

Keys to the Insects of the European Part of the USSR  
 V, Part Two

91. Family MILICHIIDAE

(A.A. Shtakel'berg)

Europe (Hungary).  
*hungarica* Czerny.

Western Europe, 10

e. Eyes oval. Height  
 es (Fig. 700, 8). Face  
 2.0. Central belt of  
*maritima*, *Calyctegia*  
 .. *T. (C) ta* Haliday.  
 ck.  
 enae very high [sic];  
 s. Body 2.0 to 3.5.  
 pe, northern Africa.  
 ..... *T. cinerea* Lw.  
 ed. Height of genae  
 to 2.5. Central Asia  
 rope... *T. grisea* Fl.

356 Small, predominantly dark-colored flies (Fig. 701). Head more or less round. *pvt* convergent, parallel, or divergent; *vi* well developed. At least anter. *or* directed toward outer side. Irregular *fr* always present medially, but in small numbers (usually two on each side of frons). Interfrontal br. present. Legs simple; rarely *t*<sub>3</sub> greatly broadened (males of *Leptometopa*). *C* with two interruptions—near *Sc* and distal to humeral crossvein; *A* not developed.

*References.* Hennig. 1937. Milichiidae and Carnidae. In Lindner, 6, 1, 60a, 1-91.

Key to Genera

- 1 ( 4). Wings at point of interruption in *C* near *R*<sub>1</sub> with relatively deep notch; *Sc* ending in *C* near proximal end of notch (Fig. 702, 1).
- 2 ( 3). Eyes along post. margin entire, without incision..... 1. *Milichia* Mg.
- 3 ( 2). Eyes along post. margin near midpoint with triangular incision..... 2. *Milichiella* Giglio-Tos.
- 4 ( 1). Wings at point of interruption in *C* near *R*<sub>1</sub> without notch (Fig. 702, 2).
- 5 (14). *pvt* divergent or cruciate (Fig. 702, 3). Labella always more or less elongated. *vi* much larger than oral br.
- 6 ( 7). Three *or*. Third section of *C* (between *R*<sub>2-3</sub> and *R*<sub>4-5</sub>) shorter than fourth section (between *R*<sub>4-5</sub> and *M*<sub>1-2</sub>)..... 3. *Phyllomyza* Fl.
- 7 ( 6). Two *or*. Third section of *C* longer than fourth section.
- 8 ( 9). Th. usually, as well as abd., lustrous black, without coating. Frons, including interfrontal stripe, also lustrous black..... 7. *Madiza* Fl.
- 9 ( 8). Th. and abd. with dense gray or brownish pollinosity, not glossy. Frons matt.
- 357 10 (11). Frons with two gray, pollinose, matt interfrontal (longitudinal) stripes with br. differing sharply in color from

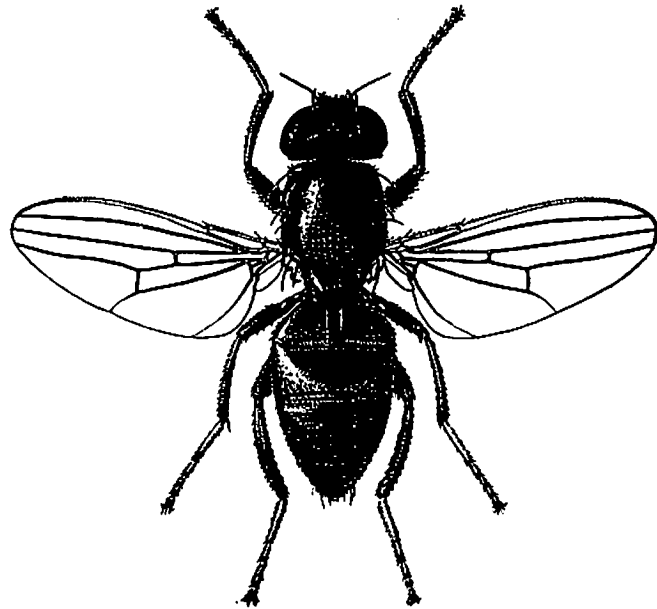


Fig. 701. *Madiza glabra* Fll. (Milichiidae), male (from Shtakel'berg).

