

A revision of the genus *Seeversiella* Ashe, 1986 (Coleoptera: Staphylinidae: Aleocharinae)

VLADIMIR I. GUSAROV

Division of Entomology, Natural History Museum, University of Kansas, Lawrence, KS 66045-7523, U.S.A.
and

Department of Entomology, St. Petersburg State University, Universitetskaya nab., 7/9, St. Petersburg 199034,
Russia
vlad@ku.edu

Table of contents

Abstract	2
Introduction	2
Depositories	3
<i>Seeversiella</i> Ashe, 1986.....	3
Key for identification of species of <i>Seeversiella</i>	10
1. <i>Seeversiella globicollis</i> (Bernhauer, 1907).....	16
2. <i>Seeversiella texana</i> Gusarov, sp. n.	22
3. <i>Seeversiella sonomotoides</i> Gusarov, sp. n.	25
4. <i>Seeversiella liliputana</i> Gusarov, sp. n.	28
5. <i>Seeversiella fusca</i> Gusarov, sp. n.	30
6. <i>Seeversiella castanea</i> Gusarov, sp. n.	32
7. <i>Seeversiella tuberculicauda</i> Gusarov, sp. n.	34
8. <i>Seeversiella nigriceps</i> Gusarov, sp. n.	36
9. <i>Seeversiella grandis</i> Gusarov, sp. n.	38
10. <i>Seeversiella mexicana</i> Gusarov, sp. n.	40
11. <i>Seeversiella badia</i> Gusarov, sp. n.	43
12. <i>Seeversiella similis</i> Gusarov, sp. n.	45
13. <i>Seeversiella minima</i> Gusarov, sp. n.	48
14. <i>Seeversiella scabricollis</i> Gusarov, sp. n.	50
15. <i>Seeversiella furcativentris</i> Gusarov, sp. n.	55
16. <i>Seeversiella brevipennis</i> Gusarov, sp. n.	58
17. <i>Seeversiella brunnea</i> Gusarov, sp. n.	62
18. <i>Seeversiella curtipennis</i> Gusarov, sp. n.	64
19. <i>Seeversiella lativentris</i> Gusarov, sp. n.	68

20. <i>Seeversiella luridicollis</i> Gusarov, sp. n.	70
21. <i>Seeversiella micralymma</i> Gusarov, sp. n.	73
22. <i>Seeversiella impressicollis</i> Gusarov, sp. n.	77
23. <i>Seeversiella sulcicollis</i> Gusarov, sp. n.	79
24. <i>Seeversiella microphthalma</i> Gusarov, sp. n.	83
25. <i>Seeversiella geostiboides</i> Gusarov, sp. n.	86
26. <i>Seeversiella adusta</i> Gusarov, sp. n.	89
27. <i>Seeversiella flavida</i> Gusarov, sp. n.	90
28. <i>Seeversiella paramoana</i> Gusarov, sp. n.	94
Discussion	95
Acknowledgements	101
References	102

Abstract

The Nearctic and Neotropical genus *Seeversiella* Ashe, 1986 is redescribed. Twenty seven new species of *Seeversiella* are described (*S. texana* Gusarov, **sp. n.** from Texas, *S. sonomotoides* Gusarov, **sp. n.** and *S. liliputana* Gusarov, **sp. n.** from Arizona, *S. fusca* Gusarov, **sp. n.**, *S. tuberculicauda* Gusarov, **sp. n.**, *S. nigriceps* Gusarov, **sp. n.** and *S. mexicana* Gusarov, **sp. n.** from Mexico, *S. castanea* Gusarov, **sp. n.** from Mexico and Honduras, *S. grandis* Gusarov, **sp. n.** from Guatemala, *S. badia* Gusarov, **sp. n.** and *S. minima* Gusarov, **sp. n.** from El Salvador, *S. similis* Gusarov, **sp. n.** from Honduras, *S. brunnea* Gusarov, **sp. n.**, *S. curtipennis* Gusarov, **sp. n.**, *S. lativentris* Gusarov, **sp. n.**, *S. luridicollis* Gusarov, **sp. n.**, *S. micralymma* Gusarov, **sp. n.**, *S. impressicollis* Gusarov, **sp. n.**, *S. sulcicollis* Gusarov, **sp. n.**, *S. microphthalma* Gusarov, **sp. n.**, *S. geostiboides* Gusarov, **sp. n.**, *S. adusta* Gusarov, **sp. n.**, *S. flavida* Gusarov, **sp. n.** and *S. paramoana* Gusarov, **sp. n.** from Costa Rica, *S. scabricollis* Gusarov, **sp. n.** and *S. furcativeventris* Gusarov, **sp. n.** from Costa Rica and Panama, *S. brevipennis* Gusarov, **sp. n.** from Panama). *Atheta globicollis* Bernhauer, 1907 (distributed from southern Canada to Honduras) is transferred to *Seeversiella* and redescribed. *Seeversiella bispinosa* Ashe, 1986 is placed in synonymy with *S. globicollis*. A key for identification of species of *Seeversiella* is provided. The lectotype of *Atheta globicollis* Bernhauer, 1907 is designated. Geographical distribution of *Seeversiella* is discussed.

