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*Nikkel*  
Sericomu gr. → s. 127  
griseicolle gr. → s. 130  
ruficorne gr. → s. 135

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## HOLARCTIC SPECIES OF Brevicornu MARSHALL, GROUPS SERICOMA, GRISEICOLLE, AND RUFICORNE (DIPTERA, MYCETOPHILIDAE)\*

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In our study of the collections of the Zoological Institute of the Academy of Sciences of the USSR, Leningrad (ZIN), of the United States National Museum of Natural History (USNM), and of the California Academy of Sciences, San Francisco (CAS), as well as the author's collections, new species were found which serve for a review of geographical distribution and of the known species of 3 groups of the genus *Brevicornu* Marshall, the species groups Sericomu, Griseicolle, and Ruficorne. The author is deeply grateful to the following colleagues for making this material available: Dr. P. H. Arnaud (CAS), Dr. R. J. Gagné (USNM), Eh. P. Narchuk (ZIL), and G. P. Ostroverkhova (Tomsk State University - TSU).

### *Brevicornu* Marshall

#### Sericoma Group

The species comprising the Sericomu Group possess the following characters: scutellum with 4 long medial setae only few short median marginal setae; 4 or 5 propleural setae; stem of wing veins  $M_1$  and  $M_2$  as long as or a little longer than crossvein r-m; base of vein  $M_{3+4} + Cu_1$  below base of stem of  $M_1 + M_2$  or basad thereof. Genitalia of  $\sigma$  with short wide ventral process of gonocoxites; lobes of gonostyles strongly elongated; mesal surface of outer lobes of gonostyles covered with small setulae.

*Brevicornu beatum* (Johannsen), comb. n.

*Allodia beata* Johannsen, 1911: 318.

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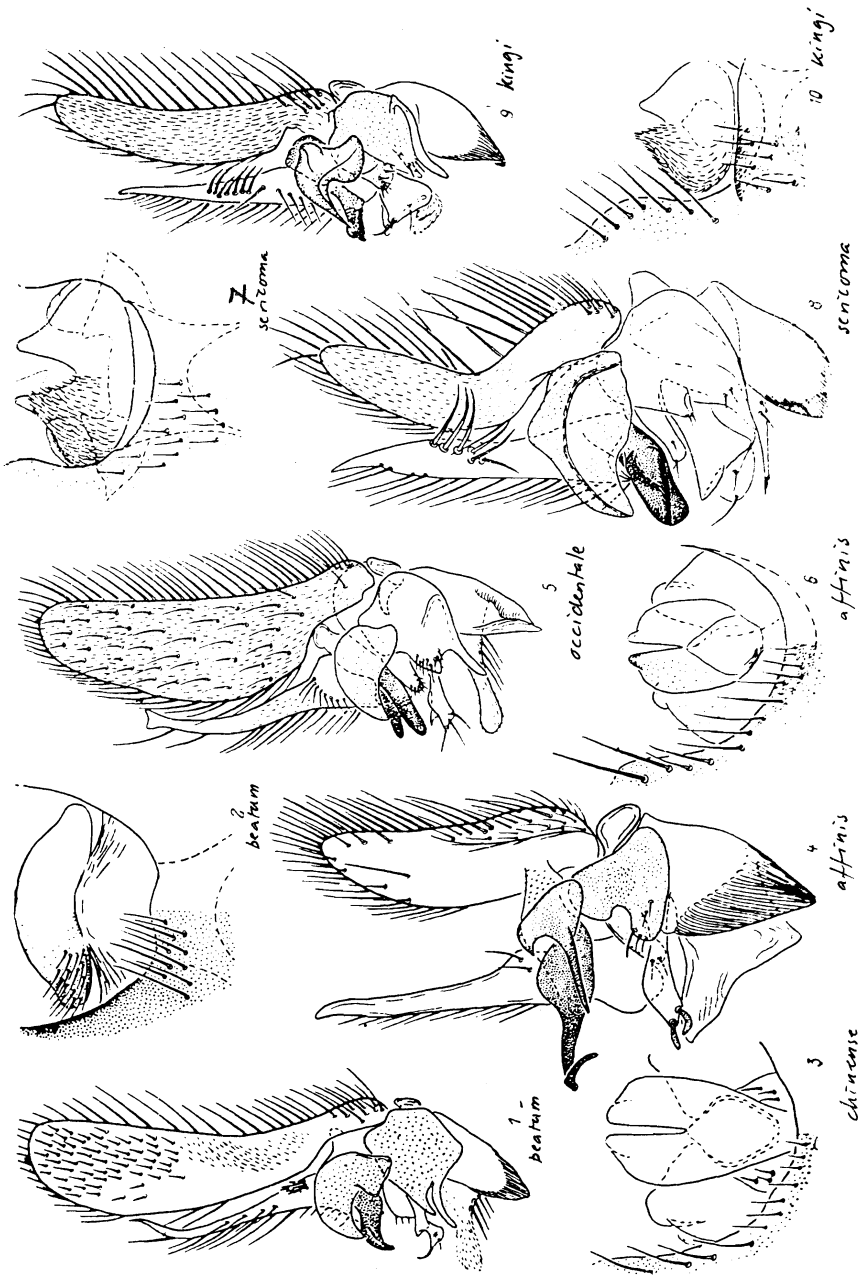


Fig. 1. *Brevicormu* Marshall. 1, 2) *B. beatum* (Jouanassen); 3) *B. chinense* sp. n.; 4, 6) *B. affinis*\*, sp. n.; 5) *B. occidentale* sp. n.; 7, 8) *B. sericoma* (Meigen); 9, 10) *B. kingi* (Edwards). 1, 4, 5, 8, 9) ♂ gonostyle in mesal view; 2, 3, 6, 7, 10) inner process of gonocoxites.

\*Here and elsewhere "*affinis*" should be "*affine*." -- transl. Ed.