- remaining dark surface of frons. Antennal bases not divided by keel.....4. *Desmometopa* Lw.
- 11 (10). Frons without gray, pollinose interfrontal longitudinal stripes; if gray longitudinal stripes present on frons, number three (one median and two lateral along margins of eyes). Antennal bases distinctly separated by keel.
- 12 (13). Length of frons greater than width. Height of genae about one-third height of eyes (height of genae at least equal to width of 3rd segment of ant.; Fig. 703, 3, 5)..... 6. *Leptometopa* Beck.
- 13 (12). Width of frons greater than length. Genae very low; height no more than one-tenth height of eyes (height much less than width of 3rd segment of ant.; Fig. 702, 4)..... 5. *Neophyllomyza* Melander.
- 14 ( 5). *pvt* parallel or divergent (Fig. 702, 5). Labella not elongated. *vi* not differing in size from oral br.
- 15 (16). Terg. and stern. well developed (covering all of abd.). Wings always present; *tp* developed (Fig. 702, 6)...8. *Meoneura* Rd.
- 16 (15). Terg. and stern. in form of small plates (greater part of abd. membranous). Wings present only in young specimens, thereafter sloughed; *tp* absent (Fig. 702, 7)..... 9. *Carnus* Nitzsch.

Key to Species of Family Milichiidae

1. *Milichia* Mg. (two species)

- 1 (2). Body monochromatic black; th. and abd. with weak brownish pollinosity. Body 2.5 to 3.0. Northwest. Western Europe....  
..... *M. ludens* Wahlberg.
- 2 (1). Body not monochromatic black. Male: msn. and abd. with light bluish gray coating. Female: msn. in middle with yellowish brown pollinosity, abd. black with two whitish gray spots along sides of t 2. Body 4.0 to 4.5. South, Caucasus; southern Primor'e. South of Western Europe, northern Africa..... *M. speciosa* Mg.

2. *Milichiella* Giglio-Tos (one species)

- 1 (1). Body black. Abd. in male on dor. side with silvery white coating. Legs black; tarsi yellow. Body 3.0. Northwest (Leningrad prov.); southern Primor'e. Central belt of Western Europe. On trunks of old aspen...*M. argyrogaster* Perris.

358 3. *Phyllomyza* Fll. (four to five species)

- 1 (4). Four pairs of *dc*.
- 2 (3). 3rd segment of ant. large (Fig. 703, 1), with long hairs (in male hairs same length as hairs of arista), entirely dark (black). Body black, 2.5. Northwest. Central belt of Western Europe, North America. Not rare..... *P. securicornis* Fll.
- 3 (2). 3rd segment of ant. large, with short hairs (in male shorter than hairs of arista), red or reddish brown, at apex sometimes darkened. Body 2.5. Northwest. South of Western Europe. Female not definitely distinguishable from female of previous species..... *P. rubricornis* Schmitz.
- 4 (1). Two to three pairs of *dc*.
- 5 (6). Apical br. of stl. divergent. Palpi on lower side with erect br. Body black, 2.5. Northwest; Primor'e. Central belt of Western Europe..... *P. equitans* Hendel.
- 6 (5). Apical br. of stl. convergent or cruciate. Palpi with short hairs. Body black. Halteres dark brown or black. Body 2.0. Northwest. Central belt of Western Europe.....  
..... *P. silesiaca* Duda.

4. *Desmometopa* Lw. (three species)

- 1 (2). Height of genae one-third height of eyes. Palpi black only at

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- apex, remaining part light reddish yellow. Msn., stl., and abd. black, with dense gray coating. Wings milk-white. Body 1.5 to 2.0. Northwest, southeast. Western Europe, northern Africa. .... **D. m-nigrum** Ztt.
- 2 (1). Height of genae not more than one-fifth height of eyes (Fig. 703, 2). Palpi either throughout length, or for most part black (only bases sometimes yellow).
- 3 (4). Knob of halteres and tarsi, except for 5th segment, reddish yellow. Palpi yellow near base. Genae reddish. Body 2.0. Extreme south; Central Asia. South of Western Europe;