Key words: Coleoptera, Staphylinidae, Aleocharinae, Athetini, *Seeversiella*, taxonomy, new species, synonymy, Nearctic, Neotropical, identification key

Introduction

In his revision of North American Aleocharinae Seevers (1978) included in the key to genera a new genus. Seevers had not completed the revision before his death in 1965, and the new genus was not formally described. Lee Herman, who prepared the manuscript for

publication, was unable to find any other reference to this new genus in the manuscript (Herman *in* Seevers 1978, p. 46).

Steve Ashe (then a curator at the Field Museum of Natural History, the same institution where Seevers had been a research associate) unsuccessfully attempted to locate the specimens intended by Seevers to represent the new genus. Fortunately, the very distinctive male secondary sexual characters mentioned in the key by Seevers allowed to find some specimens which agreed with the Seevers's concept of the genus. Ashe (1986) described the genus as *Seeversiella* (in the tribe Athetini Casey, 1910) and included in it one new species: *S. bispinosa* Ashe, 1986.

While revising the types of all athetine species described by Bernhauer from North America I discovered that the types of *A. globicollis* Bernhauer, 1907 are conspecific with *S. bispinosa*.

In this paper I redescribe *Seeversiella*, place *S. bispinosa* in synonymy with *S. globicollis*, describe twenty seven new species of *Seeversiella* and provide a key for identification of species of *Seeversiella*. I follow the terminology accepted in taxonomy of Aleocharinae (Sawada 1970, 1972; Newton *et al.* 2000). A discussion of the terms applied to the parts of the internal sac of the aedeagus can be found in Gusarov (2002). The spermathecal gland is shown on the drawings solely to illustrate the gland position in relation to other parts of spermatheca.

Depositories

AMNH – American Museum of Natural History, New York (Dr. L.H.Herman)

BMNH – The Natural History Museum, London (Mr. M.Brendell)

CASC – California Academy of Sciences, San Francisco (Dr. D.H.Kavanaugh)

CNCI – Canadian National Collection of Insects, Ottawa (Mr. A.Davies)

FMNH – Field Museum of Natural History, Chicago (Dr. A.F.Newton)

KSEM – Snow Entomological Collection, University of Kansas, Lawrence (Dr. J.S.Ashe)

SCFK – Service canadien des Forêts, Centre de Foresterie des Laurentides, Sainte-Foy, Canada (Dr. J.Klimaszewski)

