

## NEW LEAFHOPPER SPECIES (HOMOPTERA, AUCHENORRHYNCHA) FROM THE ASIAN REGIONS OF THE USSR

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The paper contains descriptions of 4 species of the family Cixiidae and 8 of the family Cicadellidae, predominantly from Soviet Central Asia, but also from the Caucasus and Southern Siberia.

The types of the new species described are in the collection of the Zoological Institute, USSR Academy of Sciences in Leningrad.

Fam. CIXIIDAE

Genus CIXIUS Latreille

Cixius (Ceratocixius) vallaris, (Figs. 1-3).

Fairly large, brightly colored. Vertex slightly broader than long in the middle along the median line. Intermediate carina of vertex roundly-obtusely curved in the middle and on merging with the lateral margins of the vertex. Anterior margin of vertex practically straight, its carina smooth. Face of the usual proportions, with prominent carinae, weakly convex in profile, practically flat in transverse section. Anterior margin of pronotal disc about 2/3 the width of the anterior margin of the vertex, lateral carinae of disc diverging from anterior margin and, gently curving, giving way imperceptibly to the postorbital carinae. Notch on posterior margin of pronotum rectangular. Costal margins of elytra convex in anterior quarter, diverging, thereafter practically straight and parallel. Granules on veins of elytra comparatively numerous - 2-3 granules on a vein segment equal to the width of a cell in the middle part of the elytra.

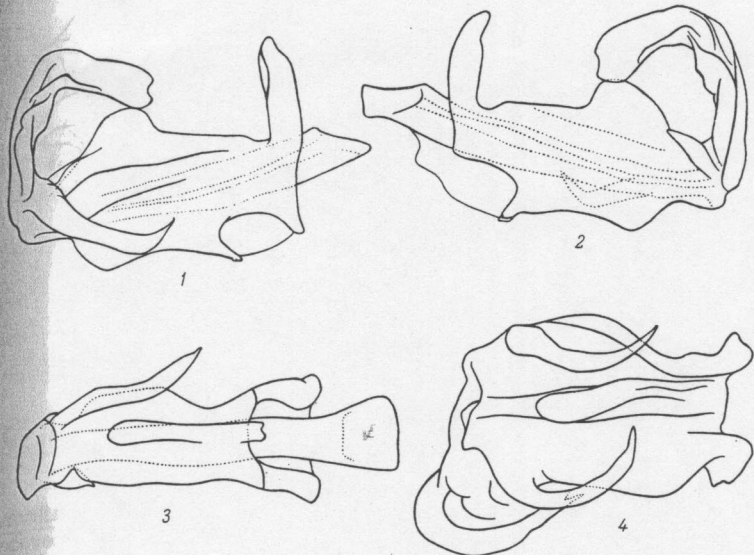
Venter, head and scutellum dark reddish brown, carinae lighter. Vertex darkened in front of intermediate carina, a broad transverse oval spot behind carina equal in width to the vertex from in front, posterolateral parts of vertex whitish externally from the spot, but with darkened posterior angles on which the dark spot is continued in the posterior half of the supraocular area; anterior part of area occupied by a small whitish spot. Pronotal carinae broadly lightened, darkening between them weakly indicated. Lateral parts of scutellum often darker than disc. Elytra practically transparent, with dark granules on veins and with conspicuous reddish-brown markings, elytra darkened from base approximately to apex of scutellum, with a distinct band extending through their middle, several fairly large transverse spots on the membrane forming 2-3 indistinct bands. Venter and legs lightening apically.

Length ♂ 6.2-6.4 mm, ♀ 6.0-6.7.

**Genitalia.** Similar in the structure of the genitalia to C. intermedius, but distinguished by the very short reduced left mobile tooth of the aedeagus.

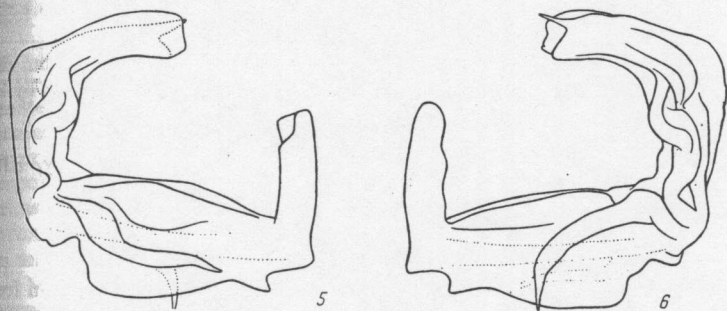
**Material.** Turkmenia, Chardzhou, 18 June 1905, 1 ♂ (E. Fisher); Tadzhikistan, Staraya Pristan', near Dzhilikul' on the Vakhsh, 4-20 June 1941, 1 ♂ (holotype), 1 ♀ (Gassakovskiy); Varzob River, near Gazhni, 25 June 1956, 1 ♀ (Kir'yanova).