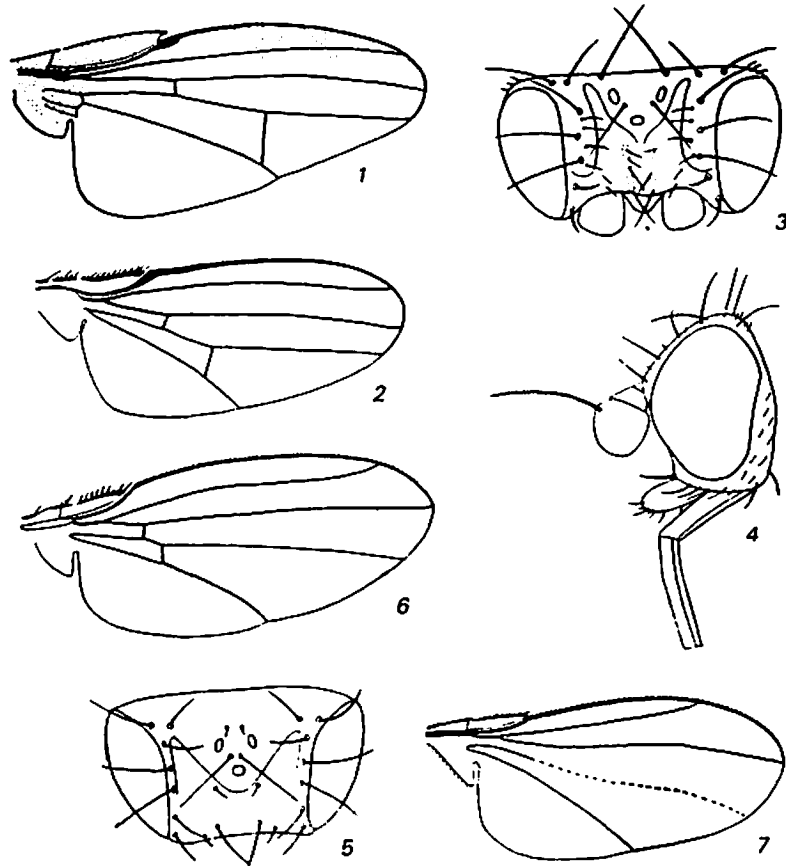


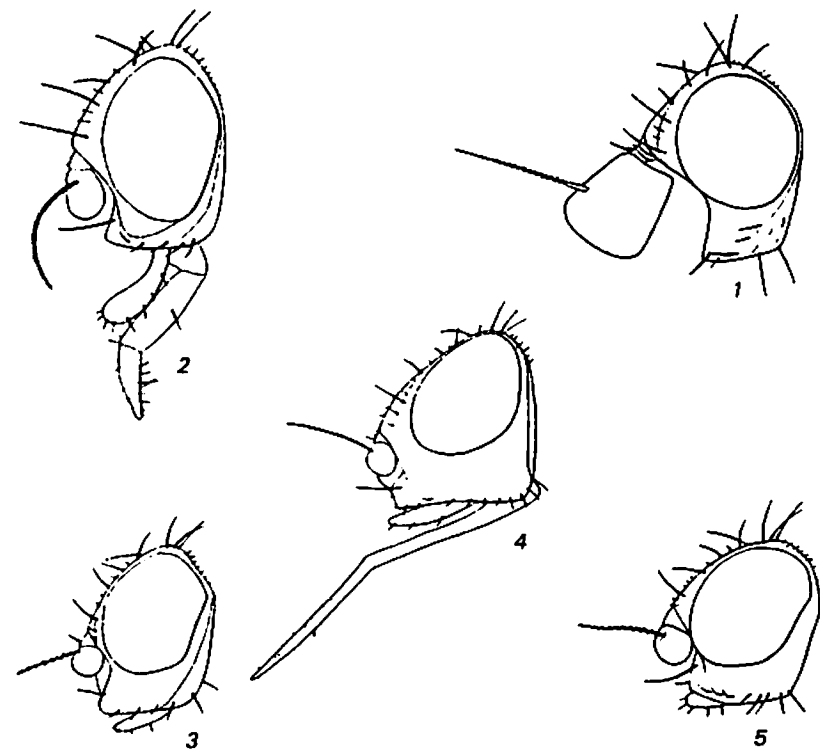
Fig. 702. Milichiidae (from Hennig).