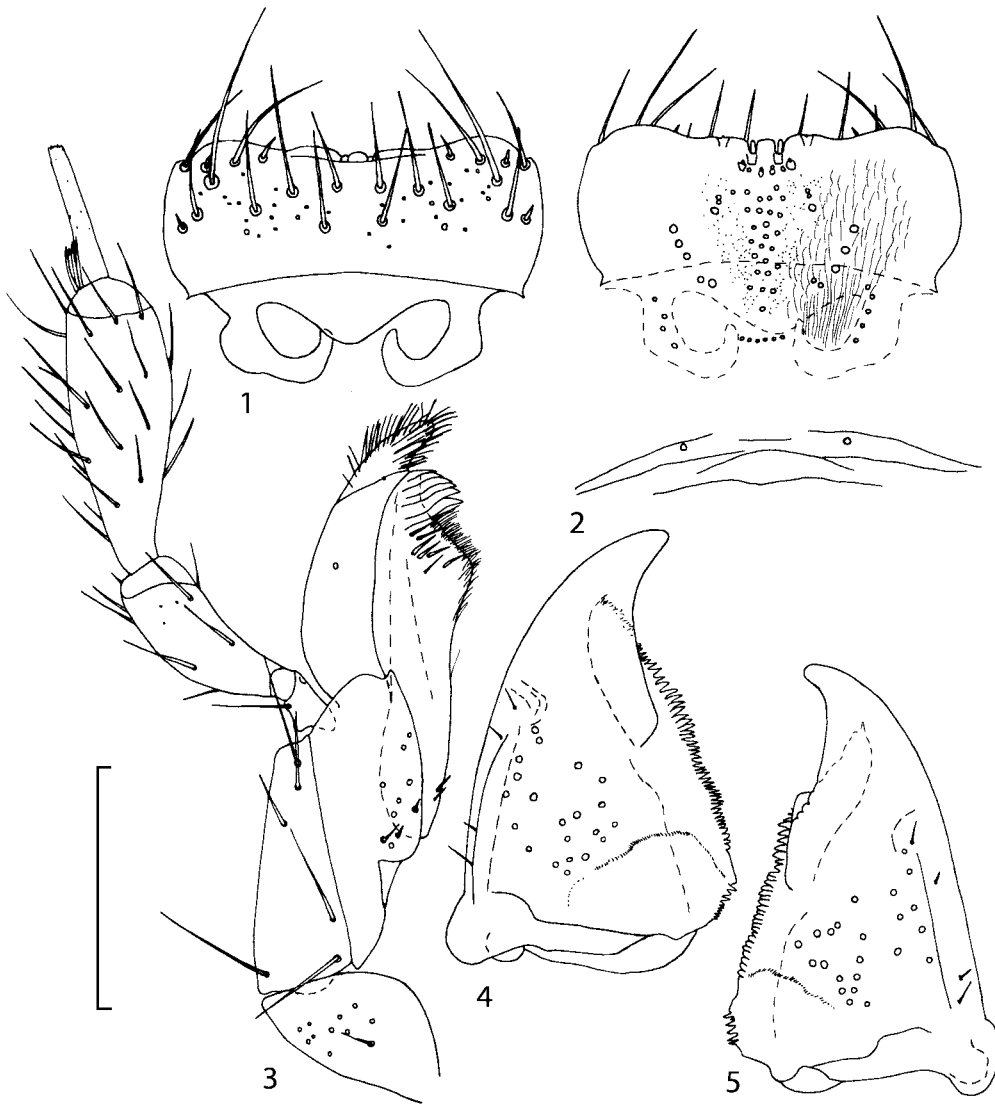
SPSU – Department of Entomology, St. Petersburg State University, St. Petersburg, Russia (Dr. V.I.Gusarov)

Seeversiella Ashe, 1986 (Figs. 1-384)

A new genus: Seevers, 1978: 46 (unnamed new genus appearing in a key).

Seeversiella Ashe: 1986: 501 (tribe Athetini Casey, 1910).

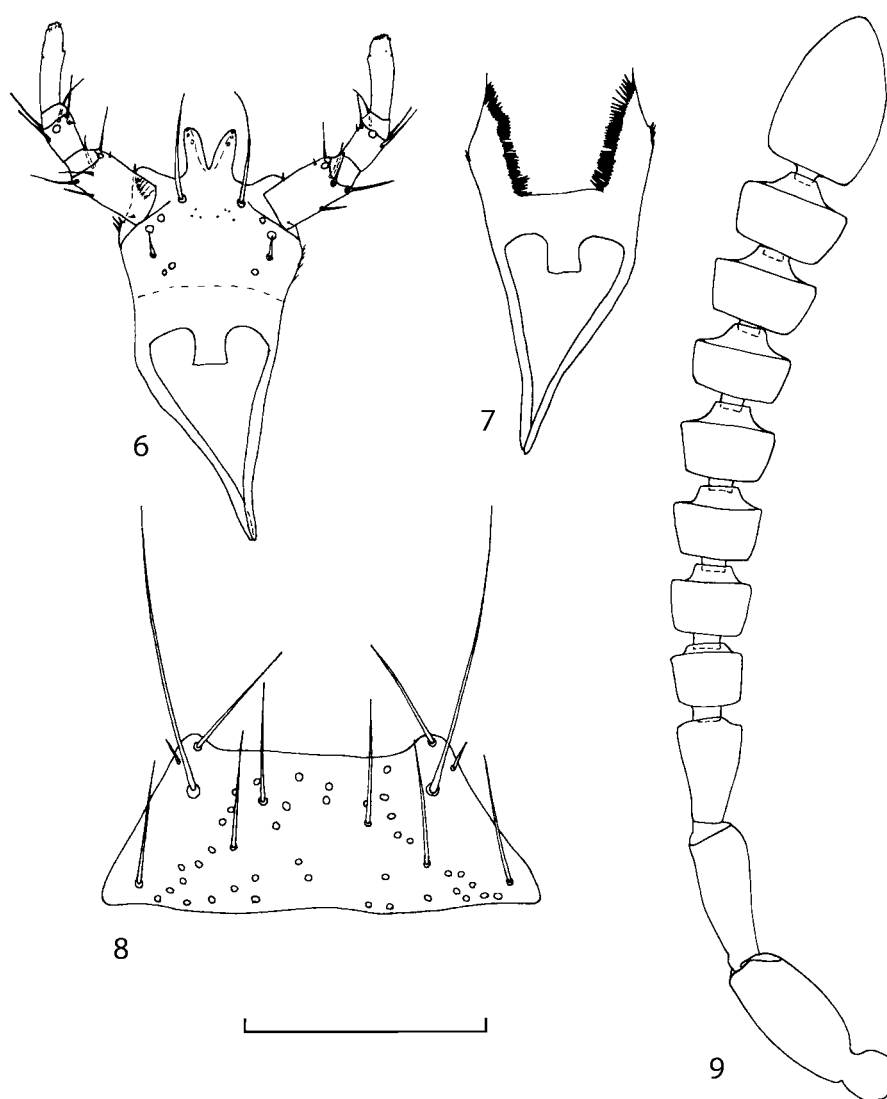
Seeversiella: Ashe in Newton, Thayer, Ashe & Chandler, 2000: (tribe Athetini, not assigned to subtribe).



