see Table) and structure of male genitalia (Figs 63-66).

Distribution. Azerbaijan (Nakhichevan Rep.), Turkmenistan, Iran.

Biology. According to Putshkov (1975), *L. iranicus* overwinters as eggs. Imagines emerge in May, their number is rapidly decreasing, they are found up to the second half of June. The species is polyphagous, feeding on various plants growing on stony gravelly soil in sunny places: *Asperula glomerata* (Bieb.) Griseb., *Scutellaria litwinowii* Bornm., *Hedysarum micropterum* Bge., *Stachys turcomanica* Trautv.

Lepidargyrus senguni (E. Wagner, 1956), comb. et stat. n. (Figs 65-70)

Psallus (Apocremnus) ancorifer senguni Wagner, 1956: 207; 1975: 168; Linnavuori, 1961: 19.

Material. Syria: 7 ♂ (including holotype), 4 ♀, Tartus, 15-18. V.1952 (Seidenstücker); Cyprus: 2 ♂, env. Limassol, 11.V.1958 (Mauromoustakis).

Description. Small; black, densely covered with silvery scales and short black hairs. Antennae whitish yellow; segment I and base of segment II often darkened. Femora black; tibiae and tarsi grey to brown; apices of fore and middle femora yellowish or whitish yellow. Membrane, including veins, smoky brown. Bristles on tibiae black, as long as or slightly longer than width of tibiae. Third segment of hind tarsi almost twice shorter than second segment. Ventral side of head and fore margin of fore coxae with black hairs. Rostrum extending far beyond apex of hind coxae.

Male genitalia: Figs 65-70.

Distribution. Syria, Cyprus, Israel.

Biology. Collected from *Echium* sp. with blue flowers (Wagner, 1956).

Note. The original spelling of the species-group name is "*sengüni*"; it is formed from the Turkish surname *Sengün* and should be corrected to *senguni*, not *sengueni*.

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