Cixius (Ceratocixius) logvinenkoae, (Figs. 4-6).



Figs. 1-4. Cixius, aedeagus.

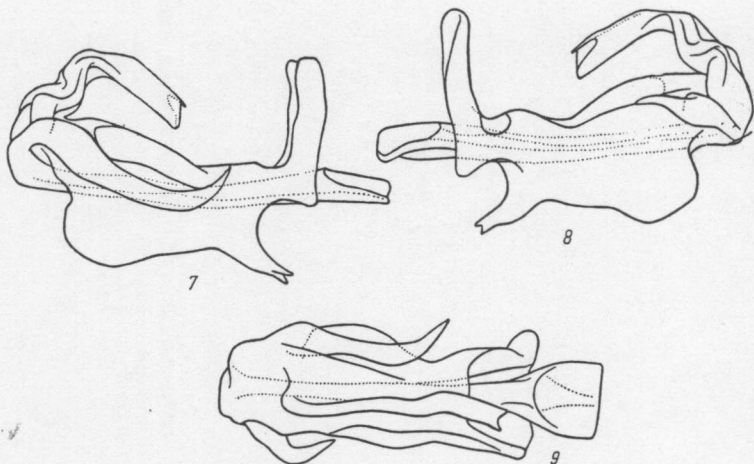
1-3) C. vallisaris: 1) from the right; 2) from the left; 3) from below;  
4) C. logvinenkoae, from below.



Figs. 5-6. Cixius logvinenkoae, aedeagus.

Female unknown.

Small, indistinctly colored. Vertex of approximately the same length from in front as its width in the middle. Intermediate carina of vertex regularly arcuate, merging gently with lateral carinae of vertex, forming a parabolic figure with their posterior parts. Anterior margin of vertex practically straight. Face of the usual proportions, with prominent carinae, weakly convex in profile, practically flat in transverse section. Anterior margin of pronotal disc little more than half width of vertex from in front, lateral carinae of disc diverging gently from anterior margin of disc and carrying over imperceptibly into postorbital carinae. Notch on posterior margin of pronotum acute-angled. Costal margins of elytra convex and diverging anteriorly, straight and approximately parallel posteriorly. Granules on veins of elytra numerous, 3-4 granules on a vein segment equal to the width of a cell in the middle part of the wing.



Figs. 7-9. *Cixius sibiricus*, aedeagus.

7) From the right; 8) from the left; 9) from below.

Venter, head, pronotum and scutellum brown cinnamomeous, carinae slightly lighter. Elytra practically transparent. Granules brown. Groups of brownish spots on elytra: near the bases, apically on the membrane and as a weakly curved indistinct band extending through the middle of the corium. The legs lighten distad of the middle of the tibiae.

Length ♂ 5.8 mm.

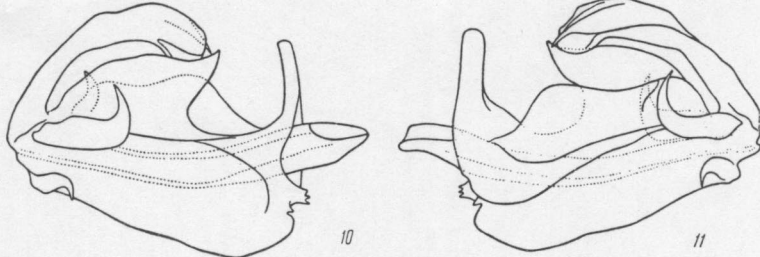
Genitalia. Similar in the structure of the genitalia to *C. cunicularis*, but distinguished by the undeveloped left upper crest of the theca. Also distinguished from it by the less characteristic and more weakly developed markings.

Material. 1 ♂, holotype, labelled: "Kobi. Georgian Military Highway, Kirichenko, 14 July 1925".

*Cixius* (*Ceratocixius*) *sibiricus* (Figs. 7-9).

Small, not brightly colored. Vertex of approximately the same length in front as its width in the middle. Intermediate carina of vertex obtusely curved, also forming a noticeable obtuse angle on merging with the lateral carinae of the vertex. Anterior margin of vertex weakly obtusely projecting. Face of the usual proportions with prominent carinae, moderately convex in profile, frons practically flat in transverse section, postclypeus appreciably convex. Anterior margin of pronotal disc about 2/3 width of anterior margin of vertex, lateral carinae of disc diverging from anterior margin and, gently bending, merging imperceptibly with the postorbital carinae. Notch on posterior margin of pronotum rectangular or obtuse, practically a right angle. Costal margins of elytra convex in anterior third, diverging, thereafter approximately straight and parallel. Granules on veins of elytra not very frequent - 1-2 granules on a vein segment equal to the width of a cell in the middle part of the elytra.

