

NEW DATA ON THE TAXONOMY OF PALEARCTIC HOVER FLIES (DIPTERA, SYRPHIDAE)

A. A. SHTAKEL'BERG (STACKELBERG)

Our knowledge of the Syrphidae, in many respects an important group of Diptera (Shtakel'berg, 1953b) has been greatly enlarged in recent years, thanks to the considerable amount of new material brought back by expeditions of the Department of Diptera of the Institute of Zoology (USSR Academy of Sciences) from various parts of the USSR, many of them remote. During the same period I have been able to study the types of certain species of Syrphidae described by non-Soviet dipterologists and to clarify their systematic position and interrelationships with allied species. The present paper is based on these studied.

The total drawings were contributed by L. V. Chernysheva, in her usual talented style, and the detailed drawings are by N. D. Oglobina (the majority) and by V. N. Lyakhov.

1. ON THE GENUS ROHDENDORFIA SMIRNOV

Thanks to the kindness of Dr. Fred Keiser (Basel) I have had an opportunity of studying the types (♂ and ♀) of *Rohdendorfia alpina* Sack (1938), a species described from Switzerland and fairly similar to *Rohdendorfia dimorpha* Smirnov, described from Soviet Central Asia (1924), where it is widespread.

The differences between these species can be summarized as follows:

Rohdendorfia dimorpha Smirnov

♂

Fore tibia with very short, recumbent, black hairs on the ventral side.

Fore tarsi with short, recumbent hairs below.

Hind femora with short, recumbent, for the most part black, hairs throughout.

Apical segment of surstyli (see profile) relatively broad, rectangular, obliquely truncate at the apex.

♀♀

3rd and 4th abdominal tergites red, each with a black band on the posterior margin.

Frons with white hairs in the anterior half

Rohdendorfia alpina Sack

♂

Fore tibia with very long, erect, delicate, white hairs, 1.5-2 times as long as the diameter of the tibia, on the ventral side.

Fore tarsi with erect, delicate, white hairs, the length of which is roughly equal to the diameter of the segments.

Hind femora near the middle with long, erect, delicate, white hairs, several times longer than the diameter of the femur.

Apical segment of surstyli (see profile) narrow, strongly arcuate.

♀♀

3rd and 4th abdominal tergites red, each with a black band on the posterior margin and a black median, longitudinal stripe which widens slightly caudad.

Frons with brown hairs throughout.

As species of *Rohdendorfia* Smirnov are not widely known, I have thought it necessary to give a total drawing of the male of *Rohdendorfia dimorpha* Smirnov (Fig. 1). Species of this genus belong to elements of the mountain (alpine) fauna both in Europe (*R. alpina* Sack — Alps) and Asia (*R. dimorpha* Smirnov — Altay,¹ mountains of Central Asia).

Species of the genus have been described under different names at different times. It is now possible to give the following synonymy for the known species of the genus:

Rohdendorfia dimorpha Smirnov, 1924 (= *Platycheirus nigripes* Enderlein, 1933 (feste Lindner, 1954) = *Cheilosia reinigi* Lindner, 1954) (syn. n.).

Rohdendorfia alpina Sack, 1938 (= *Cheilosia reinigi alpina* Lindner, 1954) (syn. n.).

The systematic position of the third Palearctic species of *Rohdendorfia*, *R. hedickei* Reinig (1936), described from a female from Hungary (Budapest) is still obscure.

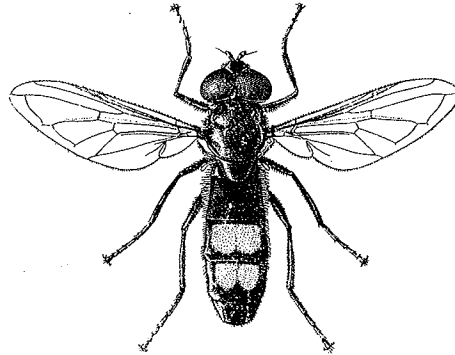


Fig. 1. *Rohdendorfia dimorpha* Smirnov, female.

2. SYNONYMY OF DIDEA NIKKOENSIS MATSUMURA

(*Didea nikkoensis* Matsumura) = *Asiodidea nikkoensis* Matsumura.

Brachyopa nikkoensis Matsumura, 1916. Thous. ins. Japan, Add. II: 234, Taf. XVII, Fig. 12, ♀, — *Didea nikkoensis* Matsumura. Shiraki, 1930: 337, 338-340. — *Asiodidea potanini* Stackelberg, 1930: 224-227, Fig. 2, 3, 4 (sec. typ.).

Detailed comparison of the types of *Asiodidea potanini* Stack. from Szechwan, preserved in the Institute of

¹ This is the first Altay record for this species, based on material collected by E. P. Narchuk in 1964.

Zoology in Leningrad, with a series of specimens of this species collected by N. A. Violovich from the Kuril Islands (Kunashir) and fully conforming to the description of *Didea nikkoensis* Matsumura given by Shiraki (1930), has shown these species to be identical. Viologich is thus proved right in synonymizing *Didea nikkoensis* Matsumura and *Asiodidea potanini* Stack. I had previously (Shtakel'berg, 1930) argued in favor of placing this species in the genus *Didea*, separate from *Asiodidea* as both in general appearance (Fig. 2) and also in head structure (Fig. 3) there are appreciable differences between *Asiodidea* and *Didea*.

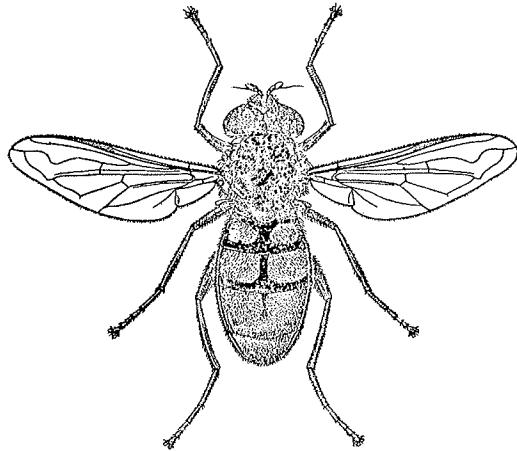


Fig. 2. *Asiodidea nikkoensis* Matsumura, male.

3. ORTHONEURA AHNBERI KANERVO, 1933 — BONA SPECIES

In the revision of the Palearctic species of the genus *Orthoneura* Macq. (Shtakel'berg, 1953a: 351) I suggested that *O. ahngeri* Kanervo, 1938 was identical with *P. plum-bago* Loew, 1843. This has been proved wrong: study of the *O. ahngeri* Kanervo types from the Helsinki Zoological Museum, which were kindly sent to me for examination by Dr. W. Hackman (Helsinki), has shown that there are constant morphological differences between the species. These are formally set out in the key below.

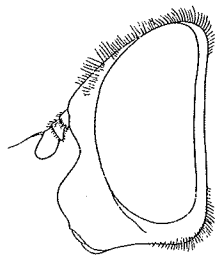


Fig. 3. *Asiodidea nikkoensis* Matsumura, female. Head, side view (after Shtakel'berg).

Recently (Shtakel'berg, 1964) I synonymized *O. anomala* Beck. with the common and widespread *O. nobilis* Fallén, 1817, after studying the type of *O. anomala* Becker, 1921.

- 21(36). Third antennal segment relatively short, its length not more than 1.5-2 times its width or almost the same.
- 22(23). Third antennal segment apically so abruptly truncate as to appear clipped; length of 3rd antennal segment roughly twice its width . . . *O. frontalis* Loew, 1843.

Shtakel'berg, 1953a: 350.

- 23(22). Third antennal segment apically rounded or acuminate.
- 24(27). Apical segment of m abruptly reversing direction, either from the very base or from the basal third; this segment without a sharp bend or break near the middle.
- 25(26).² *O. kozlovi* Stackelberg, 1952.
- 26(25).² *O. recurrens* Loew, 1871.
- 27(24). Apical segment of m more or less perpendicular to r_{4+5} ; this segment as a rule with a more or less sharp bend or break near the middle: the apical half of the segment sometimes slightly recurrent.
- 28(29).² *O. tristis* Loew, 1871.
- 29(28). At least the 3rd antennal segment reddish-yellow or yellow basally.
- 30(33). Third antennal segment regularly oblong-oval, 1.5-2 times as long as wide.
- 31(32). Apical segment of m straight. Mesonotum and thoracic pleura in female covered with very short, recumbent, light hairs that are not longer than the basal thickness of the arista. Frons of female covered with short, light hairs. Tubercle on mouth margin (see profile) occupies about half the height of the face. Fifth abdominal tergite (female) with a broad but not deep (gently sloping) incision occupying the whole width of the posterior margin of the tergite. 5.5-6 mm. USSR: Priбайkal'ye (Irkutsk). ♂ unknown *O. ahngeri* Kanervo, 1938.