FIGURES 1-5. Mouthparts of *Seeversiella globicollis* (Bernhauer) (Waterton Lakes National Park, Alberta). 1 – labrum; 2 – epipharynx; 3 – right maxilla, ventral view; 4 – left mandible, dorsal view; 5 – right mandible, dorsal view. Scale bar 0.1 mm.

Diagnosis. *Seeversiella* can be distinguished from other athetine genera by the combination of the following characters: body parallel-sided or with broad ovate abdomen (Figs. 17-19); antennal articles 8-10 transverse (Fig. 9); ligula divided into two separate lobes (Fig. 6); pronotum with microsetae directed posteriorly along the midline; in lateral portions of the disc microsetae directed towards the midline and/or obliquely posteriorly (Figs. 10-12) (posteriorly in *S. geostiboides*); pronotal macrosetae short; pronotal hypomera fully visible in lateral view; medial macroseta of mesotibia inconspicuous,

shorter than tibial width; tarsal formula 4-5-5; metatarsal segment 1 as long as segment 2; one empodial seta; in many species posterior angles of male tergum 3 projecting as spines (Figs. 15, 17), long in large males, short or absent in small males (Figs. 10A-10C in Ashe (1986)); in many species male tergum 7 with medial carina along midline (Figs. 17-18) (absent in small males); copulatory piece of internal sac of aedeagus long and flagellum-like (Figs. 29, 36; CP).



FIGURES 6-9. Mouthparts and antenna of *Seeversiella globicollis* (Bernhauer) (6-7, 9, Waterton Lakes National Park, Alberta; 8, Anticosti, Quebec). 6 – prementum; 7 – hypopharynx; 8 – mentum; 9 – right antenna. Scale bar 0.1 mm (6-8), 0.2 mm (9).

Seeversiella differs from *Geostiba* in having microsetae of lateral portions of pronotum directed towards the midline; posterior angles of male tergum 3 projecting as spines; and long flagellum-like copulatory piece of internal sac of aedeagus.