Venter and head brownish-cinnamomeous, carinae lighter, postclypeus reddish-cinnamomeous, pronotum with broadly lightened carinae, darkened between them on wider areas. Scutellum dark brown, with lighter reddish-cinnamomeous carinae. Elytra semi-transparent, slightly brownish-fumose, granules on veins darkened. Elytra of males without markings, those of females with brown inconspicuous spots on the membrane and in the middle, where they form a transverse band. Legs brown, lightening apically. Abdomen dark brown, with lighter margins of sclerites. Length ♂ 4.9-5.4 mm, ♀ 5.6-6.2 mm.



Figs. 10-11. *Cixius selengensis*, aedeagus.

10) From the right; 11) from the left.

**Genitalia.** Similar in the structure of the genitalia to *C. rufus*, but distinguished by weaker development of the lower carina of the theca, the posterior margin of which is not concave, and by the shorter left tooth of the aedeagus, which is approximately one third the length of the right tooth. Distinguished from the similar *C. ukrainicus* by the long right tooth.

**Material.** RSFSR, Orenburg Province, Spasskoye village, 14-20 Aug. 1930, 1 ♂, 2 ♀♀ (Rysakov); Kazakhstan, Dzhezkazgan Province, 40 km S. of Zhana-Arka (Atasu) station, 9 July 1959, 2 ♂♂, one of them the holotype (Yemel'yanov), 21 June 1960, 1 ♂ (Yemel'yanov); Yakutia, Urgochar on the L. Tunguska, 8 July 1973, 1 ♂, 1 ♀ (Cherkanovskiy).

*Cixius (Orinocixius) selengensis* (Figs. 10-11).

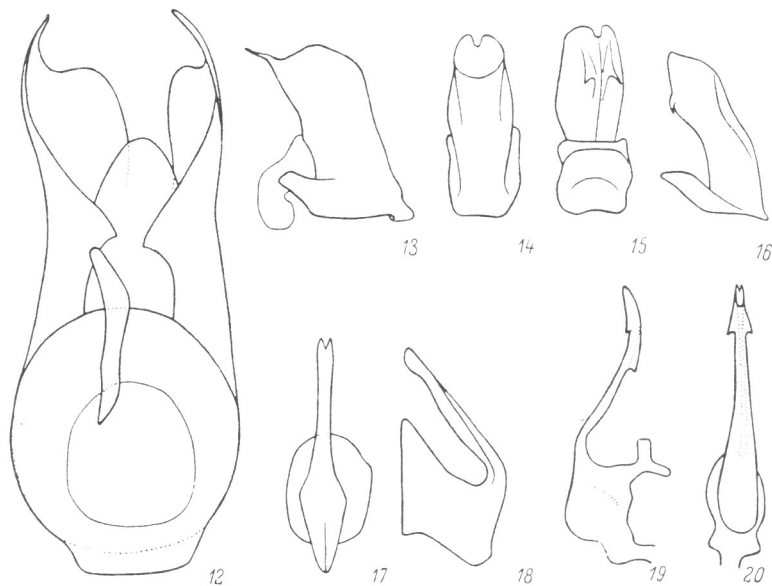
Fairly large and darkly colored. Width of vertex in front approximately twice its length in the middle, its anterior margin weakly convex, lateral margins obtusely concave, approximately parallel in anterior half, in front of intermediate carina, diverging behind it. Intermediate carina weakly arcuate, its convexity forward, approximately 1/3 nearer the anterior margin of the vertex in the middle than the posterior margin. Face of the usual proportions with prominent carinae, moderately convex in profile, frons practically flat in transverse section, postclypeus appreciably convex. Anterior margin of pronotal disc approximately 2/3 width of anterior margin of vertex, lateral carinae of disc diverging from anterior margin and, gently curving, merging imperceptibly with postorbital carinae. Notch on posterior margin of pronotum obtuse-angled. Costal margins of elytra gently convex in anterior third, diverging, thereafter approximately straight and parallel. Granules on veins of elytra not frequent - 1-2, rarely 3 granules on a vein segment equal to the width of a cell in the middle part of the elytra.

Venter and head dark brown to black, carinae of face and vertex slightly lightened. Proboscis light. Carinae of pronotum broadly lightened, darkening retained between them only in places where the carinae are widely separated, on the disc and along the sides. Scutellum entirely black. Elytra semi-transparent, brownish, with dark brown blurred markings - bases of elytra darkened to apex of scutellum, dark stripe extending along middle part of elytra, consisting of several merging spots - 2-3 spots in the subcostal area, one transverse spot from the subcosta to the suture of the clavus and one on the clavus displaced forward relative to the inner end of the corial spot. Thereafter there are spots on the membrane lying on the crossveins. Fore and middle legs dark brown, with lighter carinae, hind legs with light coxae, dark brown femora and apically lightening tibiae and tarsi. Abdomen dark brown with lighter margins to the sclerites.