Kanervo, 1938: 147-148.

- 32(31). Apical segment of m with a slight bend or break near the middle. Mesonotum and thoracic pleura in ♀ with moderately short, erect, light hairs that are 2-3 times longer than the basal width of the arista. Female frons with fairly long, light hairs. Tubercle on mouth margin occupies about a third of the height of the face. Fifth tergite of female abdomen with a narrow, deep incision, occupying not only a very small part of the posterior margin of the tergite and almost reaching its anterior margin. Frons of male moderately high, but broad, with a metallic sheen, and with a small, punctiform recess in the anterior third; line of contiguity of eyes greater than the height of the vertexal triangle; face of male broad, conspicuously widened below and with a triangular patch of white at the ocular margin; frons and face of female broad, wider than the eyes, widened below; frons of female coarsely punctate, with deep, transverse striae on the sides; antennae black-brown, 3rd antennal segment reddish yellow below. Mesonotum with small, but numerous punctures, shining. Wing with yellow base and yellow marginal ocellate spot; apical segment of m curved slightly in the middle, joining r_{4+5} at, or almost at, a right angle. Abdomen above mat in male, slightly shiny in female; surstyli narrow and long (Shtakel'berg, 1953a, Fig. 11, 3); 4th abdominal tergite of female with a slight, tuberculate elevation in the middle of the posterior margin. 5.5-6 mm. European part of the USSR (Leningrad, Perm' Prov.). Poland. *O. plum-bago* Loew, 1843.

² For reasons of space the contrasts mentioned for these species in my 1953 (Shtakel'berg, 1953a) revision of the genus *Orthoneura* have been omitted here. They may be incorporated in the present key unchanged.

Loew, 1843, Steff. Entom. Zeitg., 4: 268 (*Chrysogaster*); Sack, 1932: 31; Shtakel'berg, 1953a: 351.

33(30). Third antennal segment round or apically slightly widened; slightly longer than wide.

4. HELLENIOLA, gen. n. CHEILOSINARUM³

Type-species: *Psilota nigra* Zetterstedt, 1843 (nec Sack, 1932).

Similar to *Cheilosia*, but distinguished from it by the absence of genae (narrow ridges developed in the lower part of the face along the ocular margin and extending above the level of the median facial tubercle) and by the absence of a median facial tubercle in the female. Distinguished from *Psilota* by the presence of a median facial tubercle in the male and by the bare eyes.⁴

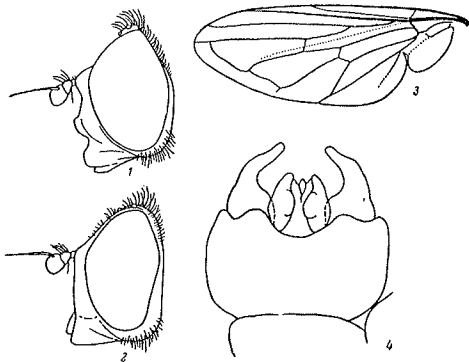


Fig. 4. *Helleniola nigra* Zetterstedt.

1) male head, side view; 2) female head, side view; 3) wing; 4) hypopygium

Male with the eyes contiguous for a distance exceeding the height of the frontal triangle; male frons with a small but distinctly developed longitudinal indentation; female frons level, with a longitudinal groove on each side, near the eye margin. Eyes bare in both sexes. Face of male with a distinct median facial tubercle and another tubercle at mouth margin (Fig. 4, 1); face of female without median tubercle but with well developed tubercle at mouth margin (Fig. 4, 2). Antennae short, simplex; 3rd antennal segment circular; arista slightly thickened, longer than antennae, bare. Thorax simplex; scutellum without a groove on the posterior margin; mesonotum and scutellum of male with fairly long, erect hairs, those of the female with short, semi-recumbent hairs. Legs simplex; hind femora not thickened. Wings relatively broad and long; rm situated conspicuously before the middle of the discoidal cell; apical segment of m relatively long, more or less parallel to posterior wing margin, almost perpendicular to r_{4+5} in its apical part (Fig. 4, 3). Abdomen broadly oval, particularly in the female, with four normally developed segments in male and five in female; surstyli large, biapical, somewhat resembling the surstyli in *Chrysogaster* and sharply distinct from those of species of *Cheilosia* (Fig. 4, 4).

³ The genus has been named in celebration of the 75th birthday of Dr. Wolter Hellén (Helsinki), who has done much to promote the study of *Cheilosia* and related genera.

⁴ The subgenus *Anocheila* of the genus *Cheilosia*, with its type-species *Cheilosia (Anocheila) freyi* Hellén, which, to judge from the description, might be related to *Helleniola*, belongs in fact to the subfamily Syrphinae, more precisely to the *Platychirus-Melanostoma* group of genera, as I have found after studying the holotype (female) of this species, kindly sent to me from the Helsinki Zoological Museum for study by Dr. W. Hackman.

Only one species is known, *Helleniola nigra* Zetterstedt, described from North and Central Sweden (Zetterstedt, 1843, 1849; Wahlgren, 1909) and known from the Leningrad Province (Shtakel'berg, 1958), Northwest Siberia (Samko; ZIN collection), Magadan Prov. (Zhelokhovtsev; Moscow University Zoological Museum) and Kamchatka (Gorodkov; ZIN collection).

5. NEW DATE ON THE SYSTEMATICS OF THE PALEARCTIC SPECIES OF NEOASCIA WILLISTON

During the ten years since I published my revision of the Palearctic species of *Neosciasia* Will. (Shtakel'berg, 1955) a good deal of new material has accumulated and it is now possible to get the systematics of the group into some order and determine the systematic position of the new species described during this period and also of some which were described before but about which little was known. The following key to the Palearctic species of this genus incorporates the new information. Special attention has been given to the structure of the thorax, with the result that *Neosciasia* can now be divided into two well-defined subgenera.

KEY TO PALEARCTIC SPECIES OF THE GENUS NEOASCIA WILLISTON

- 1(12). Metathorax forming a narrow, sclerotized bridge behind the hind coxae (Fig. 5, 1). Subgenus *Neosciasia* Williston, in sp. (typus generis et subgeneris: *Neosciasia podagratica* Fabricius, 1775).
- 2(5). Crossveins, at least in the apical part of the wing (apical segment of m and posterior crossvein) with infuscate borders.

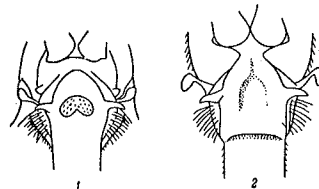


Fig. 5. *Neosciasia* — posterior part of thorax and base of abdomen from below.

1) *Neosciasia* (in sp.) *podagratica* Fabricius; 2) *Neosciasia (Neosciella) carinicauda* Stackelberg (after Shtakel'berg).

- 3(4). Third antennal segment long, roughly 2.5 times longer than wide. Male frons densely rugulose-punctate in its anterior half; female frons delicately rugulose in the anterior half, slightly shiny. 5-6 mm. European part of the USSR, Siberia (Pribaykal'ye). West Europe N. *Neosciasia podagratica* Fabricius, 1775. Shtakel'berg, 1955: 344-345.
- 4(3). Third antennal segment oval, 1.5 times longer than wide. Male frons slightly rugulose-punctate in anterior part, shiny; female frons sparsely punctate in anterior half, without rugulae, very shiny, with a conspicuous longitudinal groove almost as far as the vertex. 5-6 mm. Sakhalin. Japan (Hokkaido). N. *Neosciasia longiscutata* Shiraki, 1930. Shtakel'berg, 1955: 345.
- 5(2). Crossveins without dark borders.
- 6(7). Yellow bands of 2nd and 3rd abdominal tergites in both sexes not narrowing laterad but attaining the lateral margin of the abdomen at full width. Face.