Material. 3 ♂, Leningrad Prov., Tolmachevo, 8.VI.1935 and 18.VI.1938 (Shtakel'berg) (ZIL); 1 ♂, USA, Montana, Lake McDonald, Glacier Park, 14.VIII.1916 (Melander) (USNM).

This species has been previously known from the USA (States of New York and Iowa: Laffoon, 1965). It is very close to *B. kingi*, from which it differs in the shape of the ventral process of the gonocoxites (Fig. 1.2) and by the presence of a group of small, chitinized spinules at the base of the inner lobe of the gonostyles (Fig. 1.1).

○ *Brevicornu kingi* (Edwards).

*Allodia kingi* Edwards, 1925: 611.

Material. 1 ♂, USA, New Hampshire, Mt. Washington, 12.VIII.1962 (Wirth); 2 ♂, same, 29.VII.1961 (Wirth); 1 ♂, N.H., White Mts., Stinson Lake, 23.VII.1961 (Wirth); 1 ♂, Massachusetts, Petersham, 30.VI.1931 (Melander); 1 ♂, Connecticut, Redding, 1.VI.1929 (Melander); 1 ♂, Tennessee, (Gt.) Smokies (Mts.), Chimneys, 25.VI.1941 (Melander); UK: 1 ♂, Llangammarch, Wells, Brecknock 25.VIII.1913 (All USNM).

The species is widely distributed in Western Europe. In the USSR it has been listed from the NW European part (Ostroverkhova and Shtakel'berg, 1969). It is close to *B. sericoma*, from which it differs well in structure of the lobe of the gonostyle of the ♂ (Fig. 1.9).

○ *Brevicornu occidentale* A. Zaitzev, sp. n.

Material. Holotype: ♂. USA, Idaho, Craig Mt., 8.VI.1918 (Melander) (USNM); paratypes: 1 ♂, Idaho, Moscow Mt., 26.VIII.1923 (Melander); 1 ♂, California, Yosemite, 14.VI.1935 (Melander); 1 ♂, Calif., Gasquet, 18.IX.1934 (Melander) (USNM).

Length of wing 2.7 mm.

Head brown; clypeus, mouthparts, and palpi yellow; antenna dark brown, only pedicel yellow, median flagellar segments slightly elongated. Thorax light brown, nearly yellow. Wings hyaline, slightly yellowish; stem of M fork about as long as r-m; base of  $M_{3+4} + Cu_1$  before or at level of base of furcation of  $M_1 + M_2$ . Halteres yellow. Legs yellow; foretibia approximately as long as forebasitarsus; midtibia with 6-8 a, 4-5 pd, 4-6 p; hindtibia with 10-12 ad, 3-4 pd, 3-4 p. Abdomen bicolorous; tergites I and II yellow, III brown with yellow lateral spot, remaining tergites dark brown. Genitalia brown; ventral process of gonocoxites apically emarginate; gonostyles as in Fig. 1.5.

The species is very close to *B. kingi*, from which it differs in the shape of the ♂ gonostyle lobes (Fig. 1.5).

○ *Brevicornu sericoma* (Meigen).

*Mycetophila sericoma* Meigen, 1830: 302.

*Mycetophila semiflava* Meigen, 1838: 45.

*Braconycampta amoena* Winnertz, 1863: 839.

*Brevicornu quilanensis* Matile, 1969: 248.

Material. 1 ♂, Kola Pen., Khibiny Mts., 15.VIII.1937 (Fridolin); 1 ♂, Crimea, beech Forest, 13.V.1931 (Bukovskij) (ZIL); 3 ♂, Azerbaijan SSR, Avrora, 22.V.1980 (Zaytsev); 1 ♂, Altai, Lake Teletskoe, Artybash, 22-24.VI.1981 (Zaytsev); 1 ♂, same locality, 3.VI.1981 (Severtsov Inst. Evol. Morph. Ekol. Zhiv.); 1 ♂, UK, Llangammarch,

Wells, Brecknock, 23.VII.1913; 1 ♂, Canada, Nfld., Terra Nova Natl. Park, 8.VI.1961 (Alexander); 1 ♂, USA, New York, Allegany State Park, 28.V-3.VI.1963 (Wirth); 1 ♂, Virginia, Dead Run, Fairfax Co., 30.IX.1915 (Shannon); 1 ♂, same locality, 28.III.1915; 1 ♂, Conn., Redding, 1.VI.1920 (Melander) (USNM).

This is a widely distributed Transholarctic species. It is found in the USSR in the Caucasus (Joost and Plassmann, 1976), in Siberia, and in the Far East (Ostrovkova, 1979). From other species in the mentioned group it is well differentiated in the structure of the ♂ gonostyles (Fig. 1.8).

#### KEY TO MALES OF *Brevicornu*, SERICOMA GROUP

- 1 (2). Ventral process of gonocoxites without apical emargination, fungiform (Fig. 1.2); medial elongated lobe of gonostyle narrow and apically pointed (Fig. 1.1)  
..... *B. beatum* (Johannsen).
- 2 (1). Ventral process of gonocoxites with well developed apical emargination, not fungiform (Figs. 1.7, 10).
- 3 (6). Medial elongated lobe of gonostyle with group of stout setae in middle, pointed at apex (Figs. 1.8, 9).
- 4 (5). Inner, weakly sclerotized area of gonostyle wide, with blunt tip (Fig. 1.8)  
..... *B. sericoma* (Meigen).
- 5 (4). Inner, weakly sclerotized area of gonostyle narrow, pointed at apex (Fig. 1.9)  
..... *B. kingi* (Edwards).
- 6 (3). Medial elongated lobe of gonostyle without group of stout setae in middle, widened at apex (Fig. 1.5)  
..... *B. occidentale* sp. n.