Length ♂ 6.0-6.1 mm, ♀ 6.6-7.0 mm.

**Genitalia.** The new species belongs to a group in which the right upper crest of the theca projects strongly in an acute angle, its anterior margin concave, the posterior





Figs. 12-20. Cicadellidae, aedeagus.

12-13) Achaetica narynensis: 12) dorsal aspect; 13) side view; 14-16) Allygus kopeticus: 14) from above; 15) from below, slightly angled; 16) side view; 17-18) Poliona tumidifrons: 17) from above; 18) side view; 19-20) P. laticeps: 19) side view; 20) from above.

margin convex. It is distinguished from C. montanus and similar species by the fact that the right upper tooth of the aedeagus is longer than the lower tooth, and not vice versa.

Material. Buryatia, Khamar-Daban: Lazur'skiy Range, 1 July 1955, 2 ♂♂, including the holotype (Rozhkov); Malaya Bystraya River, 23 July 1954, 1 ♀ (Rozhkov); Irkutsk Province, Listvyanka, 15 July 1962, 1 ♀ (Gorodkov).

Fam. CICADELLIDAE

Genus ACHAETICA

Achaetica narynensis (Figs. 12-13).

A species whose proportions are average for the genus. Length of vertex approximately 1.7 times length of pronotum, its anterior margin projecting in an obtuse angle, with a rather narrowly rounded apex. Grey, with brownish-black markings. Frontoclypeus pale, with traces of transverse brownish bands interrupted in the middle, or with more strongly expressed dark brown bands merging in the middle in the upper half into a longitudinal band-spot, but broadly interrupted in the lower half. Facial sutures darkened. Frequently a longitudinal spot above the antennae, area around bases of antennae blackened, 1-2 dark brown spots beneath eyes on cheeks. Black pattern of merging spots on vertex: black bands extend along the anterior margin from the apex to the ocelli; at the apex of the vertex there is a pair of triangular longitudinal spots the apices of which merge with the inner ends of the bands. Behind the spots a band interrupted in the middle and narrowing toward the eyes extends from ocellus in a noticeable curve with the convexity rearward. Pair of irregular spots on anterior margin of vertex near eyes; pair of large spots on posterior margin of vertex near eyes divided into two parts by oblique longitudinal stripes. Pronotum with merging brown spots anteriorly, sometimes with a pair of blurred indistinct transverse spots posteriorly to the sides of the scutellum. Sides of

prosternum with two small longitudinal spots. Scutellum usually without markings. Elytra usually without markings even when they are well developed on the pronotum and vertex, but the most deeply pigmented specimens have the veins defined in brown. Apex of abdomen dark brown, with the pattern of small light spots usual for the genus.

Thorax almost entirely blackened below, abdomen with dark spots below, legs often with dark spots and bands.

In genital structure the species belongs to the A. gloriosa and A. halocnemi group and is especially similar to the latter, from which it is distinguished by the dorsal membrane extending to the apices of the aedeagal lobes, and by the obtuse-angled, weakly projecting medioventral teeth on the aedeagal lobes.

Length ♂ 2.7-3.0 mm, ♀ 3.2-3.5.

Material. Kirgizia, Naryn Province, Aktal settlement, 75 km W of Naryn, 10 July 1966, 60 males and females, holotype ♂ (Yemel'yanov and Kerzhner).

On Salsola passerina.

#### Genus ALLYGUS

Allygus kopeticus (Figs. 14-16).

Pale, brownish, with brown to dark brown markings. Facial sutures defined in brown. Dark brown markings on frontoclypeus consisting of transverse striae merging in the middle into two longitudinal stripes between which a light stripe remains, broadening downward. Longitudinal dark stripe on anteclypeus, one spot each on the lora on the inner margin. Broad blackened area around bases of antennae. Pair of small converged apical spots on vertex, pair on outer margin of ocelli and weak pair on inner margin. Pair of transverse bands behind ocelli lying on the same straight line and widely divided in the middle. Further pair of small dark spots on vertex at posterior inner angles of eyes. Pronotum with speckled brown markings consisting of larger spots on the anterior margin. Indistinct brown triangular spots on lateral angles of scutellum, pair of small round black spots before groove, indistinct longitudinal dark stripes along sides beyond groove. Elytra with light veins and brownish cells bordered by merging dark brown spots. Thorax and abdomen more or less darkened, legs with dark brown spots.

Length ♂ 6.8-7.2 mm, ♀ 6.8-7.1.

Practically indistinguishable in external appearance from similar species from the mountains of Soviet Central Asia; in particular most similar to A. vadimi. Distinguished from other species of the subgenus Syringius by the structure of the genitalia, by the lateral teeth of the aedeagus shifted to the ventral side.