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1—*Milichia speciosa* Mg., wing; 2—*Desmometopa m-nigrum* Ztt., same; 3—*Phyllomyza securicornis* Fll., head, dorsal view; 4—*Neophyllomyza acyglossa leanderi* Hendel, same, in profile; 5 and 6—*Meoneura obscurella* Fll.: 5—same, lateral view, 6—wing; 7—*Carnus hemapterus* Nitzsch, same.

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- tropics. Larvae in latrines, cisterns, etc.; synanthropic.....  
..... **D. tarsale** Lw.
- 4 (3). Knob of halteres dark or reddish brown. Palpi and legs black throughout length. Genae black. Wings hyaline, not milk-white. Body 1.5 to 2.0. Northwest, Siberia. Central belt of Western Europe, North America..... **D. sordidum** Fll.
5. **Neophyllomyza** Melander (one species)
- 1 (1). Head black; frons with slight silken sheen. Body and legs black. Body 1.5. North, northwest. Western Europe. On oozing sap of trees (oak, etc.), flowers (Compositae, etc.), and dead insects..... **N. acyglossa** Vill.
6. **Leptometopa** Beck.  
Wings milk-white. Three species.
- 1 (2). Mpl. pubescent. Pteropleural br. not present. Head short (Fig. 703, 3). Msn. and abd. with gray pollinosity. Body 1.5. South; Central Asia. Central belt and south of Western Europe, northern Africa..... **L. niveipennis** Strobl.
- 2 (1). Mpl. bare. One or two pteropleural br.  $t_1$  of male broadened notably.
- 3 (4). Length of head in profile distinctly greater than height. Height of genae about half height of eyes. Frontalia broad, about equal in width to 3rd segment of ant. (Fig. 703, 4). Two pteropleural br. Msn. and abd. black, with brownish gray coating; pleura of th. lustrous black. Body 1.5. South; Central Asia. South of Western Europe, northern Africa.....  
..... **L. ruffifrons** Beck.
- 4 (3). Height of genae about one-third height of eyes. Frontalia very narrow, barely expressed (Fig. 703, 5). One pteropleural br. Msn. with gray coating and longitudinal stripes on front. Abd. black, in apical half lustrous. Body 2.0. Northwest. Western Europe, North America. Larvae in nests of birds.....  
..... **L. latipes** Mg.
7. **Madiza** Fll. (one species)
- 1 (1). Head, th., and abd. lustrous black (Fig. 701). Legs black; post. tarsi yellow. Body 2.0 to 3.0. Cosmopolitan species (except in Arctic zone). Common..... **M. glabra** Mg.