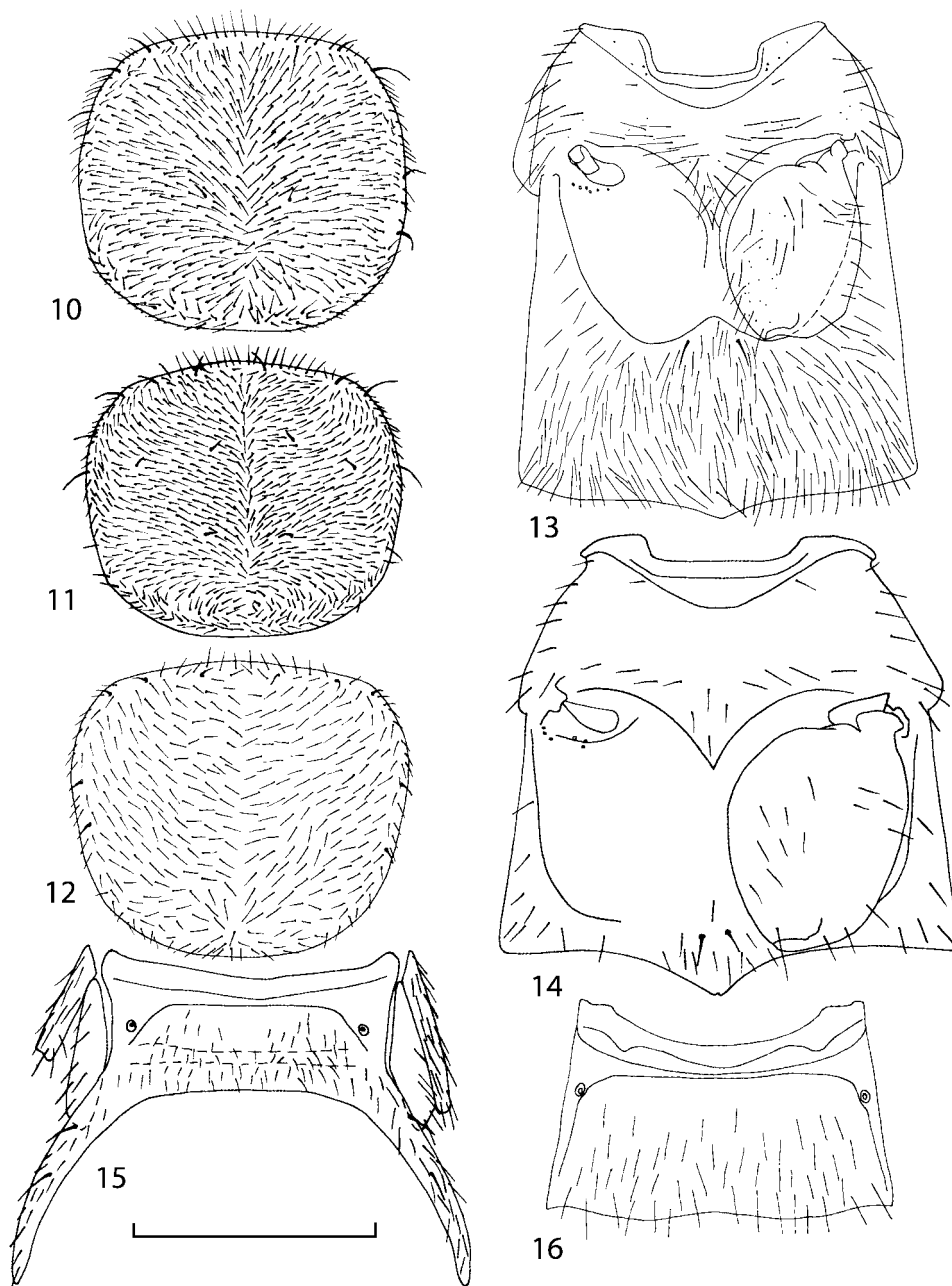
Seeversiella differs from *Tropimenelytron* Pace, 1983 in having contiguous mesocoxae; ligula divided into two separate lobes; microsetae of lateral portions of pronotum directed towards the midline; posterior angles of male tergum 3 projecting as spines; and long flagellum-like copulatory piece of internal sac of aedeagus.

Seeversiella differs from the small species of *Atheta* Thomson, 1858 with transverse antennal segments in having ligula divided into two separate lobes; microsetae of lateral portions of pronotum directed towards the midline; posterior angles of male tergum 3 projecting as spines; and long flagellum-like copulatory piece of internal sac of aedeagus.

Description. Length 1.6-3.7 mm, pronotal width 0.34-0.74 mm. Body parallel-sided or with broad ovate abdomen (Figs. 17-19), dark brown to brownish yellow.