- slightly protuberant below. Hypopygium with black hairs. 4.5-5.5 mm. USSR: Caucasus. Central belt and south of West Europe
 N. *Neosciascia floralis* Meigen, 1822.
 = *aneza* Müller
 Shtakel'berg, 1955: 345-346.
- 7(6). Yellow bands on 2nd and 3rd tergites sharply narrowed laterad and never attaining the lateral margin of the abdomen at full width; the frequent yellow marks (bands, maculae) of the 2nd and 3rd tergites, in general, not crossing the lateral margin of the abdomen or else the abdomen is entirely bronze or black, without yellow marks. Hypopygium often with white hairs.
- 8(9). Face slightly protuberant below, apically blunt. Hypopygium with black hairs. Larger: 6-6.5 mm. USSR: Caucasus, mountains of Central Asia
 N. *Neosciascia pavlovskii* Stackelberg, 1955.
- 9(8). Face strongly protuberant below, apically acute. Hypopygium with white hairs. Smaller: 3.5-5 mm.
- 10(11). Abdomen unicolorously black. Fore and mid femora, except the apices, black. Hypopygium with long, white hairs. 4 mm. USSR: Caucasus. ♀ unknown
 N. *Neosciascia monticola* Stackelberg, 1960.
 Shtakel'berg, 1960: 442.
- 11(10). Abdomen with yellow maculae on 2nd and 3rd tergites. Fore and mid femora largely yellow. Hypopygium with short, white hairs. 3.5-5 mm. European part of the USSR, Kazakhstan, Siberia. West Europe, China
 N. *Neosciascia dispar* Meigen, 1822.
 Shtakel'berg, 1955: 347-348. = *tenax* Harris
- 12(1). Metathorax more or less widely divided medially behind the hind coxae and not forming a bridge (Fig. 5, 2). Subgenus *Neosciella*, subgen. n. (type-species: *Neosciascia interrupta* Meigen, 1822).
- 13(14). Lower part of face protruding strongly, by roughly the diameter of an eye (Fig. 6). Body entirely black. Legs black, with yellow knees. 4-5 mm. North (Kola Peninsula) and east (Sverdlovsk Prov.) of the European part of the USSR
 N. (*Neosciella*) *petsamoensis* Kanervo, 1934.
 Shtakel'berg, 1955: 343-344.
- 14(13). Lower part of face protruding moderately, by roughly half the diameter of an eye. Body not, as a rule, unicolorously black; yellow bands or maculae occurring on the abdomen. Legs, particularly the fore and mid pairs, in considerable part light (yellow).
- 15(18). Transverse veins, at least in the apical part of the wing (apical segment of m and posterior crossvein) with brown, smoky-gray borders.
- 16(17). Third antennal segment short-oval (not more than 1.5 times as long as wide). Yellow maculae on sides of 4th tergite. 5-6 mm. European part of the USSR (Leningrad and Yaroslavl' Prov.). West Siberia. North and central belt of West Europe
 N. (*Neosciella*) *interrupta* Meigen, 1822.
 Shtakel'berg, 1955: 348.
- 17(16). Third antennal segment elongate-oval, as in *N. podagrica* F. (2-2.5 times as long as wide). No yellow maculae on sides of 4th tergite. 5-6 mm. USSR - Crimea, Caucasus. Central belt of West Europe
 N. (*Neosciella*) *obliqua* Coe, 1940.
 Shtakel'berg, 1955: 349. = *mitacantha* Strobl
- 18(15). Wings hyaline; crossveins without infusate borders.
- 19(24). Third antennal segment short-oval (barely longer than wide). Hypopygium covered with white hairs.
- 20(21). Second and 3rd abdominal tergites of male each with a distinct, large median tubercle. Surstyli narrow, long. 5-6.5 mm. USSR: Sakhalin
 N. (*Neosciella*) *tuberculifera* Viologich, 1957.
 Viologich, 1957, Entom. obozr., 36: 748-749.
- 21(20). Male abdomen without distinct large tubercles on 2nd and 3rd tergites. Surstyli massive, relatively broad.
- 22(23). Male abdomen with a broad, reddish-yellow band on anterior margin of 3rd tergite. 4-5 mm. USSR: European part, Caucasus, Siberia, West Europe.
 N. (*Neosciella*) *geniculata* Meigen, 1822.
 Shtakel'berg, 1955: 350.
- 23(22). Male abdomen without a reddish-yellow band on anterior margin of 3rd tergite. 5 mm. USSR: Sakhalin
 N. (*Neosciella*) *geniculata orientalis* Viologich, 1957.
 Viologich, 1957, Entom. obozr., 36: 749.
- 24(19). Third antennal segment long-oval 1.5-2 times as long as wide. Hypopygium with black hairs.
- 25(26). Frons of male strongly punctate and rugulose and mat on anterior half. Hypopygium with an apical carina. Second abdominal tergite of female parallel-sided on the basal 2/3, widening abruptly in the apical third; female abdomen with yellow lateral maculae on the 2nd to 4th tergites. 5-6 mm. USSR: Kazakhstan, West Siberia
 N. (*Neosciella*) *carinicauda* Stackelberg, 1955.
 Shtakel'berg, 1955: 350-351.
- 26(25). Frons of male with sparse punctures on anterior half, without rugulae. Distal surface of hypopygium evenly rounded, without carina. Second abdominal tergite in female slightly narrowed behind the anterior margin, then gradually widening toward the apex; female abdomen as a rule unicolorously black-bronze, without yellow maculae. 4-5.5 mm. USSR: European part, Kazakhstan, West Siberia. West Europe
 N. (*Neosciella*) *aneza* Meigen, 1822.
 Shtakel'berg, 1955: 351. = *meticulosa* Scopoli

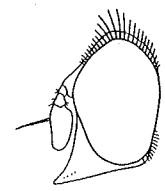


Fig. 6. *Neosciascia* (*Neosciella*) *petsamoensis* Kanervo, male. Head, side view.

Neosciascia (*Neosciella*) *petsamoensis* Kanervo, 1934, ♂ (nov.).

♂ described here for the first time.

♂. Frons very broad, its width roughly equal to that of the eye (see above), with a small, transverse depression

in the anterior third and a smooth, longitudinal stripe running from the bases of the antennae to the anterior ocellus, sparsely punctate, very shiny, with short, sparse hairs. Face protruding strongly, by roughly an eye diameter (Fig. 6); face black, covered with whitish-gray pollen. Occiput with sparse grayish pollen, a row of long, erect, black, setaceous hairs along the posterior ocular margin on the upper part of the head. Antennae black; 3rd antennal segment massive, relatively broad, long-oval, roughly 1.5 times as long as wide. Arista thickened in the basal half. Thorax black, shiny; scutum with small, sparse punctures and erect, sparse hairs; mesopleura and pteropleura covered with light grayish pruinescence. Legs black; apical part of fore and mid femora and basal part (1/4-1/3) of tibiae of all legs brownish-yellow. Hind femora visibly, but not greatly thickened. Wings almost hyaline; ocellate spot on wings light brown. Abdomen entirely black, with almost parallel margins, widening slightly caudad. Hypopygium covered with black hairs.

1. ♂: Sverdlovsk Prov., Tsvirl'skiy District, Burmantovo, June 10, 1958 (Rasnitsyn).

6. SYSTEMATIC POSITION OF MACROPELECOCERA STACKELBERG

The genus *Macropelecocera* Stackelberg, of which only one species is known, *M. paradoxa* Stackelberg, is an extremely odd, yet characteristic element in the high mountain dipterous fauna of Soviet Central Asia. To some extent the genus can be compared with the mountain-dwelling genus *Ischiroptera* Pokorny, peculiar to the Alps of Central Europe; in that genus the apical process of the 3rd antennal segment, bearing the arista, is still in a rudimentary state; in *Macropelecocera* this process has attained considerable development (Shtakel'berg, 1952, Fig. 16, 2).

As in most representatives of the subfamily Peleocerinae, sexual dimorphism is sharply expressed in *Macropelecocera paradoxa* Stackelberg in the coloration of the abdomen, which is entirely black in the male (Fig. 7) but largely red in the female (Shtakel'berg, 1952, Fig. 16, 4).