#### Griseicolle Group

The following characters are special to this group: Scutellum with 2 long, medial setae; marginal setae, if present, considerably less than half as long as medial setae; propleuron with 4 setae. Stem of wing veins  $M_1 + M_2$  as long as or a little longer than crossvein r-m; base of  $M_{3+4} + Cu_1$  or basad of  $M_1 + M_2$ . Genitalia of ♂ with lobate ventral process of gonocoxites; lobes of gonostyles greatly elongated, one of their small areas usually bearing 2 stout, curved, blunt spinules.

○ *Brevicornu chinense* A. Zaitzev, sp. n.

Material. Holotype: ♂, China, Szechuen, Beh Luh Din, 30 mi N Chengtu, 1-15.IV.1935 (Graham); paratype: ♂, same label (USNM).

Length of wing 2.7 mm.

Head dark brown; clypeus brown; mouthparts and palpi yellow; antenna dark brown, only pedicel and basal flagellar segment yellow. First flagellar segment not longer than wide. Thorax dark brown; mesonotum matt. Wing hyaline; stem of  $M_1 + M_2$  as long as r-m; base of  $M_{3+4} + Cu_1$  below base of stem of  $M_1 + M_2$ . Halteres yellow. Legs yellow; bases of fore- and midfemora with dark ventral smear; foretibia as long as forebasitarsus; midtibia with 7 a, 3 pd, and 7 p; hindtibia with 6 ad, 4 pd, and 5 p. Abdomen dark brown, tergites II and III with small yellow lateral spots; genitalia brown.

Close in shape of ventral process (Fig. 1.3) to *B. affinis*, but differing in shape of lobe of gonostyle (Fig. 2.5).

0 *Brevicornu affinis* A. Zaitzev, sp. n.

Material. Holotype: ♂, USA, Washington, Glenwood, Klickitat R., 27.VII.1927 (Melander); paratypes: 1 ♂, Montana, Thompson, 25.VIII.1918 (Melander); 2 ♂, California, Muir Woods, 7.VIII.1915 (Melander) (USNM).

Length of wing 2.4 mm.

Head, including clypeus, brown; mouthparts and palpi yellow; antenna dark brown, only pedicel yellow; median segment of flagellum approximately as long as wide. Thorax dark brown, nearly black; mesonotum matt. Wing hyaline; stem of  $M_1 + M_2$  1.5 times as long as r-m; base of  $M_{3+4} + Cu_1$  at level of or before base  $M_1 + M_2$ . Halteres yellow. Legs yellow; forefemur as long as forebasitarsus; midtibia with 6-9 a, 3 pd, and 4-5 p; hindtibia with 5 ad, 4 pd, and 3 p. Abdomen dark brown, tergites I and III with yellow lateral spots; genitalia brown. Ventral process of gonocoxites with deep emargination (Fig. 1.6); gonostyles as in Fig. 1.4).

The species is close to *B. griseicolle*, but differs in the shape of the process of the gonocoxites and the gonostylar structures.

③ *Brevicornu disjunctum* A. Zaitzev, sp. n.

Material. Holotype: ♂, USA, Virginia, Falls Church, Holmes Run, 22.IX.1960 (Wirth) (USNM).

Length of wing 2 mm.

Head brown; clypeus, mouthparts, and palpi yellow; antenna dark brown, only pedicel yellow; medial flagellar segments as long as wide. Thorax brown-yellow; mesonotum matt brown with yellow humeral spots; scutellum brown; pleura bright brown. Wing hyaline; stem of vein  $M_1 + M_2$  approximately as long as r-m; base of  $M_{3+4} + Cu_1$  before base of  $M_1 + M_2$ . Halter yellow. Foretibia a little longer than forebasitarsus; midtibia with 7 a, 4 pd, and 5 p; hindtibia with 11 ad, 3 pd, and 4 p. Abdomen dark brown, tergites II-IV with large lateral yellow spots. Genitalia brown; ventral process of gonocoxites furcate (Fig. 2.7); gonostyles as in Fig. 2.4.

The species is close to *B. nigrofuscum*, but differing therefrom in details of genitalic structure.

○ *Brevicornu griseicolle* (Staeger).

*Mycetophila griseicollis* Staeger, 1840: 258.

*Brachycampta caudata* Winnertz, 1863; 843.

Material. 1 ♂, Taganrog, 3.IX.1926 (Ahnger) (ZIL); 1 ♂, Norway, Hammerfest, 5.VIII.1954 (Sabrosky) (USNM); 31 ♂, USA, spms. from States of Idaho, Calif., Wash., Ore. (USNM, CAS); 1 ♂, Canada, Alberta, Billby, 1.VI.1924 (Bryant) (CAS).

The species is widely distributed in Europe. Within the USSR it is listed from Krasnoyarsk Territory and Tomsk Province (Ostroverkhova, 1979).

It differs from other species of its group in the shape of the ventral process of the gonocoxites (Fig. 2.2) and the lobe of the gonostyle (Fig. 2.1).

① *Brevicornu melanderi* A. Zaitzev, sp. n.

Material. Holotype: ♂, USA, California, E. Barton Flat, 10.X.1945 (Melander); paratype: ♂, Mass., Petersham, 2.VI.1914 (Melander) (USNM).