Material. Turkmenia, Kopetdag, Kuruzhdy settlement, 15 July 1973, 3♂, including holotype, 6♀♀ (Yemel'yanov).

#### Genus POLIONA

Poliona tumidifrons (Figs. 17-18).

Slender. Vertex projecting forward in an obtuse angle, its apex narrowly rounded. Transition from frons to vertex gentle. Postclypeus broader than that of P. microcephala and slightly swollen, projecting above the plane of the cheeks. Vertex 1/3 shorter than pronotum.

Light whitish brown, with brown markings. Anterior part of vertex light, practically white, pair of oblique longitudinal striae converging forward at apex of vertex. In the middle part of the vertex a transverse band runs immediately behind the ocellus to the median line and very slightly forward, interrupted in the middle, its inner ends (angles)

merged with the anterior ends of two longitudinal oblique stripes extending to them from the rear, their posterior ends fused and slightly diverging forward. To the rear of the part of the transverse band and externally from the longitudinal stripes there are small rounded spots merged in front with the band. The upper part of the frontoclypeus may be apparent in front of the ocelli and right at the apex of the head. Inward from the ocelli a weak longitudinal stria is also apparent. A pair of small brownish spots may be noticeable on the posterior margin of the vertex behind the band and on the very margins of the eyes. The sutures and the space beneath the antennae are darkened on the face; dark transverse markings are developed on the frontoclypeus, which is interrupted in the middle from the base of the anteclypeus by a light longitudinal triangular area, the apex of which lies near the apex of the head. The pronotum has mottled markings of small light spots on a brown ground, these spots being larger in front, and the brown ground is denser in places, forming dark brown spots. Longitudinal brown stripe on scutellum, the width of which equals the transverse groove of the scutellum, and two large triangular spots along the sides, separated from the margin of the scutellum and from the median stripe by a narrow whitish area. Elytra whitish grey, with dark brown lines along the veins, apart from the costa. Area of cells defined in brown in places. Venter light, without markings or with darkening of the thoracic sclerites taking the form of blurred spots; in such instances two dark spots or short longitudinal stripes are apparent on the sides of the prothorax to the rear of the eyes and cheeks.

Length ♂ 5.4-5.7 mm, ♀ 6.0.

Material. Turkmenia, Imam-Baba in the Merv oasis, 24-25 April and 3-5 June 1912, 3 ♂♂, including the holotype and 1 ♀ (Kozhanchikov); Messerian, 4 May 1951, 1 ♂ (Shteynberg).

Distinguished from the similar species P. microcephala by the obtusely angled vertex with narrowly rounded apex, the broad convex frons and the contrasting markings of the vertex. Very similar in genital structure to P. microcephala and practically indistinguishable from it.

Poliona laticeps (Figs. 19-20).

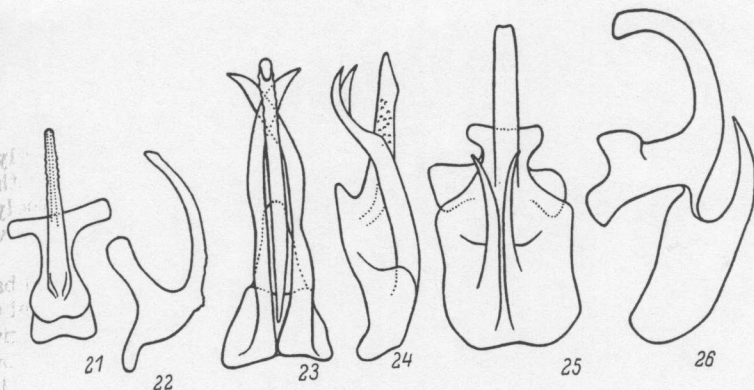
Female unknown.

Body large, squat. Head and eyes of approximately the same width as pronotum. Vertex obtuse-angled, projecting forward rather weakly, with narrowly rounded apex. Width of vertex more than 1.5 times its length, lateral margins nearly parallel. Face relatively broad, frontoclypeus narrow, its width beneath the eyes approximately equal to the width of the cheek at the same level. Sides of frontoclypeus practically straight, its lower margin approximately one third as wide as the upper margin. Anteclypeus broadening apically. Ocelli comparatively small. Width of pronotum approximately 2.3 times its length. Elytra rather short, membrane shorter than its width.

Body pale, brownish, with weakly developed brown markings. Traces of a transverse band and small apical spots are to be seen on the vertex. A distinct brown band near the upper margin is expressed on the face, originating beneath the ocelli on the frontoclypeus, and consisting of two arcuate, upward-convex areas. Below this band weak traces of transverse bands are to be seen on the frontoclypeus. Pronotum rather light on anterior margin and uniformly colored, more darkly colored behind, with speckled markings consisting of small light spots; at the boundary between the areas of coloration described there are small dark brown arcuate spots behind the eyes. Scutellum with traces of dark triangles on the lateral angle. Elytra pale, with fine brown lines along the veins and discrete brown mottling in the cells, terminal margin of elytra more broadly darkened. Venter without distinct markings.