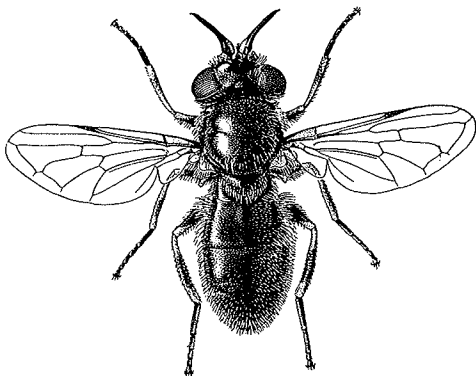


Fig. 7. *Macropelecocera paradoxa* Stackelberg, male.

7. NEW DATA ON THE SYSTEMATICS OF PALEARCTIC SPECIES OF THE GENUS EUMERUS MEIGEN

1. When in London for the Twelfth International Entomological Congress in July 1964 I had an opportunity of studying in the British Museum the holotype of a new species of the genus *Eumerus*, namely, *E. claripennis* Coe, described by Dr. R. L. Coe from Yugoslavia (Coe, 1957). As a result, I have come to the conclusion that this is a distinct species and my previous suggestion of the identity of *E. claripennis* Coe, 1957 with *E. sogdianus* Stackelberg, 1952 should now be discarded (in Shtakel'berg, 1961, p. 207, *E. claripennis* Coe was erroneously named *E. vitripennis* Coe).

E. claripennis Coe can be included in the key to Palearctic species of *Eumerus* (Shtakel'berg, 1961: 218), as follows:

163(164). Third antennal segment relatively broad, reddish-brown or dark brown to black
 *E. strigatus* Fallén, 1817.

164(163). Third antennal segment relatively narrow (Shtakel'berg, 1961, Fig. 31, 2, Fig. 32, 2), light reddish-yellow.

164a(164b). Fourth abdominal tergite in male yellow on posterior margin. Fourth abdominal sternite in male with a regular, not deep, arcuate incision. Third antennal segment with parallel margins; its length roughly twice its width, as in *E. roborovskii* Stack. (Shtakel'berg, 1961, Fig. 31, 2). 6 mm. Yugoslavia. *E. claripennis* Coe, 1957.

Coe, 1957: 61.

164b(164a). Fourth abdominal tergite in male metallic green up to the apex. Fourth abdominal sternite in male with a deep incision on posterior margin (Shtakel'berg, 1961, Fig. 31, 3 and Fig. 32, 3).

As this species is now included in the key, the following minor amendments must be made elsewhere in the key:

159(160). Delete: "4th tergite with a yellow border on posterior margin" (line 5 on p. 217 of Russian text).

160(150). Delete: "4th tergite without a yellow border on posterior margin, entirely shiny" (lines 5-6, *ibid.*).

2. *Eumerus ferulae*, sp. n. Similar to *E. mesasiaticus* Stackelberg, 1949 (Shtakel'berg, 1961: 191-192), but distinguished by the different structure of the male hind femora (without a gradual elevation below at the base), by the longer and narrower abdomen (twice as long as wide) and by the white hairs on the hypopygium.

Male. Eyes covered with moderately long, dense, white hairs; eyes contiguous at one point. Frons and face narrow; height of frontal triangle roughly 1.5 times its width at the level of the bases of the antennae; frons and face covered with gray pruinescence and dense, snow-white hairs; vertexal triangle black, slightly shiny, relatively narrow (roughly 2.5 times as high as wide posteriorly); ocelli situated in the anterior part of the vertexal triangle; distance between anterior and posterior ocelli roughly equal to the distance from the posterior ocelli to the upper ocular angle; vertexal triangle with long, white, erect hairs. Occiput almost black, shiny, with a border of gray pruinescence along the posterior ocular margin. Antennae short, reddish-yellow; 3rd antennal segment relatively short, ovate, with an acute lower distal angle; arista bare, slightly thickened, situated in the basal third of the dorsal margin of the 3rd antennal segment. Thorax shiny black, with a slight bronze hue; scutum covered with small but frequent punctures, shiny black, with two poorly developed longitudinal stripes of white pruinescence extending from its anterior margin roughly to the level of the wing base; hairs covering scutum short, erect, yellowish-gray; scutellum of the same color as the scutum, with a distinct border on the posterior margin. Legs dark bronze, shiny; apices of femora, basal half and apex of each tibia, basal segment of mid tarsus and also tarsi of all pairs of legs below, yellow; hind femora moderately thickened, with two rows of fairly long, sharp spinules in the apical half, below; hind tibiae slightly curved, slightly thickened towards apices; legs covered with white hairs which are longer on the posterior surface of the fore and mid femora. Wings hyaline, with the veins yellow in the basal half (these may be recently eclosed specimens); wing spot light brownish yellow; r_{4+5} slightly but perceptibly curved; postalar scales and halteres light yellowish white. Abdomen relatively long and narrow (more than twice as long as wide), black, shiny, with small but dense punctures; 2nd, 3rd and 4th tergites with

broad, obliquely arranged maculae of white pruinescence. Posterior margin of 4th tergite yellow; hairs covering upper surface of abdomen short, recumbent, dark at base, but longer, erect and white on the sides and at the apex of the abdomen; hypopygium with white hairs; 4th sternite with a deep triangular incision on posterior margin.

♀. Frons relatively narrow, occupying less than 1/5 of the width of the head (seen from above), shiny black, with small punctures; ocular margin with a narrow border of white pruinescence and with rather long, white, erect hairs.

Body length 6-7 mm.

Holotype: 1 ♂—Kyzyl Kum Station of the Uzbek Academy of Sciences, Shafrikan, Bukhara Prov., Uzbek SSR, from *Ferula* roots (B. Mamayev); paratypes (1 ♂, 1 ♀), from the same location (B. Mamayev). The type is in the Institute of Zoology, Leningrad (USSR Academy of Sciences), the ♂ paratype in the Severtsov Institute of Animal Morphology (USSR Academy of Sciences) in Moscow.

The new species can be included in the key to Palearctic species of the genus (Shtakel'berg, 1961) as follows.

♂♂ (page 191 of Russian edition)

53(54). Face with thin, grayish-white pruinescence, not shiny and with white hairs.

53a(53b). Hind femur without a sloping elevation in basal third below but even. Abdomen relatively long and narrow (roughly twice as long as wide). Hypopygium with white hairs *E. ferulae*, sp. n.

53b(53a). Hind femur with a sloping elevation in basal third below (Shtakel'berg, 1961, Fig. 9, 11). Abdomen short, broad (not more than 1.5 times as long as wide). Hypopygium with black hairs. Eyes apposed at one point, with dense, long, light hairs⁵ *E. mesasiaticus* Stackelberg, 1949.

♀♀ (page 227 of Russian edition)

118a(118b). Fourth tergite yellow along posterior margin *E. ferulae*, sp. n.

118b(118a). Fourth tergite not yellow along posterior margin (metallic green or brown).

119(122)

3. *Eumerus persicus* Stackelberg, ♂ (nov.). Previously described as a new species *Eumerus* from one female from North Iran (Shtakel'berg, 1949). One male and one female of the species have now been obtained from Armenia. The previously unknown male is described below. The following addition can now be made to the key to species of this genus, on the basis of the male (Shtakel'berg, 1961: 186).

20(19). Line of contiguity of eyes does not exceed half the height of the frontal triangle. Legs, including fore tibiae and tarsi, black; hind femora moderately thickened.

20a(20b). Hypopygium with dense, white hairs. Frons and face with white pruinescence and white hairs; vertexal triangle black, shiny, with coarse punctures and white hairs. Scutum black, with coarse, numerous punctures, slightly shiny, with relatively short, erect, pure white hairs. Legs black, knees narrowly brown. Abdomen red, apex black; 2nd to 4th tergites each with a pair of half-moon maculae of white pruinescence; hypopygium black, with white hairs. 10 mm. USSR: Transcaucasia

(Armenia). North Iran
. *E. persicus* Stackelberg, 1949.

Armenian highlands, Khosrovskiy Forest, June 8-9, 1961 (1♂, 1♀; V. Rikhter).

20b(20a). Hypopygium with dense, black hairs. Frons and face with gray pruinescence and white hairs. Scutum black, with coarse, numerous punctures, slightly shiny, with relatively short, erect, yellow hairs. Legs black, knees narrowly yellowish. Abdomen red, with three pairs of half-moon maculae of white pruinescence on 2nd to 4th tergites, and with very short recumbent hairs. 10 mm. USSR: Transcaucasia (Armenia) *E. urartorum* Stackelberg, 1960.