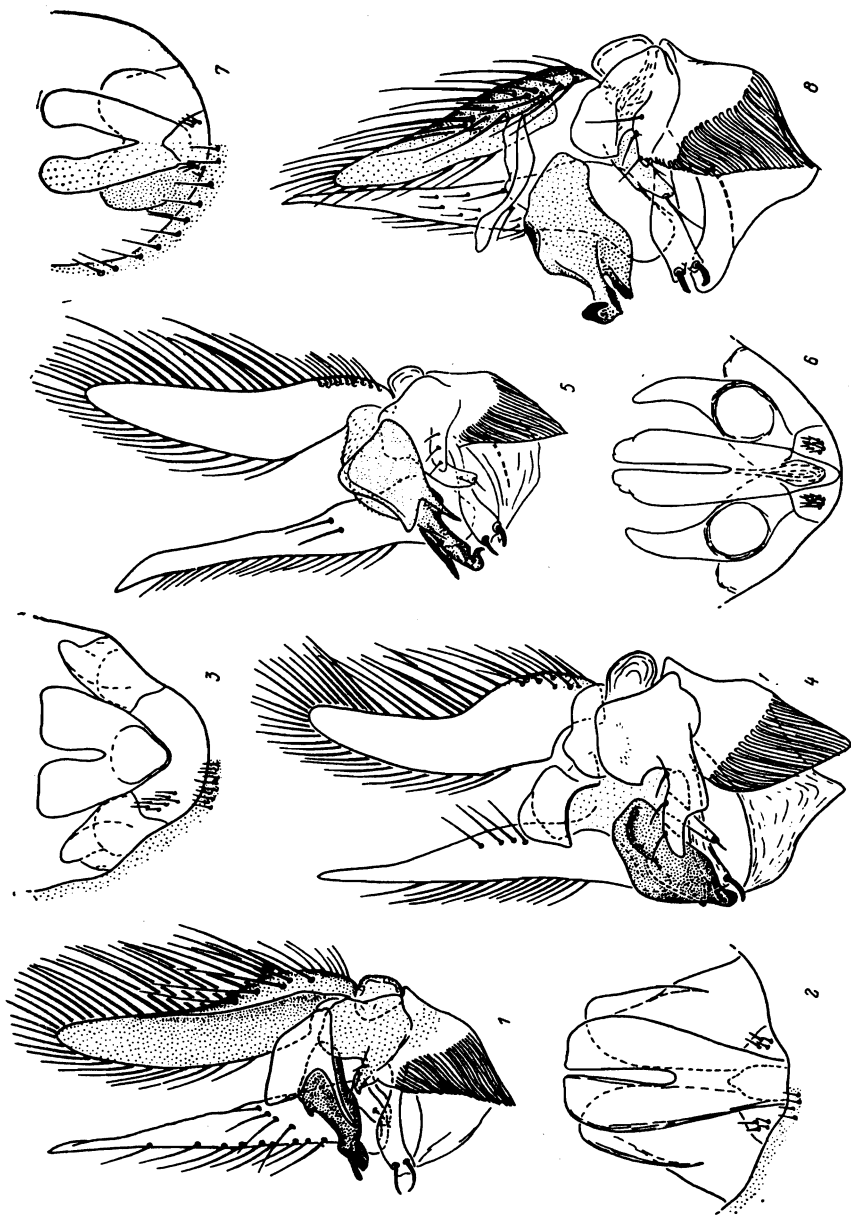


Fig. 2. *Brevicornu* Marshall. 1, 2) *B. griseicolle* (Staeger); 3, 8) *B. nigrofuscum* (Lundström); 4, 7) *B. disjunctum* sp. n.; 5) *B. chinense* sp. n.; 6) *B. melanderi* sp. n. 1, 4, 5, 8) gonostyles of ♂ in mesal view; 2, 3, 6, 7) ventral process of gonocoxites.

Length of wing 3.3 mm.

Head, including clypeus, dark brown; mouthparts and palpi yellow; antenna dark brown, only pedicel and base of 1st flagellar segment yellow; medial flagellar segments not longer than wide. Thorax dark brown; mesonotum matt. Wing hyaline: stem of  $M_1 + M_2$  1.5 times as long as  $r-m$ ; base of  $M_{3+4} + Cu_1$  at level of base of  $M_1 + M_2$ . Halter yellow. Legs yellow; foretibia as long as forebasitarsus; midtibia with 7a, 3 pd and 5 p; hindtibia with 6 ad, 4 pd, and 3 p. Abdomen dark brown; genitalia bright brown, with ventral process of gonocoxites elongate and with deep narrow emargination (Fig. 2.6).

The species differs well from other species of the Griseicolle Group in gonostylar structure (Fig. 3.1) and in the shape of the ventral process of the gonocoxites. It is close in genitalic structure to *B. fuscipenne* (Staeger).

○ *Brevicornu nigrofusum* (Lundström).

*Brachycampta nigrofusca* Lundström, 1909: 27.

Material. 1 ♂, Canada, Northwest Terr., Aklavik, 18.VII.1931 (Bryant) (CAS); 1 ♂, USA, Texas, Comal R., 24.III.1942 (Melandar) (USNM).

This species has so far been known only from Europe. It differs from the very closely related *B. disjunctum* in the wider lobe of the process of the gonocoxites (Fig. 2.3) and in gonostylar structure (Fig. 2.8).

#### KEY TO MALES OF *Brevicornu*, GRISEICOLLE GROUP

- 1 (8). Mesal field of gonostyle with subulate process (Fig. 1.4; 2.1, 5; 3.1); ventral process of gonocoxites not V-shaped (Fig. 1.3, 62.2, 6).
- 2 (5). Ventral process of gonocoxites wide, ovate or elliptical (Fig. 1.3, 6).
- 3 (4). Length of subulate process of mesal field of gonostyle exceeding length of field (Fig. 1.4). . . . . *B. affinis* sp. n.
- 4 (3). Length of process only half that of field (Fig. 2.5) . . . *B. chinense* sp. n.
- 5 (2). Ventral process of gonocoxites narrow, extended (Fig. 2.2, 6).
- 6 (7). One of small gonostylar parts bearing 2 small curved apical setae (Fig. 2.1); ventral process of gonocoxites as in Fig. 2.2 . . . *B. griseicolle* (Staeger).
- 7 (6). One of small gonostylar parts bearing several small setae (Fig. 3.1); ventral process of gonocoxites as in Fig. 2.6 . . . . . *B. melanderi* sp. n.
- 8 (1). Mesal field of gonostyle without subulate process (Fig. 2.4, 8); ventral process of gonocoxites V-shaped (Fig. 2.3, 7).
- 9 (10). Lobes of ventral process of gonocoxites wide (Fig. 2.3); gonostyle as in Fig. 2.8 . . . . . *B. nigrofusum* (Lundström).
- 10 (9). Lobes narrow (Fig. 2.7); gonostyle as in Fig. 2.4 . . . *B. disjunctum* sp. n.