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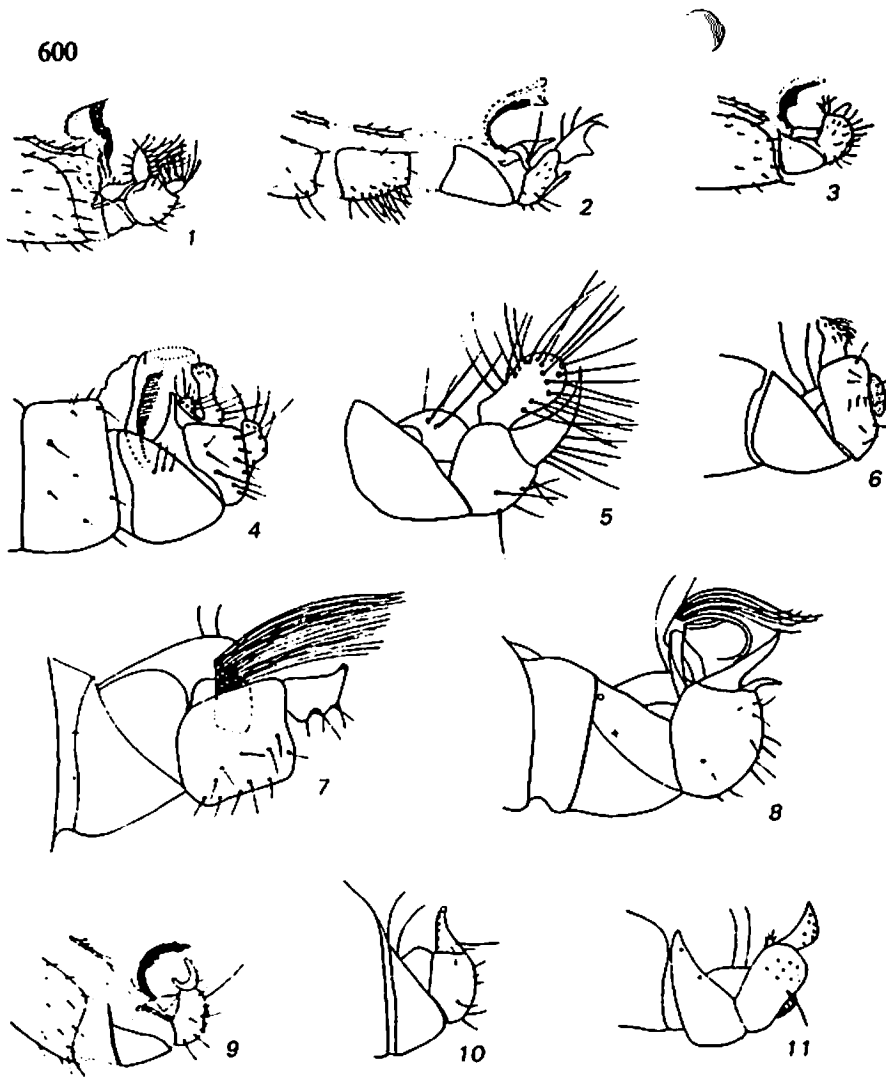
Fig. 703. Milichiidae. Head in profile (from Hennig).

1—*Phylomyza securicornis* Fll., male; 2—*Desmometopa sordidum* Fll.;  
3—*Leptometopa niveipennis* Strobl; 4—*L. rufifrons* Beck.; 5—*L. latipes* Mg.

### 8. *Meoneura* Rd. (10 to 11 species)

- 1 ( 2). One pair of *dc*. Vertical triangle reaching about half height of frons. Body black. Wings slightly milk-white. Halteres yellowish white. Edites elongated-oval, tapered toward apex (Fig. 704, 1). Body 1.0 to 1.5. Northwest. Central belt of Western Europe, North America..... *M. vagans* Fll.
- 2 ( 1). Three to four pairs of *dc*.
- 3 ( 4). Four pairs of *dc*. Terminal terg. of abd. in male, beginning from apical half of *t* 3, with broad longitudinal depression; along margin bearing long bristly hairs directed upward and medially. Vertical triangle extending beyond half of frons. Th. and abd. lustrous black. Cerci linear and narrow. Edites furcate at apex (Fig. 704, 2). Body 1.0. Northwest. Western Europe (Switzerland, England). Rare... *M. minutissima* Fll.