Length ♂ 4.7 mm.

Pygophore with projection on posterior-inferior margin of lobes. Genital plates short, with rather strongly concave outer margin. Aedeagus of the usual structure, typical of the genus, shaft of aedeagus slender, bearing a pair of lateral subapical processes and a process below situated slightly toward the base from the lateral processes. All three teeth appear as carinae rising toward the base and then breaking off abruptly.



Figs. 21-26. Phlepsidius, aedeagus.

21-22) Ph. ornis: 21) from above; 22) side view; 23-24) Ph. pedemontanus: 23) from above; 24) side view; 25-26) Ph. narynensis: 25) from above; 26) side view.

Material. Tadzhikistan, Gissar Range, Zevar, 25 June 1921, 1 ♂ holotype (Ye. Kuznetsova).

Distinguished from other species of the genus by the presence of processes on the four lobes and a lower unpaired tooth at the apex of the shaft of the aedeagus.

#### Genus PHLEPSIDIUS

##### Phlepsidius ornis (Figs. 21-22).

Very slender. Head and eyes slightly narrower than pronotum. Vertex obtuse-angled in front, with narrowly rounded apex. Length of pronotum practically twice length of vertex. Vertex brown, with indistinct small light spots apically and on the posterior margin. Three light apical spots, two V-shaped spots on posterior margin. Face light, with indistinct dark transverse bands on frontoclypeus merging along median line. Pronotum brown, with light speckled markings, larger light spots on anterior margin. Scutellum brown, with light spots on all three angles, and also on the lateral margins to the sides of the transverse groove and on the anterior margin, and with a pair of spots equidistant from each other and from the spots on the lateral angles. Elytra semitransparent, with brown veins and in places with a brown film in the cells, a film that is usually present in the radial cell behind the first radiomedial crossvein, in the subapical median cells and at the wing tip in the region of the second apical cell. Venter and legs pale, brownish.

The species is similar in genital structure to Ph. desertorum, from which it is distinguished by the total absence of teeth from the shaft of the aedeagus and by the presence of a pair of sub-basal cariniform lobes on the dorsal surface of the shaft. The pygophore lobes bear strong hooklike processes on the dorsal side.

Length ♂ 6.0-6.1 mm, ♀ 6.2-6.7.

Material. Kirgizia, Naryn Province, 7 km W of the mouth of the Atbashi River, 24 July 1963, 2 ♂♂, 3 ♀♀, holotype ♂ (Yemel'yanov).

Distinguished from the similar Ph. desertorum by the lack of basal processes and by the presence of small sub-basal processes on the shaft, as well as by the more elongate and apically more narrowly truncate genital plates.



Phlepsidius pedemontanus (Figs. 23-24).

Female unknown.

Slender. Anterior margin of vertex curved at an obtuse angle, practically a right angle, vertex approximately equal in length and width, narrower than the width of the eye, lateral margins of vertex slightly diverging anteriorly. Face elongate, frontoclypeus narrow. Pronotum slightly wider than head, approximately 1.5 times as long as vertex.

Ground color pale brown; brown markings developed above. Interrupted band on anterior margin of vertex consisting of an oblique band behind the ocellus parallel to the anterior margin of the vertex, thereafter continued as a narrow transverse band giving way on the inside to a longitudinal oblique band near the apex of the vertex; the anterior end of the latter joins a polished paired band from the other side of the vertex. Median line of vertex designated by a longitudinal stripe, which is forked in front and the ends of which extend to the posterior ends of the apical stripes of the interrupted anterior band. Along the sides from the median longitudinal stripe there is a pair of blurred, irregularly shaped brown spots, the posterior-inner angles of which are indistinctly segregated into more or less independent small spots. Blurred darkening on face beneath eyes and around antennae, indistinct darkening or spots apparent at apical margins of lora. Frontoclypeus with transverse dark bands merging in the middle into a longitudinal dark stripe, intersected in its lower part along the median line by a light stripe that disappears higher up. Pronotum with brown and light spots around anterior margin, otherwise lighter brown, with indistinct longitudinal light stripes. Brown longitudinal stripe on scutellum equal in width to the transverse groove; two dark triangular spots on lateral angles, separated from the median stripe and the lateral margins by a narrow light expanse. Elytra semi-transparent, with brown veins, except costa, and with a brown film in places in the cells, this film forms a larger constant spot at the apex of the vertex. Venter with indistinct brown markings, legs pale.