#### Ruficornae Group

Characters of the group are as follows: Scutellum with 2 long and 2 very short medial setae; propleura usually with 2 setae. Wing with base of vein  $M_{3+4} + Cu_1$  before or at level of fork of  $M_1 + M_2$ . Antenna with medial flagellar segments longer

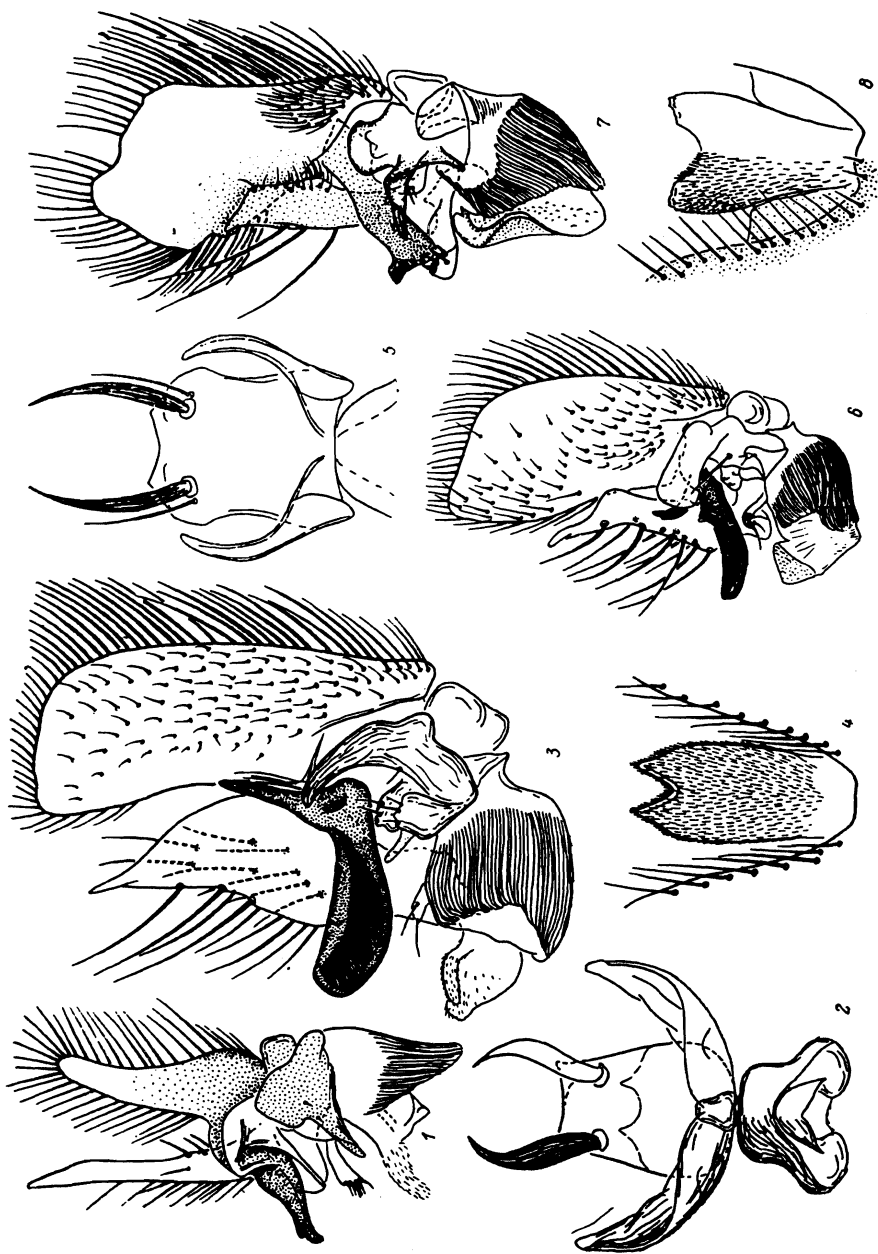


Fig. 3. *Brevicornu* Marshall. 1) *B. melanderi* sp. n.; 2, 3, 8) *B. arcticum* (Lundström); 4-6) *B. canadense* sp. n.; 7) *B. extimium* sp. n.; 1, 3, 6, 7) gonostyle of ♂ in mesal view; 2, 5) aedeagus; 4, 8) ventral process of gonocoxites.



than wide. Genitalia of ♂ usually with small ventral process of gonocoxites; gonostylar lobe usually wide.

♂ *Brevicornu arcticum* (Lundström).

*Brachycampta arctica* Lundström, 1913, in Lundström and Frey, 1913: 4.

Material. 1 ♂, USA, Wash., Pullman, without collection data (USNM).

The species was described from the Kanin Peninsula (W Arctic USSR, E of Kola Pen.) and has been reported from Ireland (Chandler, 1977). It is a rare species, apparently Holarctic, and is close to *B. fennicum*, from which it is well differentiated in the ventral process of the gonocoxites and gonostylar structures.

♂ *Brevicornu bellum* (Johannsen), COMB. N.

*Allodia bella* Johannsen, 1911: 318.

*Brevicornu flaveola* Ostroverkhova, 1979: 204, SYN. N.

Material. 2 ♂, USSR, Leningrad Prov., Tolmachevo, 20.VI.1938, 9.VIII.1938 (Shtakel'berg) (ZIL); 1 ♂, Tomsk Prov., Staritsa, 2.VII.1970 (holotype of *B. flaveola*) (TSU); 1 ♂, USA, Idaho, Moscow Mt., 7.VII.1918 (Melander) (USNM).