Head as wide as long; eyes small or large, temple length to eye length ratio 0.8-7.0; infraorbital carina incomplete. Antennal article 2 longer or as long as article 3, articles 4-5 slightly elongate, subquadrate or slightly transverse, 6-7 subquadrate or transverse, 8-10 transverse or strongly transverse (ratio 1.5-2.0), apical article without coeloconic sensilla. Labrum (Fig. 1) transverse, anterior margin slightly concave. Adoral surface of labrum (epipharynx) as in Fig. 2. Mandibles (Figs. 4-5) broad, right mandible with a small medial tooth; dorsal molar area with velvety patch consisting of very small denticles (not visible at 400x). Maxilla (Fig. 3) with galea extending beyond apex of lacinia; apical lobe of galea covered with numerous fine and short setae; apical fifth of lacinia with row of closely spaced spines, middle portion produced medially and covered with numerous setae. Labium as in Figs. 6-8; ligula divided into two lobes; medial area of prementum without pores but with 5-15 pseudopores, lateral areas with 3 (occasionally 4) pores and single spinose pore (Fig. 6). Hypopharyngeal lobes as in Fig. 7. Mentum (Fig. 8) with slightly protruding anterior angles and straight anterior margin.

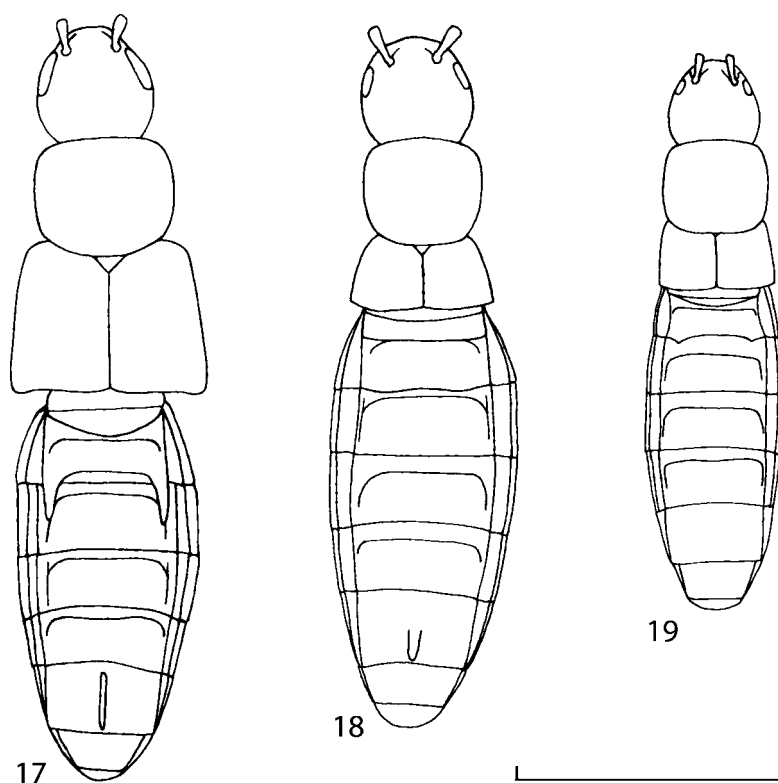
Pronotum (Figs. 10-12) slightly transverse, broadest near middle, sides slightly convex; anterior and posterior margins convex; surface covered with microsetae directed posteriorly in midline; in lateral areas of the disc microsetae directed towards midline and/or obliquely posteriorly (posteriorly in *S. geostiboides*); macrosetae short; hypomera fully visible in lateral view. Meso- and metasternum as in Fig. 12, mesosternal process extending about ½ length of mesocoxal cavities, metasternal process short, mesosternum and mesosternal process not carinate medially; relative lengths of mesosternal process: isthmus: metasternal process in ratio of about 3:3:1; mesocoxal cavities margined posteriorly; mesocoxae contiguous. Medial microseta of mesotibia inconspicuous, shorter than tibial width. Tarsal segmentation 4-5-5, metatarsal segment 1 as long as segment 2. One empodial seta, slightly shorter than claws. Wings fully developed, partially reduced or reduced to short vestiges that are shorter than elytra. Posterior margin of elytra straight or slightly concave near postero-lateral angle.



FIGURES 10-16. Details of *Seeversiella globicollis* (Bernhauer) (10, Anticosti, Quebec; 13, Waterton Lakes National Park, Alberta), *S. scabricollis* Gusarov, **sp. n.** (11, 15, paratype from Volcán Barva, Costa Rica) and *S. micralymma* Gusarov, **sp. n.** (12, 14, 16, paratype from Cerro Buenavista, Costa Rica). 10-12 – pronotum; 13-14 – mesometathorax; 15 – male tergum 3 and paratergites; 16 – male tergum 3. Scale bar 0.4 mm (10-11, 15), 0.3 mm (12-13, 16), 0.2 mm (14).