Pygophore lobes without teeth or processes, short and high, more or less sheerly truncate at the rear, posterior margin of lobes sub-basally bearing a small but very distinct lobe. Genital plates short, with convex lateral margins and broad transversely truncate apices bearing a marginal row of macrochaetae. Basal margin of genital plates forming distinctive lobes from above over the valva to the sides of the styli and recurved rearward over the basal surface of the plates. These lobes apparently stand in a functional relationship to the lobes of the pygophore lobes. Aedeagus with a straight process, slightly laterally compressed shaft and a pair of processes extending from the base at the boundary with the connective and parallel to the shaft. These processes are longer than the shaft and pointed apically.

Length ♂ 5.5-5.6 mm.

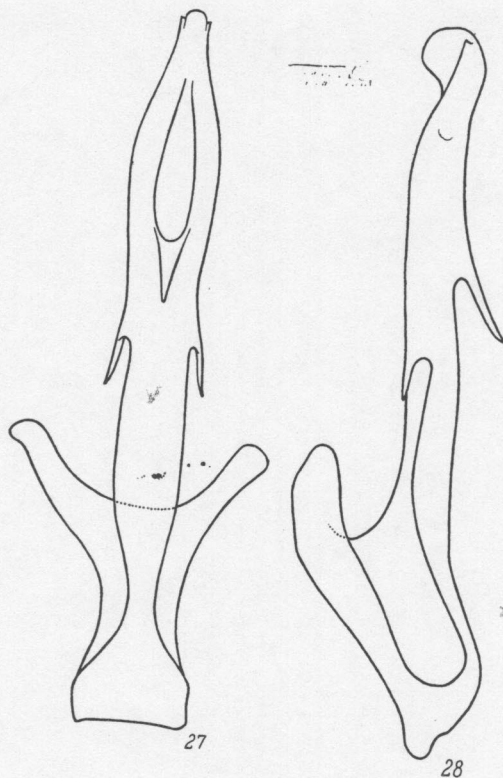
Material. Kirgizia, Osh Province: "Turduk River, Uzun-Akhmat", 13 Aug. 1930, 1 ♂ (Bianki); 20 km N of Tashkumyr, 26 June 1966, 1 ♂ holotype (Yemel'yanov).

The species, which is unusual, is distinguished from other species of the genus by the lobes on the lower margins of the pygophore lobes, by formations of the bases of the genital plates and by other characters.

Phlepsidius narynensis (Figs. 25-26).

Body comparatively small, moderately slender. Anterior margin of vertex obtuse-angled, with rather broadly rounded apex. Vertex convex, its width behind the ocelli approximately equal to its length, its lateral margins diverging rather strongly forward. Ocelli large. Pronotum only slightly wider than head. Face moderately elongate.

Coloration pale, whitish brownish, with indistinct brown or more likely light brown markings. Markings on vertex approximately the same as in Ph. pedemontanus. Horseshoe-shaped stripe in the middle of the anterior margin of the vertex, the ends pointing forward, with transverse stripes extending from its sides sideways to the ocelli, merging with the dark emargination of the ocellus to its rear and on its inside. A median dark stripe extends from the posterior margin of the horseshoe-shaped stripe along the coronal



Figs. 27-28. Mocuellus chakassicus, aedeagus.

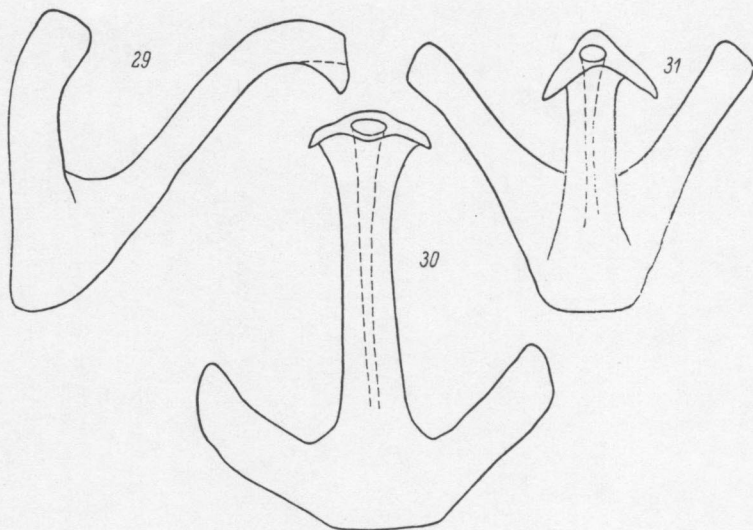
27) From above; 28) in side view.

suture to the posterior margin of the vertex. To the sides of the median stripe there are irregular spots of variable shape, frequently breaking down on each side of the vertex into a larger anterior-medial spot and a smaller posterior-lateral spot, the merging of which on each side begins from the medial margins. Pronotum with dark spots on anterior margin and weak light longitudinal stripes on a slightly darkened ground elsewhere. Lateral dark triangular spots sometimes apparent on scutellum. Elytra semi-transparent, whitish, with slightly darkened veins. Entire venter, including face, pale, lacking distinct markings.