The species was described from British Columbia, Canada (Johannsen, 1911) and was later reported from the USSR (Tomsk Prov.; Ostroverkhova, 1979). It is well distinguished among species of its group by gonostylar structure (Fig. 5.4) and shape of the ventral process of the gonocoxites (Fig. 5.5).

♂ *Brevicornu bipartitum* Lastovka and Matile, 1974: 127.

Material. 1 ♂, USSR, Leningrad Prov., Komarovo, 13.VIII.1949 (Shtakel'berg) (ZIL); 1 ♂, USA, Wash., Mt. Rainier, 11.VII.1934 (Bryant) (CAS); 1 ♂, Ore., Viento 1.VII.1917 (Melander) (USNM).

The species was described from Mongolia, but apparently is widely distributed in the Holarctic Region. It is closest to *B. foliatum*, from which it differs well in gonostylar structure (Fig. 5.1).

♂ *Brevicornu canadense* Zaitzev, sp. n.

Material. Holotype: ♂, Canada, Alberta, Banff, 28.IX.1932 (Bryant) (CAS).

Length of wing 3 mm.

Head, including clypeus, dark brown; palpi and mouthparts yellow; antenna dark brown, pedicel yellow; medial flagellar segments slightly longer than wide. Thorax dark brown; mesonotum with yellow humeral spots; scutellum with 2 long and 2 short setae; propleuron with 3 setae. Wing yellowish; stem of vein  $M_1 + M_2$  shorter than  $r-m$ ; base of  $M_{3+4} + Cu_1$  slightly before level of  $M_1 + M_2$ . Halter yellow. Legs yellow; foretibia a little longer than forebasitarsus; midtibia with 7 a, 3 pd, and 4 p; hindtibia with 6 ad, 4 pd and 4 p. Abdomen dark brown; genitalia brown; ventral process of gonocoxites elongate, with apical emargination (Fig. 3.4); outer lobe of gonostyle very wide (Fig. 3.6).

The species is close to *B. arcticum*, differing in ♂ genitalic structure.

♂ *Brevicornu eximium* A. Zaitzev, sp. n.

Material. Holotype: ♂, Canada, Northwest Terr., Aklavik, 16.VII.1931 (Bryant) (CAS).

Length of wing 2.6 mm.

Head dark brown; clypeus brown; mouthparts and palpi yellow; antenna dark brown, only pedicel yellow; median flagellar segments slightly longer than wide. Thorax dark brown; mesonotum matt; scutellum with 2 long and 2 short setae; propleuron with 3 setae. Wing yellowish; stem of  $M_1 + M_2$  as long as r-m; base of  $M_{3+4} + Cu_1$  slightly before level of base of  $M_1 + M_2$ . Halter yellow. Legs yellow; foretibia as long as forebasitarsus; hindtibia with 7 ad, 3 pd and 4 p. Abdomen dark brown, tergites II and III with large lateral yellow spots; genitalia bright brown; ventral process of gonocoxites trapezoidal (Fig. 4.4); outer lobe of gonostyle very wide (Fig. 3.7).

The species is close to *B. foliatum*, differing well in genitalic structure.

♂ *Brevicornu fennicum* (Landrock)

*Brachycampta bicolor* (Macquart) Lundström, 1906: 22; 1909: 24.

*Allodia fennica* Landrock, 1927: 121, nom. n. pro *bicolor* Lund., non Macq., 1834: 131.

This is a rare species known from Northern and Western Europe. It is very close to *B. foliatum*, differing only in details of genitalic structure (Chandler, 1977).

♂ *Brevicornu foliatum* (Edwards).

*Allodia foliata* Edwards, 1925: 609.

Material. 1 ♂, USSR, Altai, Teletskoe Lake, Artybash, 10.VII.1981 (Zaytsev) (Severtsov Inst.).

The species is known from several parts of Northern Europe. Within the USSR it has been recorded from Krasnoyarsk Terr. and Tomsk Prov. (Ostroverkhova, 1979) and is likely distributed across the entire Palearctic Region. It differs from closely related species in the shape of the ventral process of the gonocoxities and gonostylar structures (Fig. 4.1).

♂ *Brevicornu pedatum* A. Zaitzev, sp. n.

Material. Holotype: ♂, USA, Calif., Yosemite, 10.VI.1935 (Melander) (USNM).

Length of wing 2.5 mm.

Head brown; clypeus, mouthparts, and palpi yellow; antenna bicolorous, pedicel and first 3 flagellar segments yellow, remainder brown; length of medial flagellar segments equal to their width. Thorax yellow-brown; mesonotum matt brown with large yellow humeral spots; scutellum brown, with 4 long setae; propleuron with 3 setae. Wing hyaline; stem of  $M_1 + M_2$  twice as long as r-m; base of  $M_{3+4} + Cu_1$  at level of base of  $M_1 + M_2$ . Halter yellow. Legs yellow; foretibia as long as forebasitarsus; midtibia with 6 a, 2 pd, and 4 p; hindtibia with 8 ad, 5 pd, and 4 p. Abdomen brown; tergites II-IV with lateral yellow spots; genitalia brown; ventral process of gonocoxites furnished with small setulae (Fig. 4.7); inner lobe of gonostyle with extended tip (Fig. 4.9).