8. BRIEF REVIEW OF PALEARCTIC SPECIES OF BRACHYPALPUS MACQUART

Species of the genus *Brachypalpus* Macquart, which are in general not numerous, are poorly represented in Palearctica. They occur also in Nearctica, roughly the same number of species occurring in both regions. Despite their small number, there is considerable difficulty both in differentiating between the species of this genus and in determining the synonymy, since the majority of the Palearctic species were described a long time ago by authors whose descriptions consisted mainly of color characters, which are rather variable within a species (the color varies, particularly, from one sex to the other). The difficulty of species differentiation is further aggravated by lack of reliable type specimens for some species. All this makes it difficult to define some of the old species of *Brachypalpus*.

Sack (1932) includes nine species of *Brachypalpus* in his review of Palearctic Syrphidae, namely: *B. angustus* Egger, 1860; *B. bimaculatus* Macquart, 1828; *B. chrysites* Egger, 1857; *B. eunotus* Loew, 1863; *B. femoratus* Meigen, 1822; *B. laphriformis* Fallén, 1816; *B. meigeni* Schiner, 1857; *B. valgus* Panzer, 1798; *B. zugmeyereri* Mik, 1887. Some of these should undoubtedly be suppressed as synonyms. Lundbeck's synonymy (Lundbeck, 1916: 507) seems to me convincing: that is, *B. bimaculatus* Macquart, 1828 and *B. angustus* Egger, 1860 become synonyms of *B. laphriformis* Fallén, 1816. The systematic position of *B. femoratus* Meigen, described only from the female, is not quite clear to me.

After Sack's review *B. nipponicus* Shiraki, 1952, from Japan was described from the female. I here describe one new species of the genus, *B. nigri-facies*, sp. n., from the Caucasus and the males of *B. nipponicus* Shiraki and *B. zugmeyereri* Mik., not previously described in the literature (see below).

Species of the genus *Brachypalpus*, as we know, exhibit rather pronounced sexual dimorphism, expressed both in the leg structure, particularly that of the hind pair, and in the coloration of the legs, which are on the whole lighter in the females. The males and females are therefore described separately in my key to the Palearctic species of the genus. The key to the females is provisional.

MALES

1(2). Scutum with dense, whitish-gray pruinescence, and with three broad, longitudinal stripes of black pruinescence. Second to 4th abdominal tergites with large, lateral macular of gray pruinescence, sometimes with a leaden hue. Head black; face with whitish-gray pruinescence. Antennae black-brown; 3rd antennal segment short, round. Legs black; tibiae and tarsi of mid and hind legs, except for the two terminal tarsal segments, yellow. 9-11 mm. USSR: Caucasus. Central Europe (Poland, Hungary)
. *B. eunotus* Loew, 1873.

⁵ Continue text as in the 1961 work.

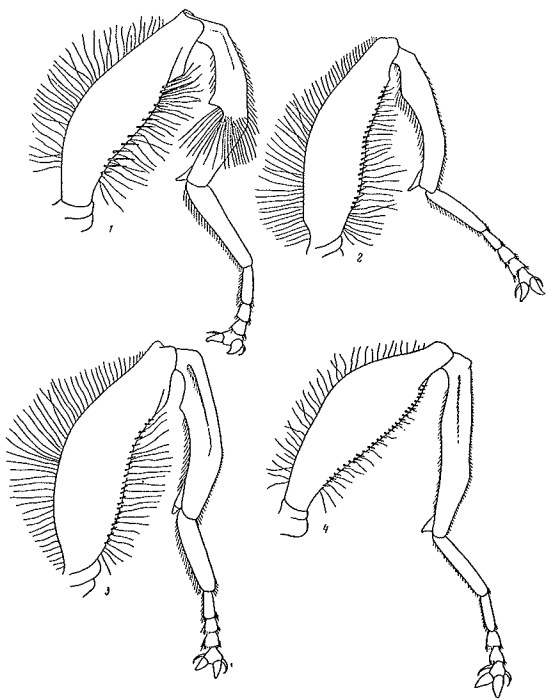


Fig. 8. Hind legs of *Brachypalpus*, females.

- 1) *B. nigrifacies*, sp. n.; 2) *B. nipponicus* Shiraki; 3) *B. valgus* Panzer; 4) *B. laphroformis* Fallén.

Loew, 1873, Berl. Entom. Zeitschr., 17: 37;
Loew, 1873, Besch. europ. Dipt., 3: 213; Sack, 1932:
356; Bañkowska, 1963: 76.

- 2(1). Scutum metallically shiny, without pruinescence or with barely perceptible traces of pruinescence, and without dark longitudinal bands. Abdomen without lateral patches of pruinescence, shiny throughout.
- 3(8). Eyes not contiguous on frons.
- 4(5). Face entirely black. Hind tibia with a sharp tubercle on ventral side, near the middle (Fig. 8, 1). Abdomen with light hairs at the apex. Antennae black. Body black, with long, yellowish-gray hairs; scutum with black hairs, as a rule, on the posterior part (between the wing bases). Legs unicolorously black. Surstyli with relatively short, broad dorsal lobes (Fig. 10, 1). 12-13 mm. USSR: Caucasus (Great Caucasus: Teberda) *B. nigrifacies*, sp. n.
- 5(4). Face yellow medially or at the sides. Hind tibia with a gently sloping tubercle in the basal third of the ventral side (Fig. 8, 2). Abdomen with black hairs apically.
- 6(7). Hind tibia with a sharp tooth apically (Fig. 8, 2). Face yellow in the middle. Antennae brown; 3rd antennal segment short, transverse. Body black. Thorax with long, light yellowish-gray hairs. Legs black; hind coxae, bases of mid and hind femora and basal part (1/3-1/2) of tibiae yellow; basal segments of mid and hind tarsi brown. Abdomen with light yellowish-gray hairs basally (1st-3rd tergites), black hairs apically (4th tergite and hypopygium). Surstyli with narrow, long, triangular dorsal lobes (Fig. 10, 2). 11-14 mm. USSR: Priamur'ye, South Primor'ye, Sakhalin. Japan *B. nipponicus* Shiraki, 1952.

Shiraki, 1952, Mushi, 23(1): 7-9, Fig. 5 (♀). -
dentitibia Stackelberg (in litt.). Violovich, 1960: 249
(nomen nudum).

- 7(6). Hind tibia apically without a sharp tooth (Fig. 8, 3). Face with a broad, black, median, longitudinal stripe. Antennae brown; 3rd antennal segment long-oval (roughly 1.5 times as long as wide). Body black. Thorax with long, light yellowish-gray hairs. Legs black; bases of mid and hind femora, apices of femora, basal part of fore tibiae and greater part of mid and hind tibiae yellow. Abdomen with light yellowish-gray hairs basally (1st-3rd tergites) and black hairs apically (4th tergite and hypopygium). Surstyli with triangular dorsal lobes, broad basally (Fig. 10, 3). 11-14 mm. USSR: Ukraine (Kiev and Khar'kov Provinces). Central and Southern Europe
. *B. valgus* Panzer, 1798.

Panzer, 1798, Fauna Germanica, 54, tab. 7
(*Syrphus*); Meigen, 1822, Syst. Beschreib., 3: 217
(*Xylota*); Meigen, 1830, Syst. Beschreib., 6: 349
(*Xylota*); Sack, 1932: 357; Bañkowska, 1963: 77. 6

- 8(3). Eyes contiguous on frons for a considerable distance (sometimes the eyes are separated by a very narrow shiny black stripe but are proximate for a considerable distance).
- 9(12). Face yellow in the lower half, without a black longitudinal median stripe. Apex of abdomen and hypopygium with black hairs.
- 10(11). Abdomen basally and on the sides of the 2nd tergite distinctly yellow. Mid femora more or less extensively black in the apical half. Antennae brown; 3rd antennal segment short-oval (hardly longer than wide). Body black. Thorax with long, light yellowish-gray hairs. Legs reddish-yellow; fore femora, except the apices and bases, mid femora in the apical half, at least above, and hind femora in the apical half above, black; tarsi more or less darkened (brown); hind tibia of male with a slight elevation in the basal third on the inside (Fig. 8, 4). Abdomen with relatively short, whitish hairs basally (1st-3rd tergites) and with longer, black hairs apically (4th tergite and hypopygium). Surstyli with moderately long, triangular dorsal and short, rectangular ventral lobes (Fig. 10, 4). 10-12 mm. USSR: European part (Leningrad, Moscow, Kursk and Khar'kov Provinces). Central Europe *B. laphroformis* Fallén, 1816.