Abdominal terga 3-5 with moderate basal impressions. Tergum 7 as long as tergum 6. Punctuation on terga 6-7 sparser than on terga 3-5. Tergum 7 with wide white palisade fringe or without fringe (in wingless species).

In many species posterior angles of male tergum 3 projecting as spines (Figs. 15, 17), long in large males, short or absent in small males (Figs. 10A-10C in Ashe (1986)); in some species lateral portions of posterior margin of male tergum 3 extending as short and obtuse projections (Figs. 16, 18-19); in most species male tergum 7 with medial carina along midline (Figs. 17-18) (absent in small males) or with medial subapical tubercle. Copulatory piece of internal sac of aedeagus long and flagellum-like (Figs. 29, 36; CP); medial lamellae narrow (Figs. 29-30; 47; 258; ML). Internal sac with one pair of distal sclerites (not homologous to suspensoria) laterally of copulatory piece; the distal sclerites are hook-shaped (Figs. 28-29, 31, 35), dentiform (Figs. 63, 65) or reduced to elongate (Figs. 199-200, 203, 206) or subquadrate (Fig. 343) plates which may have numerous spicules (Figs. 99-101). Spermatheca short, S-, L-, J- or C-shaped (Figs. 32, 53, 62, 104, 149, 205).



FIGURES 17-19. Body outline of *Seeversiella globicollis* (Bernhauer) (17, Volcán Tacana, Mexico), *S. micralymma* Gusarov, **sp. n.** (18, paratype from Cerro de la Muerte, Costa Rica) and *S. flavida* Gusarov, **sp. n.** (19, paratype from Cerro de la Muerte, Costa Rica). Scale bar 1 mm.

Type species. *Seeversiella bispinosa* Ashe, 1986, by original designation.

Discussion. Although most species of *Seeversiella* described below can be recognized by comparing the external shape of the aedeagus, the details of the internal sac provide additional characters to distinguish the closely related species. Some characters of the internal sac, like long flagellum-like copulatory piece (Figs. 29; 172; 200, 203-204; 301; CP) and narrow medial lamellae (Figs. 29-30; 274-275; 304-305; ML), are consistent within the genus. The base of the copulatory piece and the medial lamellae are linked together by two connecting bands (Figs. 243-245; CB). These bands are sclerotized areas of the internal sac wall. In everted internal sac the bands are situated on the parameral face of the sac (Fig. 245; CB). When the sac is retracted the bands are clearly visible laterally of the copulatory piece (Fig. 243; CB).

Other elements of the internal sac may differ significantly between species. One such element is a pair of distal (in everted sac) sclerites located laterally of the copulatory piece (Figs. 28-29; DS). These sclerites are not attached to the copulatory piece and probably they are not homologous to suspensoria. In *S. globicollis* and *S. texana* the distal sclerites are hook-shaped (Figs. 31; 51) and, when retracted, lie in the separate pockets of the internal sac. In many species the distal sclerites are reduced to elongate (Figs. 199-200, 203, 206) or subquadrate (Fig. 343) plates which may have numerous spicules (Figs. 99-101). The homology of these plates to the hook-shaped sclerites of *S. globicollis* can be established by their similar position in the internal sac, laterally of the copulatory piece (Figs. 28-29; 199-200, 203-204). Another detail of the internal sac which varies within the genus is the lateral diverticula which may be covered with numerous setae (Figs. 29; 169, 172-173; LD), have sclerotized denticles (Fig. 200) or possess long spiniform sclerites which may look like the medial lamellae but their location in the internal sac is different (Figs. 301, 304; 318; SLD). In retracted sac, the setae, the denticles or the sclerites of the lateral diverticula are usually well visible in cleared preparations (Figs. 173; 299, 303; 316; 327).

In *Seeversiella*, as in many other aleocharine genera (e.g., *Geostiba*, *Tropimenelytron*) the male secondary sexual characters are subject to intraspecific variation. Larger males have longer spines on male tergum 3 (up to 3 times as long as tergum medial length) and longer carina on tergum 7. In smaller males the spines are very short or absent altogether. Therefore the male secondary characters cannot be reliably used to distinguish the species of *Seeversiella*.

My examination of available specimens of *Seeversiella* suggests that some species differ from each other in the length of elytra and wings, and in the eye size. On several occasions these characters are used below in the key to species. However, these characters should be used with caution because some species are polymorphic. Ultimately the details of male genitalia are the most reliable characters to recognize the species of *Seeversiella*.