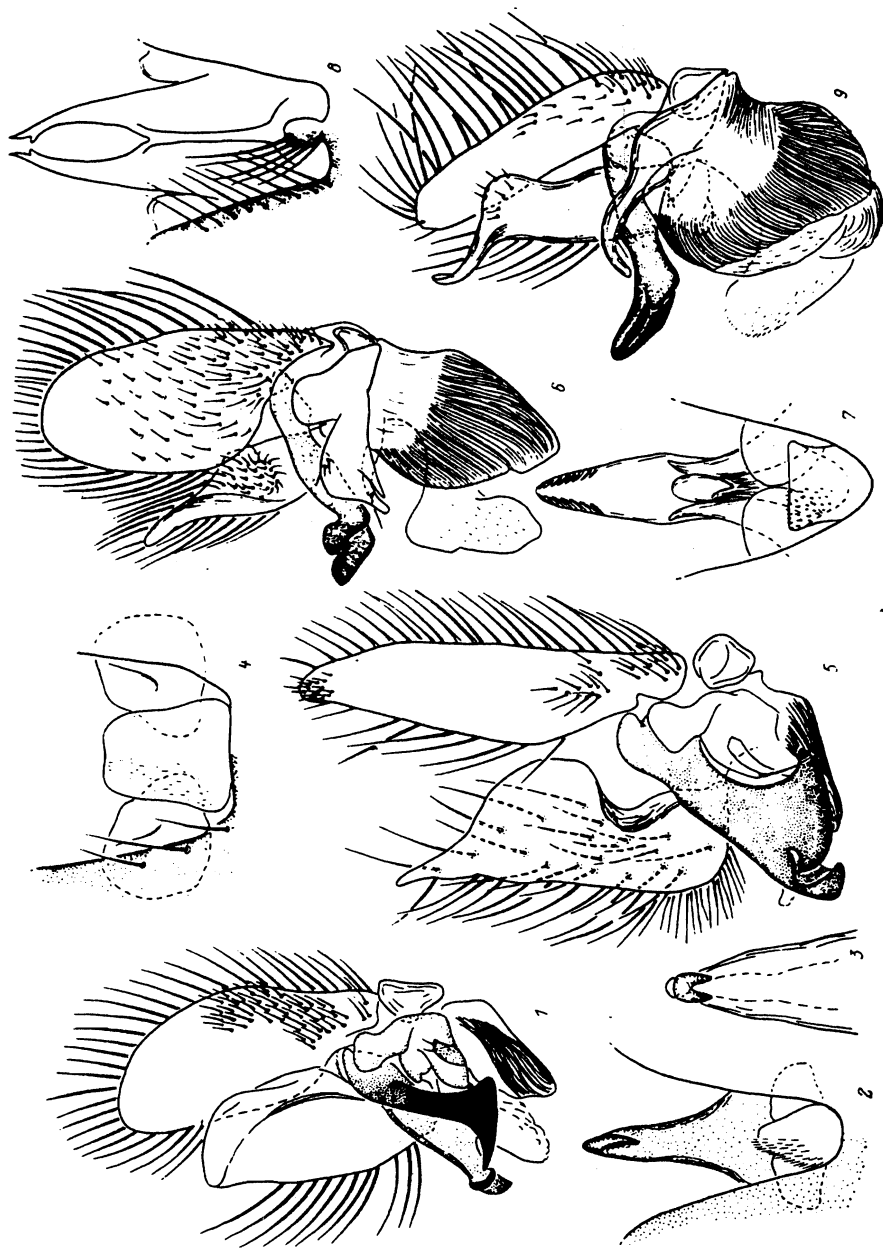


Fig. 4. *Brevicornu* Marshall. 1) *B. foliatum* (Edwards); 2, 6) *B. setulosum* sp. n.; 3, 5, 8) *B. ruficornu* (Meigen); 4) *B. eximium* sp. n.; 7, 9) *B. pedatum* sp. n. 1, 5, 6, 9) gonostyle of  $\sigma$  in mesal view; 2, 7) ventral process of gonocoxites and aedeagus; 3) aedeagus; 4, 8) ventral process of gonocoxites.

The species is close to *B. foliatum*, from which it differs well in genitalic structures and brighter body coloration.

0 *Brevicornu ruficorne* (Meigen).

*Mycetophila ruficornis* Meigen, 1838: 45.

*Brachycampta hastata* Winnertz, 1863: 842.

*Brachycampta cinerea* Lundström, 1911: 397.

Material. 1 ♂, USSR, Moscow Prov., Pavlovskaya Sloboda, 24.V.1981 (Zaytsev); 3 ♂, Altai, Teletskoe Lake, Artybash, 22-24.VI.1981, 2.VII.1981 (Zaytsev) (Severtsov Inst.).

The species is known from various parts of Europe, in the USSR from Tomsk Prov. and Krasnoyar Terr., and thus apparently a widely distributed Palearctic species. It is close to *B. arcticum*, differing in the ventral process of the gonocoxites (Fig. 4.8) and gonostyle (Fig. 4.5).

0 *Brevicornu setulosum* A. Zaitzevm sp. n.

Material. Holotype: ♂, Lena and Lemeran R. systems, 17.VIII.1875 (Chekanovskiy) (ZIL); paratype: ♂, USA, Coeur d'Alene, Echo Bay, 3.VIII.1924 (Melander) (USNM).

Length of wing 2.4 mm.

Head, including clypeus, brown; mouthparts and palpi yellow; antenna dark brown, only pedicel yellow; medial flagellar segments 1.5 times as long as wide. Thorax bright brown; mesonotum matt; humeral spots well developed, yellow; scutellum with 2 long and 2 short setae; propleuron with 3 setae. Wing hyaline; stem of  $M_1 + M_2$  approximately as long as r-m; [base of]  $M_{3+4} + Cu_1$  at level of base of  $M_1 + M_2$ . Halter yellow. Legs yellow; foretibia as long as forebasitarsus; midtibia with 5a, 3 pd, and 4 p; hindtibia with 6 ad, 4 pd, and 3 p. Abdomen brown, tergites II and III with yellow lateral spots; genitalia bright brown; aedeagus bent ventrally, pointed apically; ventral process of gonocoxites small, tapered to tip (Fig. 4.2) outer lobe of gonostyle with group of setae (Fig. 4.6).