Fallén, 1816, Dipt. Suec., Syrphici: 22 (*Syrphus*);
Lundbeck, 1916, Dipt. danica, 5: 505-507;
Bañkowska, 1963: 76. - *angustus* Egger, 1860, Verh.
zool.-bot. Gesell. Wien, 10: 665; Bañkowska, 1963:
76. - *bimaculatus* Macquart, 1829, Recueil Soc. Sci.
Agric. Lille, 1828: 282 (*Xylota*); Verrall, 1901,
Brit. Flies, 8: 591; Bañkowska, 1963: 76.

- 11(10). Abdomen black at base. Mid femora yellow throughout. Antennae reddish brown; 3rd antennal segment short-oval. Body black. Thorax with long, dense, light yellow hairs. Legs reddish yellow, fore and hind femora above with a black longitudinal stripe extending from the base to the middle of the femur; hind tibia with a small tubercle on the ventral side. Abdomen narrow, olive-brown; basally (1st-3rd tergites) with yellow hairs, apically (4th tergite and hypopygium) with black hairs. 11-13 mm. Central

⁶ Sources and synonymy, taken from the Kertész Catalog of Diptera (1910: 294-296) not cited in this paper, apart from the main ones.

Europe (after Sack, 1932)
 *B. meigeni* Schiner, 1857.⁷

Schiner, 1857, Vern. zool. -bot. Gesell. Wien, 7: 443; Schiner, 1862, Fauna Austr., Diptera, 1: 353; Sack, 1932: 357; Bańkowska, 1963: 77.

- 12(9). Face on lower half with a black median longitudinal stripe. Apex of abdomen and hypopygium with light (yellow or reddish-yellow) hairs.
- 13(14). Hind tibia with a sharp bend in apical third (Fig. 9, 1). Legs (particularly the mid tibiae and hind tarsi) largely black. Antennae brown; 3rd antennal segment short-oval, yellow below. Body black. Thorax with long reddish-yellow hairs. Legs reddish yellow; coxae and femora, except the apices of the latter, apical half of the fore tibiae, fore tarsi and two apical segments of the mid and hind tarsi black; hind tibiae brown in the middle. Abdomen with long, erect, reddish-yellow hairs. Surstylus with a triangular dorsal lobe, gradually narrowing toward the apex, and a small semi-oval ventral lobe (Fig. 10, 6). 13-14 mm. Caucasus (Talysh) *B. zugmeyeri* Mik, 1887 (see below).

Mik, 1867, Wien. Entom. Zeitg., 6: 164.

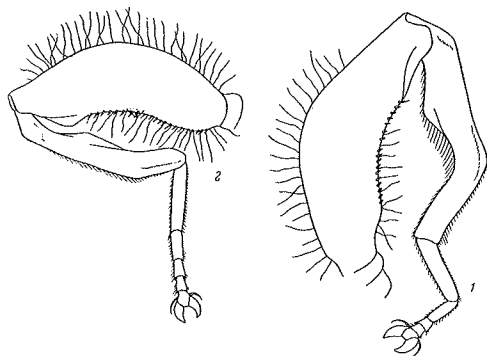


Fig. 9. *Brachypalpus*, male, hind legs.
 1) *B. chrysites* Egger.; 2) *B. zugmeyeri* Mik.



Fig. 10. *Brachypalpus*, hypopygial surstyli.

- 1) *B. nigrifacies*, sp. n.; 2) *B. nipponicus* Shiraki; 3) *B. valgus* Panzer; 4) *B. laphriformis* Fallén; 5) *B. chrysites* Egger; 6) *B. zugmeyeri* Mik.

⁷ The species is unknown to me in nature. *B. meigeni* Schiner could be a color aberration of *B. laphriformis* Fallén.

FEMALES⁸

- 1(2). Scutum with dense, whitish-gray pruinescence and with three broad longitudinal stripes of black pruinescence. Second to 4th abdominal tergites with large lateral maculae of gray pruinescence, sometimes with a leaden hue *B. enotus* Loew.
- 2(1). Scutum metallically shiny, without pruinescence or with barely perceptible traces of it, and without dark longitudinal stripes. Abdomen without lateral macular of pruinescence, all evenly shiny.
- 3(4). Face entirely black. Legs black throughout *B. nigrifacies*, sp. n.
- 4(3). Face yellow at least on the sides or below.
- 5(8). Face without a black, median, longitudinal stripe.
- 6(7). Abdomen distinctly reddish yellow basally, particularly on the sides of the 2nd tergite *B. laphriformis* Fallén.
- 7(6). Abdomen black throughout
 *B. meigeni* Schiner,⁹ *B. nipponicus* Shiraki.
- 8(5). Face with a black, median, longitudinal stripe reaching or almost reaching the mouth margin.
- 9(10). Fourth and 5th tergites, or at least the 5th, with black hairs *B. valgus* Panzer.
- 10(9). Fourth and 5th tergites with golden or reddish-yellow hairs
 *B. chrysites* Egger, *B. zugmeyeri* Mik.⁹

Brachypalpus nigrifacies, sp. n.

This species is clearly distinguishable from all known Palearctic species of the genus by its unicolorously black face and legs.

Male. Face unicolorously black, with slightly grayish pruinescence, with long but not dense white hairs on the sides (ocular margins). Frons black, with dense whitish-gray pruinescence and long white hairs. Eyes bare, not contiguous (the distance between them at the narrowest part being roughly 1.5 times the diameter of the anterior ocellus). Vertex triangle black, with slight gray pruinescence and long white hairs. Occiput black, with dense, whitish-gray pruinescence and long white hairs. Antennae black; 3rd antennal segment black-brown, oval, with lower margin almost straight; its length more than 1.5 times its width. Arista longer than antenna, distinctly thickened, gradually thinner only in the apical half, brown, lighter towards the apex. Thorax black; scutum, scutellum and pleura finely punctate, shiny, with very long, dense, erect, yellowish-gray hairs; anterior and posterior part of pleura bare. Legs unicolorously black; hind femora thickened and slightly curved; hind tibia strongly curved, with a very pronounced triangular tubercle on the ventral side, before the middle, and with a sloping emargination distad of that tubercle (Fig. 8, 1). Femora with long, yellowish-white hairs, tibiae with short-recumbent yellowish hairs. Wings hyaline; wing spot light brown; in the middle of the wing a relatively narrow, brownish, transverse band. Postalar scales yellowish with yellowish-white markings. Halteres light brown. Abdomen black, shiny, with long, dense,

⁸ The female of *B. femoratus* Meigen (1822), not known to me in nature, is not included in the key.

⁹ The females of *B. meigeni* Schiner and *B. zugmeyeri* Mik are not known to me in nature.

erect, orange-yellow hairs. Hypopygium black, with long, dense, orange-yellow hairs. Surstyli with small, short, triangular dorsal lobes and massive, semi-oval ventral lobes (Fig. 10, 2).

Female. Frons broad, above roughly 1/4 as wide as head, shiny black, with rather long, erect, white hairs. Third antennal segment slightly shorter than in male. Hind tibia simple, without a triangular tubercle or emargination on the ventral side. Body length 11-14 mm.

Holotype: 1 ♂ - Teberda, reservation, Olen'ya Gorge, 1500 m, April 23, 1964, on flowers of *Petasites albus* (Gorodkov). Paratypes: 1 ♀ (allotype) - Teberda, reservation, March 27, 1955 (Arens); 1 ♂ - reservation, Abago pasture, June 13, 1959 (Cheng Yung-Lin; Moscow University Zoological Museum); 1 ♂, Teberda Health Resort, River Mukhu, 1500 m, March 22, 1964 (Gorodkov); 2 ♂ - Teberda Health Resort, 1300 m, March 19 and April 24, 1964 (Gorodkov). Holotype and most of the paratypes in the Zoological Institute of the USSR Academy of Sciences at Leningrad.

Brachypalpus nipponicus Shiraki, 1952, ♂ (nov.).

Shiraki, 1952, Mushi, 23(1): 7-9, Fig. 5 (♀). - *dentitibia* Stackelberg (in litt.). Violovich, 1960: 249 (nom. nud.).

