

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

A. I. ZAYTSEV (ZAITZEV)

A. N. Severtsov Institute of Evolutionary Morphology and Ecology of Animals, Academy of Sciences of the USSR, Moscow

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 Sericoma, 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. Gagne (USNM), Eh. P. Narchuk (ZIL), and G. P. Ostroverkhova (Tomsk State University - TSU).

Brevicornu Marshall

Sericoma Group

The species comprising the Sericoma 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 that cross-vein \( r-m \); 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.

Alloedia beatata Johannsen, 1911: 318.

Fig. 1. Brevicormu Marshall. 1, 2) B. beatum (Jonannsen); 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) γ gonostyle in mesal view; 2, 3, 6, 7, 10) inner process of gonocoxites.

*Here and elsewhere "affinis" should be "affine." — Transl. Ed.
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. Zaitcev, 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; mid-tibia 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 semiflava* Meigen, 1838: 45.

*Braunycampa amoena* Winnertz, 1863: 839.


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 (Zaitsev); 1 ♂, Altai, Lake Teletskoe, Artybash, 22-24.VI.1981 (Zaitsev); 1 ♂, same locality, 3.VI.1981 (Severtsov Inst. Evol. Morph. Ekol. Zhiv.); 1 ♂, UK, Llangammarch,
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 (Ostroverkhova, 1979). From other species in the mentioned group it is well differentiated in the structure of the σ 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, widened at apex (Fig. 1.5) ..................................... B. occidentale sp. n.

Griseicollle 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 $M_3 + Cu_1$ or basad of $M_1 + M_2$. Genitalia of σ 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: σ, China, Szechuen, Beh Luh Din, 30 mi N Chengtu, 1-15 IV. 1935 (Graham); paratype: σ, 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 wing veins $M_1 + M_2$ as long as r-m; base of $M_3 + Cu_1$ 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, tergires 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).
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 M₁ + M₂ 1.5 times as long as r-m; base of M₃+₄ + Cu₁ at level of or before base M₁ + M₂. 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.

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 M₁ + M₂ approximately as long as r-m; base of M₃+₄ + Cu₁ before base of M₁ + M₂. 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 Krasnoyar 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).

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. Brevoortia Marshall. 1, 2) B. gracileolus (Staeger); 3, 8) B. nigrofuscum (Lundstrom); 4, 7) B. dijunctum sp. n.; 5) B. chinense sp. n.; 6) B. melanops sp. n. 1, 4, 5, 8) Gonostylus 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).

B. nigrofuscum (Lundström).

Material. 1 $\sigma$, Canada, Northwest Terr., Aklavik. 18.VII.1931 (Bryant) (CAS); 1 $\sigma$, USA, Texas, Comal R., 24.II.1942 (Melander) (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 Brevicorvus, 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. nigrofuscum (Lundström).

10 (9). Lobes narrow (Fig. 2.7); gonostyle as in Fig. 2.4 . . . B. disjunctum sp. n.

Ruficorvus 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. extremum* 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).


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.


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 M1 + M2 shorter than r-m; base of M3+4 + Cu1 slightly before level of M1 + M2. 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.

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*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)


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).

_Azodia 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 gonocoxites 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. ruficornis (Meigen); 4) B. eximium sp. n.; 7, 9) B. pedatum sp. n. 1, 5, 6, 9) gonostyle of ♂ 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  *Brevisicornu ruficorne* (Meigen).

*Mycetophila ruficornis* Meigen, 1838: 45.

*Brachycampta hastata* Winnertz, 1863: 842.

*Brachycampta cinerea* Lundström, 1911: 397.


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).

♀  *Brevisicornu 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*₃₄ + *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 BREVISICORNU, 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 Lašťovka 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. edum sp. n.

18 (17). Medial lobe of gonostyle only a little shorter than outer lobe ......... ........................... B. fennicum (Landrock).

LITERATURE CITED


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1. Scutellum mit 4 korp/heli setzen; 4-5 propleural borner; m-stamme 7 r-m. Ventral process på gev lidj; Gennelykning med lave armi.
   → sericarpa - gr. (5,87)

2. Scutellum mit 2 lange stifter og 2 korta i 4 propleural stifter; m-stamme 7 r-m. Ventral process på gev lobale Gennelykning med svart lange armi.
   → griseicolla - gr (6,130)

3. Sc. mit 2 lange og 2 svart korte stifter; vanlige i 2 propleural stifter; Ventral process på gev svart blåen. Gennelykning med ride boker.
   → ru/nizoma - gr.