The species is close to *B. foliatum*, differing well therefrom in genitalic structure.

#### KEY TO MALES OF *Brevicornu*, RUFICORNE GROUP

- 1 (4). Outer side of hindtibia with 10-12 setae in row.
- 2 (3). Medial lobe of gonostyle with pointed tip (Fig. 4.5); aedeagus divided apically (Fig. 4.3); ventral process of gonocoxites as in Fig. 4.8 . . . . .  
. . . . . *B. ruficorne* (Meigen).
- 3 (2). Medial lobe of gonostyle with rounded tip (Fig. 5.1); aedeagus not divided apically (Fig. 3); ventral process of gonocoxites as in Fig. 5.4 . . . . .  
. . . . . *B. bipartitum* Laštovka and Matile.
- 4 (1). Outer side of hindtibia with 3-8 setae in row.
- 5 (8). Aedeagus with large, cornute, bent spine at tip (Fig. 3.1, 5).
- 6 (7). Ventral process of gonocoxites widening to tip (Fig. 3.8); medial lobe of gonostyle wide (Fig. 3.3) . . . . . *B. arcticum* (Lundström).

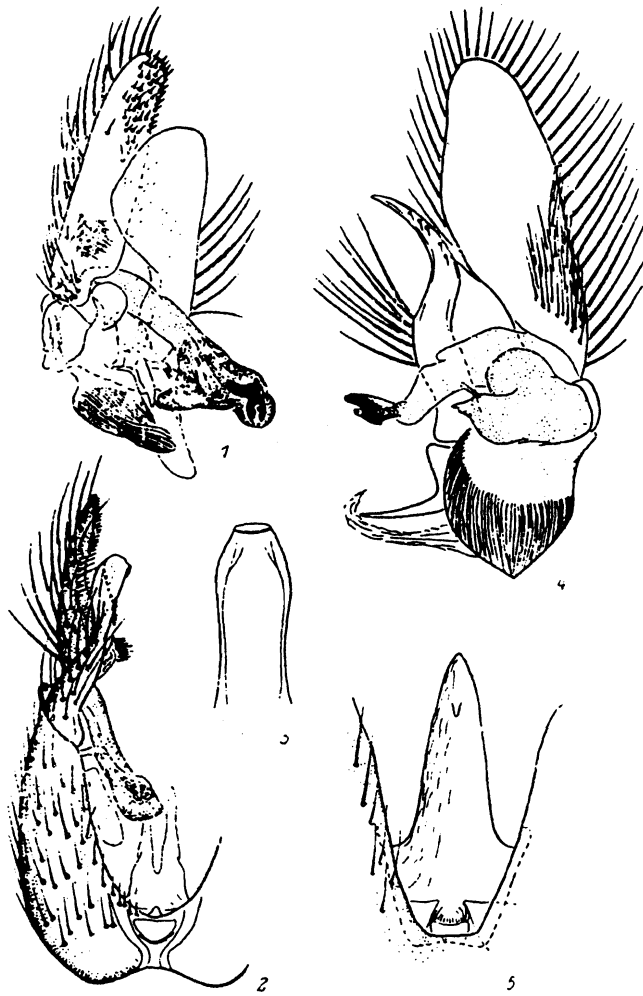


Fig. 5. *Brevicornu* Marshall. 1-3) *B. partitum* Laštovka and Matile; 4, 5) *B. bellum* (Johannsen). 1, 4) gonostyle of ♂ in mesal view; 3) genitalia of ♂ in ventral view; 3) aedeagus; 5) ventral process of gonocoxites and aedeagus.

- 7 (6). Ventral process of gonocoxites narrowed to tip (Fig. 3.4); medial lobe of gonostyle narrow (Fig. 3.6) . . . . . *B. canadense* sp. n.
- 8 (5). Aedeagus without such cornute spine at tip.
- 9 (10). Inner surface of medial lobe of gonostyle covered with fine setae (Fig. 4.6); aedeagus with bent tip (Fig. 4.2). . . . . *B. setulosum* sp. n.
- 10 (9). Inner surface of medial lobe of gonostyle without fine setae.
- 11 (12). Ventral process of gonocoxites with very deep emargination . . . . .  
 . . . . . *B. foliatum* (Edwards).
- 12 (11). Ventral process of gonocoxites without deep emargination (Fig. 4.4, 7; 5.5).

- 13 (14). Medial lobe of gonostyle sinuate (Fig. 5.4) . . . *B. bellum* (Johannsen).
- 14 (13). Medial lobe of gonostyle differently shaped (Fig. 3.7, 4.9).
- 15 (16). Tip of medial lobe of gonostyle extended into long narrow process (Fig. 4.9); ventral process of gonocoxites spinulose (Fig. 4.7) . *B. pedatum* sp. n.
- 16 (15). Tip of medial lobe pointed, but without process (Fig. 3.7); ventral process of gonocoxites without spinules.
- 17 (18). Medial lobe of gonostyle approximately half as long as outer lobe (Fig. 3.7) . . . . . *B. eximium* sp. n.
- 18 (17). Medial lobe of gonostyle only a little shorter than outer lobe . . . . .  
 . . . . . *B. fennicum* (Landrock).

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1. Scutellum med 4 kraftige setae;  
4-5 propleural børster; m-stamme  
≅ r-m. Ventral process på gex vid;  
Gonoskytus med lange armer  
→ sericoma - gr. (s.127)
  2. Scutellum med 2 lange setae og/lobet  
2 korter i 4 propleural setae;  
m-stamme ≅ r-m. Ventral process  
på gex lobate. Gonoskytus med  
svært lange armer  
→ griseicollis - gr (s.130)
  3. Sc. med 2 lange og 2 svært korte  
setae; vanligvis 2 propleural setae;  
Ventral process på gex svært liten  
Gonoskytus med vide lober.  
→ ru/izorne - gr.