Distinguished from the majority of the Palearctic species of *Brachypalpus* by the presence of a sturdy, sharp tooth on the posteroventral side at the apex of the hind tibia in the male (Fig. 8, 2).

Male. Eyes proximate for a short distance but not contiguous. Frons black in large part, except for the space above the lunule, which is covered with dense, whitish-gray pruinescence and fairly long but not dense hairs. Face yellow, with a large, black, transverse patch under the antennae, much of the face covered with whitish pruinescence, which is often obliterated in places, and with white hairs; cheeks rather high (their height under the eyes exceeds the width of the 3rd antennal segment), shiny black. Vertexal triangle narrow (its height more than 1.5 times its width), black, with rather long, black hairs. Occiput black, with dense gray pruinescence and whitish-gray hairs. Antennae short, brown; 3rd segment short (wider than long), short-oval, covered with grayish pruinescence; arista set away from the base of the 3rd segment, slightly thickened basally, gradually tapering toward the apex, with brownish base but largely whitish. Thorax black, shiny. Scutum finely punctate, shiny, covered with barely perceptible yellowish or brownish pruinescence and with long, erect, yellowish-gray hairs. Thoracic pleura in the anterior (propleura) and middle (posterior half of mesopleura, anterior half of pteropleura and top half of sternopleura) parts with very long, erect, yellowish-white hairs. Legs black; apices of all femora, bases of mid femora, basal half of anterior and mid tibiae, hind coxae and basal third to half of hind femora, as well as basal third of hind tibiae, reddish-yellow. Hind femur thickened and conspicuously curved, with very small, dense spinules on the outer side of the ventral surface and with a clearly developed tubercle in the apical quarter below. Hind trochanter with a blunt triangular tubercle. Hind tibia curved, with a gently sloping tubercle in the basal third of the ventral surface, and with a fairly long, sharp tooth apically on the posteroventral side (Fig. 8, 2). Wings almost hyaline, slightly brownish; wing spot brownish-yellow with a dark brown base; rm situated beyond the middle of the discoidal cell. Squamae and halteres light yellow. Abdomen black, shiny, with yellowish-gray hairs in the basal half and black hairs in the apical half (4th tergite and hypopygium); hairs on upper surface of abdomen rather long, erect, those on the lower surface all light, very long, erect. Hypopygium large; surstyli bilobate; dorsal lobes of surstyli rather narrow (seen in profile) and long, much widened basally; ventral lobes of surstyli roughly a third the length of the dorsal lobes, more or less rectangular (Fig. 10, 2).

Body length 11-14 mm.

1 ♂: Sakhalin, Yuzhno-Sakhalinsk, June 17, 1954 (Violovich); Sakhalin, Yuzhno-Sakhalinsk, June 7 and 17, 1954 (5 ♂; Violovich); Klimoutsy, 40 km west of Svobodnyy, April 3, May 18, 30, 31, June 4, 1959 (7 ♂; Borissova and Zinov'yev); Vladivostok, Golden Horn Bay, May 25, 1911 (2 ♂; Rydzevskiy); Khabarovsk, June 15, 1925 (2 ♂).

The secondary tooth at the apex of the hind tibia is a secondary male sexual character, lacking in the female. The Institute of Zoology collection contains three females of this species from the Amur Province (Klimoutsy) and the Primor'ye (Sitsa) which fully agree with the original description of the female of the species (Shiraki, 1952).

Brachypalpus zugmeyer Mik, 1887, ♂ (nov.).

Mik, 1887, Wien. Entom. Zeitg., 6: 164 (♀).

This species belongs to the group in which the male eyes are contiguous on the frons. Face yellow with a black, longitudinal median stripe, reaching the mouth margin. Apex of male abdomen covered with light, reddish-yellow hairs. Hind tibiae of male slightly and gradually curved (Fig. 9, 2), a character which differentiates the male of this species from that of the related *B. chrysites* Egger.

Male. Eyes contiguous for a short distance, roughly equal to the distance between the line of contiguity of the eyes and the anterior ocellus. Frons brown or black, largely covered with a white pruinescence and with moderately long, brownish-yellow hairs; lunule and space above it shiny, light brown, bare. Face yellow, with a rather broad, black, median, longitudinal stripe extending from the bases of the antennae to the mouth margin; lateral (yellow) sections of face covered with pruinescence and white hairs; cheeks fairly high (their height under the eyes exceeds the width of the 3rd antennal segment), shiny black. Vertexal triangle narrow (its height more than 1.5 times its width behind), black, slightly shiny, with rather long, yellowish-brown (rust colored) hairs. Occiput black, with dense gray pruinescence and rust colored hairs. Antennae short, brown; 3rd segment oval (roughly 1.5 times as long as wide), covered with a light pruinescence; arista situated near the base of the 3rd antennal segment, slightly thickened basally, gradually thinner toward the apex, whitish. Thorax black, shiny; scutum finely punctate, shiny, with long, dense, erect, reddish-yellow hairs. Thoracic pleura with gray pruinescence, very long, erect, light yellow hairs on the anterior (propleura) and middle (posterior half of mesopleura, anterior half of pteropleura and upper half of sternopleura) parts. Legs black; all femora each with a narrow band of yellow apically; basal half and extreme tip of fore tibia, mid tibia throughout and basal half and apex of hind tibia, as well as the three basal segments of the mid and hind tarsi, bright reddish-yellow. Hind trochanter with a small triangular tubercle; hind femora greatly thickened and perceptibly curved, below with two rows of stout spinules; hind tibia noticeably but evenly curved, with a tubercle on the ventral side in the basal third, and without apical tooth (Fig. 9, 2). Wings slightly brownish, with a poorly developed brown, transverse band; wing spot light brownish yellow; rm situated roughly in the apical third of the discoidal cell; squamae and halteres yellow. Abdomen black, shiny, covered with long, bright reddish-yellow hairs throughout its length, including the hypopygium, hairs semi-recumbent over a large part of the abdomen, erect at its tip. Hypopygium large; surstyli bilobate; dorsal lobe of surstylus triangular, narrowing gradually toward the apex; ventral lobe relatively short, semi-oval (Fig. 10, 6).

Body length 13-14 mm.

1 ♂: Mount Guglyaband, Lenkoran District, south of Divagach, Azerbaydzhan, May 6, 1935 (Luk'yanovich); 1 ♂: Alekseyevka, Talysh, April 22, 1936 (Vogachev).

E. zugmayeri Mik was described very briefly and only from the female; I do not have complete confidence in the identification of the two males from the Caucasus (ZIN Collection) as *E. zugmayeri*, but the similarity between this species and *E. meigeni* Schiner in regard to color characters, to which Mik drew attention (Mik, 1937: 164) makes this identification highly plausible. I have no female of the species at my disposal.

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Institute of Zoology, USSR Academy of Sciences,
Leningrad

Вершинный отдел сурстилей (см. в профиль) относительно широкий, прямоугольный, на вершине косо срезанный.

♀♀

3-й и 4-й тергиты брюшка красные, с черной перевязью по заднему краю.

Лоб в передней половине в белых волосках.

Вершинный отдел сурстилей (см. в профиль) узкий, сильно дуговидно изогнутый.

♀♀

3-й и 4-й тергиты брюшка красные, с черной перевязью по заднему краю и черной срединной продольной полосой, несколько расширяющейся кзади.

Лоб на всем протяжении в бурых волосках.

Представители рода *Rohdendorfia* Smirnov мало известны, в связи с чем я считал необходимым дать тотальный рисунок ♂ *Rohdendorfia*

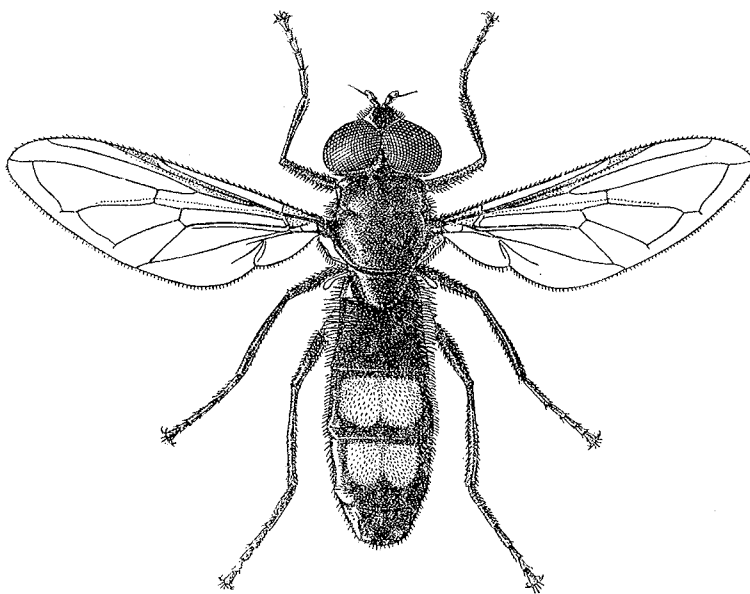


Рис. 1. *Rohdendorfia dimorpha* Smirnov. ♂.

dimorpha Smirnov (рис. 1). Виды этого рода принадлежат к элементам горной (альпийской) фауны, как в Европе (*R. alpina* Sack — Альпы), так и в Азии (*R. dimorpha* Smirnov — Алтай,¹ горы Средней Азии).