- 4 ( 3). Three pairs of *dc*. Terminal terg. of abd. in male simple, without longitudinal depression and without long hairs.
- 5 ( 6). Face, except for antennal sockets, upper part of genae, and anter. half of frons yellow. Vertical triangle reaching half height of frons. Msn. black, with slight grayish pollinosity. Abd. lustrous black. Cerci small. Edites small, conical, with rounded apex (Fig. 704, 3). Body 0.8 to 0.9. Northwest. Central belt of Western Europe..... *M. flavifacies* Collin.
- 6 ( 5). At least face (frontalia, margin of mouth) black.
- 7 (10). Vertical triangle not reaching midpoint of frons.
- 8 ( 9). Frons black or in anter. part slightly brownish. Post. branch of edites flask-shaped, broadened (Fig. 704, 4). Th. and abd. black. Msn. with barely perceptible gray coating. Legs black. Body 1.0. Northwest. North of Western Europe (Finland). Rare..... *M. anceps* Frey.
- 9 ( 8). Frons in anter. half bright yellow. Post. branch of edites triangular, slightly bent, pointed at apex (Fig. 704, 5). Body black; msn. with brownish gray coating. Legs black. Anter. branch of edites large, toward apex broadened slightly, with long hairs (Fig. 704, 5). Body 1.0. Northwest. Central belt of Western Europe. Nests of birds..... *M. lamellata* Collin.
- 10 ( 7). Vertical triangle reaching at least midpoint of frons; sometimes, however, extending to its anter. margin.
- 11 (18). Vertical triangle reaching midpoint of frons or slightly beyond it.
- 12 (13). Wings milk-white. Body black; msn. with gray coating; abd. lustrous. Cerci moderately developed. Edites entire, relatively short, in apical part slightly bent (Fig. 704, 6). Body 1.0. Northwest. North and central belts of Western Europe. Common. Predominantly on blooming Umbellifera..... *M. lacteipennis* Fll.
- 13 (12). Wings hyaline, not milk-white.
- 14 (15). Entire anter. half of frons reddish yellow. *f*<sub>1</sub> before apex with one well developed *pv*. Body black; msn. with distinct yellowish gray pollinosity; abd. black; four anter. terg. covered with yellowish gray pollinosity; *t* 5 lustrous. Cerci small. Post. lobe of edites irregularly triangular; anter. lobe with dense tuft of long hairs at apex (Fig. 704, 7). Body 1.75 to 2.0. Northwest; Wrangel Island (drifted ?). Western Europe, northern Africa..... *M. obscurella* Fll.
- 15 (14). Frons in anter. half narrowly reddish yellow or entirely black. *f*<sub>1</sub> before apex with two well developed *pv*.
- 16 (17). Frons in anter. part yellowish red. Body black; msn. with



361 Fig. 704. *Mconeura* (Milichiidae). Hypopygium, lateral view (from Hennig, Collin, and Frey).

1—*M. vagans* Fll.; 2—*M. minutissima* Fll.; 3—*M. flavifacies* Collin; 4—*M. anceps* Frey;  
5—*M. lamellata* Collin; 6—*M. lacteipennis* Fll.; 7—*M. obscurella* Fll.; 8—*M. neottiophilla* Collin; 9—*M. bicuspidata* Collin; 10—*M. triangularis* Collin; 11—*M. neglecta* Collin.

brownish gray pollinosity; abd. lustrous black. Edites consist of three isolated plates, of which post. two acute, and anter. one rounded; at apex with tuft of very long hairs (Fig. 704, 8). Body 1.0. Northwest. Central belt of Western Europe. Nests of birds..... *M. neottiophila* Collin.

- 17 (16). Frons entirely black. Body black; msn. with slight brownish pollinosity. Edites falciform (Fig. 704, 9). Body 1.5. Western Europe (England)..... *M. bicuspidata* Collin.
- 18 (11). Vertical triangle reaching anter. margin of frons.
- 361 19 (20). Frons along sides of highly lustrous vertical triangle more or less matt, along anter. margin black, without trace of light coloration (only extreme anter. margin sometimes yellow). Msn. with slight gray pollinosity. Edites small, triangular; post. margin with smooth notch (Fig. 704, 10). Abd. lustrous black. Body 1.25. Northwest. Central belt of Western Europe. Rare..... *M. triangularis* Collin.
- 20 (19). Frons along sides of lustrous vertical triangle silken, lustrous, along anter. margin sometimes slightly brownish or reddish. Msn. lustrous black, without pollinosity; only stl. gray pollinose. Structure of edites (Fig. 704, 11) closer to *M. lacteipennis* Fll. Body 1.0. Northwest. Central belt of Western Europe. Rare..... *M. neglecta* Collin.

#### 9. *Carnus* Nitzsch (one species)

- 1 (1). Body and legs blackish brown or brown; bases of *t* and tarsi yellow. Wings hyaline. Body 1.5. Northwest, southeast. Central belt of Western Europe. Nests of birds.....  
..... *C. hemapterus* Nitzsch.