Four lobes with drawn out and narrowly rounded protuberant apices, without teeth on the upper margin and lobes on the lower margin. Genital plates elongate, triangular, with rather narrowly rounded apices. Styli with small, apparently underdeveloped apices. Aedeagus with intricately constructed base. Shaft of aedeagus arcuate, simple, extending from anterior part of base; a pair of stout, apically pointed processes extending from posterior part of base and running together along the shaft approximately to its middle. Anterior margin of base bearing paired projections of its margin proximally recurved below its anterior part.

Length ♂ 3.4-4.1 mm, ♀ 4.2-4.6.

Material. Kirgizia, Naryn Province: Aktal, 75 km W of Naryn, 10 July 1966, 6 ♂; 4 ♀, including holotype ♂ (Yemel'yanov); 66 km W of Naryn, 12 July 1966, 9 ♂, 3 ♀ (Yemel'yanov); Baydula Range, 5 km N of the Dolon Pass, 7 July 1966, 3 ♂ (Yemel'yanov).



Figs. 29-31. Cabrellus ephemericus, aedeagus.

29) Side view; 30) from rear and below; 31) from rear.

The species, which is segregated, is most similar to Ph. pedemontanus, both in the markings on the vertex, and in genital structure. It is distinguished from Ph. pedemontanus by the short basal processes of the aedeagus, the recurved anterior projections of the margin of the base of the aedeagus, the elongate triangular genital plates and the lack of lobes on the lower margins of the pygophore lobes.

#### Genus MOCUELLUS

##### Mocuellus chakassicus (Figs. 27-28).

Externally practically indistinguishable from M. collinus and similar species. Similar in genital structure to M. collinus and M. lingi, but well distinguished by the basally displaced lateral recurrent teeth of the aedeagus, which lie considerably basad of the basal margin of the gonopore.

Length ♂ 3.3-3.4 mm, ♀ 3.7-3.8 mm.

Material. Khakasia, vicinity of Abakan, 11 Aug. 1964, 5 ♂♂ and 3 ♀♀, including holotype ♂ (Yemel'yanov).

#### Genus CABRELLUS

##### Cabrellus ephemericus (Figs. 29-31).

Vertex slightly longer than pronotum, its anterior margin acute-angled (an acute angle close to a right angle) with rather narrowly rounded apex. Vertex flat, transition of face to vertex gentle, but rather steep. Elytra of female abbreviated, rounded apically, reaching abdominal tergites V-VI, elytra of male also abbreviated, reaching tergites VI-VII.

Pale, greyish, with indistinct brown to dark brown markings. Pair of longitudinal stripes on vertex divided at the rear by a longitudinal light spot. Light longitudinal triangular space on frontoclypeus from anteclypeus to apex of head, with transverse brown



stripes to the sides of it, their ends adjacent to the triangle more or less merging. Four brownish longitudinal stripes on pronotum, the anterior ends of which are darkened in the form of dark brown spots. Elytra with weakly and unevenly brownly bordered cells. Legs with small brown spots on femora and darkening at base of setae on tibiae. Sides of pterothorax darkened. Abdomen with dark spots above, merging along sides into two bands pierced on each tergite by a small light spot. Undersurface of abdomen more or less darkened, lateral margins of middle sternites light, posterior sternites light, with dark posterior margins. Subgenital sternite of female and pygophore light, pair of small dark spots in middle of subgenital sternite. Genital block of male light, pygophore lobes darkened from their bases, anal tube dark.

The structure of the male genitalia is in general that typical for the genus Cabrellus. The pygophore lobes are gently convex below. The genital plates have a slightly convex lateral margin, which is more steeply curved apically. The styli are apically thicker and shorter than in C. minutus. The aedeagus has a forked base, from the posterior margin of which the shaft extends, slightly curved to the dorsal side apically and without a median tooth. The apex is truncate and its angles are slightly drawn out along the sides from the gonopore.

The systematic position of the new species is not entirely clear. It is distinguished from the type-species of Cabrellus (C. minutus) by coloration, by the shortness of its wings and the weak development of the processes of the aedeagus. The genus Cabrellus is possibly similar to Praganus and Sicistella, but the criteria employed for the discrimination of genera in the subfamily Deltocephalinae are clearly inadequate in this case, and consequently the affinity and status of the genera mentioned remain doubtful.

Length ♂ 3.1-3.4 mm, ♀ 3.8-4.2 mm.

Material. Turkmenia, Repetek station, 15 May - 20 April 1977, ~100 ♂♂, 5 ♀♀, including holotype ♂ (Kaplin).

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