Виды этого рода описывались в разное время под разными названиями. В настоящее время представляется возможным сформулировать синонимику известных видов этого рода следующим образом:

Rohdendorfia dimorpha Smirnov, 1924 = *Platychirus nigripes* Enderlein, 1933 (teste Lindner, 1954) = *Cheilosia reinigi* Lindner, 1954 (syn. n.).

Rohdendorfia alpina Sack, 1938 = *Cheilosia reinigi alpina* Lindner, 1954 (syn. n.).

Систематическое положение 3-го палеарктического вида рода *Rohdendorfia*, *R. hedickei* Reinig (1936), описанного по ♀ из Венгрии (Будапешт), пока неясно.

¹ Для Алтая этот вид указывается впервые по материалам, собранным в 1964 г. Э. П. Нарчук.

2. К СИНОНИМИКЕ *DIDEA NIKKOENSIS* MATSUMURA

Didea nikkoensis Matsumura = *Asiodidea nikkoensis* Matsumura.

Brachyopa nikkoensis Matsumura, 1916. Thous. ins. Japan, Add. II : 234, Taf. XVII, Fig. 12, ♀. — *Didea nikkoensis* Matsumura. Shiraki, 1930 : 337, 338—340. — *Asiodidea potanini* Stackelberg, 1930 : 224—227, Fig. 2, 3, 4 (sec. typ.).

Детальное сравнение типов *Asiodidea potanini* Stack. из Сычуани, хранящихся в Зоологическом институте АН СССР в Ленинграде, с сериями экземпляров этого вида, собранных Н. А. Виоловичем на Курильских

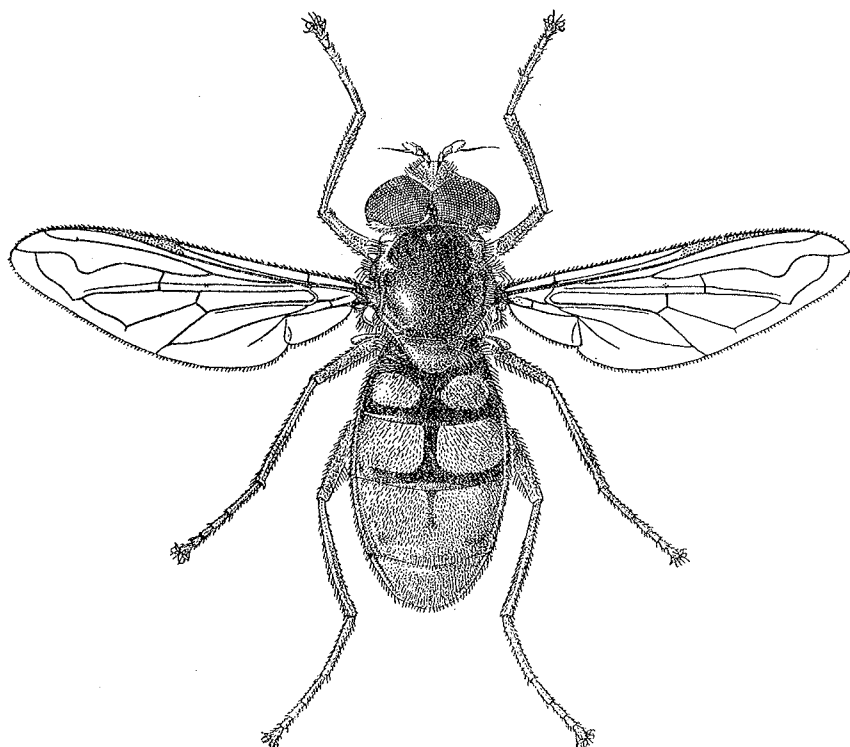


Рис. 2. *Asiodidea nikkoensis* Matsumura. ♂.

островах (о. Кунашир) и полностью соответствующих описанию *Didea nikkoensis* Matsumura, приведенному Сираки (Shiraki, 1930), показало идентичность этих видов. Таким образом, сведение в синонимы *Didea nikkoensis* Mats. и *Asiodidea potanini* Stack., произведенное Н. А. Виоловичем (1960), является правильным. Выделение этого вида в обособленный от рода *Didea* род *Asiodidea* было аргументировано мною ранее (Штакельберг, 1930); как общий облик (рис. 2), так и строение головы (рис. 3) указывает на большие отличия *Asiodidea* от *Didea*.

3. *ORTHONEURA ANGERI* KANERVO, 1933, — BONA SPECIES

В ревизии палеарктических видов рода *Orthoneura* Macq. (Штакельберг, 1953a : 351) мною было высказано предположение об идентичности *O. ahngeri* Kanervo, 1938, и *P. plumbago* Loew, 1843, каковое предположение оказалось неверным: исследование типов *O. ahngeri* Kan., хранящихся в Зоологическом музее в Хельсинки и любезно присланных мне для исследования д-ром В. Хакманом (Dr. W. Hackman, Helsinki), показало наличие стойких морфологических отличий между этими видами, которые сформулированы ниже в определительной таблице.

А. А. Штакельберг

НОВЫЕ ДАННЫЕ ПО СИСТЕМАТИКЕ ПАЛЕАРКТИЧЕСКИХ МУХ-ЖУРЧАЛОК (DIPTERA, SYRPHIDAE)

[A. A. STACKELBERG. NEW DATA ON THE TAXONOMY OF PALEARCTIC HOVER-FLIES (DIPTERA, SYRPHIDAE)]

Экспедиционные поездки сотрудников Отделения двукрылых Зоологического института АН СССР в различные, часто отдаленные районы СССР, осуществленные за последние годы, дали весьма значительные новые материалы по *Syrphidae*, которые позволили расширить наши знания по этой важной во многих отношениях (Штакельберг, 1953б) группе двукрылых. Параллельно с этим за эти же годы мне удалось исследовать типы некоторых видов *Syrphidae*, описанных зарубежными диптерологами, и выяснить их систематическое положение и взаимоотношения с близкими видами. Эти исследования и легли в основу настоящей работы.

Тотальные рисунки к работе выполнены как всегда в высокой степени талантливо художником Л. В. Чернышевой, рисунки деталей — художниками Н. Д. Оглоблиной (большинство) и В. Н. Ляховым.

1. К ПОЗНАНИЮ РОДА *ROHDENDORFIA* SMIRNOV

Благодаря любезности д-ра Ф. Кейзера (Dr. Fred Keiser, Basel), я имел возможность изучить типы (♂, ♀) *Rohdendorfia alpina* Sack (1938), вида, описанного из Швейцарии и довольно близкого к описанному из Средней Азии и широко распространенному там *Rohdendorfia dimorpha* Smirnov (1924).

Отличия этих видов в основном сводятся к следующему:

Rohdendorfia dimorpha Smirnov
♂♂

Rohdendorfia alpina Sack
♂♂

Передние голени с вентральной стороны в очень коротких прилегающих черных волосках.

Передние голени с вентральной стороны в очень длинных торчащих нежных белых волосках, длина которых превосходит диаметр голени в $1\frac{1}{2}$ —2 раза.

Передние лапки снизу в коротких прилегающих волосках.

Передние лапки в торчащих нежных белых волосках, длина которых примерно равна диаметру члеников.

Задние бедра на всем протяжении в коротких прилегающих, в большей части черных волосках.

Задние бедра в средней части в длинных торчащих нежных белых волосках, длина которых несколько превосходит диаметр бедра.