Key for identification of species of *Seeversiella*

- 1 Elytra longer or only a little shorter than pronotum. Pronotal length to elytral length (measured from humeral angle) ratio 1.1 or less 2
- Elytra much shorter than pronotum (Figs. 18-19). Pronotal length to elytral length (measured from humeral angle) ratio more than 1.1 28
- 2 Pronotum glossy, with weak isodiametric microsculpture or without microsculpture 3
- Pronotum matte, with strong isodiametric microsculpture 25
- 3 Punctuation of pronotum asperate. Tergum 8 with three pairs of macrosetae (Figs. 222, 224). Proximal seta of the apex of paramere is approximately as long as the other three setae (Fig. 233). Aedeagus: Figs. 226-233. Spermatheca: Fig. 234. Body length 2.6-3.0 mm, pronotal width 0.53-0.56 mm. Known from Cerro Punta, Panama, at altitude of 2100 m (Fig. 388) 16. *S. brevipennis* Gusarov, **sp. n.**
- Punctuation of pronotum not asperate. Tergum 8 with four pairs of macrosetae (Figs. 20, 22). Proximal seta of the apex of paramere is much longer than the other three setae (Fig. 33)..... 4
- 4 Pronotum with weak isodiametric microsculpture 5
- Pronotum without microsculpture 23
- 5 Males 6
- Females (Females of *S. nigriceps* are unknown) 15
- 6 Distal sclerites of internal sac strongly sclerotized, hook-shaped (Figs. 31, 35; 48, 51; DS) or dentiform (Figs. 63, 65; DS) 7
- Distal sclerites of internal sac poorly sclerotized, not hook-shaped or dentiform and may have numerous spicules (Figs. 87; 99, 101; 124; 146; DS) 10
- 7 Distal sclerites of internal sac hook-shaped (Figs. 31, 35; 48, 51) 8
- Distal sclerites of internal sac dentiform (Figs. 63, 65; 124) 9
- 8 Body dark brown. Microsculpture on head and pronotum less distinct. Apex of median lobe in lateral view straight (Figs. 26-27). Copulatory piece of internal sac long (Figs. 29, 34). Elytra (measured from humeral angle) longer than pronotum. Wings fully developed, 4 times as long as elytra. Aedeagus: Figs. 24-31, 33-36. Body length 2.4-3.3 mm, pronotal width 0.44-0.54 mm. Widespread in North America, known from Canada to Honduras (Figs. 385-387) 1. *S. globicollis* (Bernhauer) (males)
- Body brown. Microsculpture on head and pronotum more distinct. Apex of median lobe in lateral view bent paramerally (Figs. 43-44). Copulatory piece of internal sac short (Figs. 46, 49-50). Elytra (measured from humeral angle) shorter than pronotum. Wings short, 2 times as long as elytra. Aedeagus: Figs. 41-52. Body length 2.5-2.8 mm, pronotal width 0.44-0.49 mm. Known from the Guadalupe Mountains, Texas, at altitude of 2400 m (Fig. 386) 2. *S. texana* Gusarov, **sp. n.** (males)
- 9 Distal sclerites of internal sac wider (Figs. 63, 65). Aedeagus: Figs. 58-61, 63-67. Body length 2.3-2.8 mm, pronotal width 0.40-0.44 mm. Known from the Huachuca

- Mountains, Arizona, at altitude of 2150 m (Fig. 386) 3. *S. sonomotoides* Gusarov, **sp. n.** (males, in part)
- Distal sclerites of internal sac narrower (Fig. 124). Aedeagus: Figs. 119-125. Body length 2.4 mm, pronotal width 0.47 mm. Known from Mexico, at altitude of 2400 m (Fig. 387) 8. *S. nigriceps* Gusarov, **sp. n.** (males, in part)
- 10 Apex of median lobe in lateral view widened subapically (Figs. 112-113; 156-157) 11
- Apex of median lobe in lateral view not widened subapically (Figs. 85-86) 14
- 11 Apex of median lobe in lateral view emarginate on parameral side (Figs. 156-157). Aedeagus: Figs. 154-159. Body length 2.5 mm, pronotal width 0.50-0.53 mm. Known from El Salvador, at altitude of 2100 m (Fig. 387) 11. *S. badia* Gusarov, **sp. n.** (males)
- Apex of median lobe in lateral view may be slightly bent paramerally (Figs. 141-142) but never clearly emarginate (Figs. 112-113; 141-142) 12
- 12 Apex of median lobe in parameral view wide (Figs. 110-111). Aedeagus: Figs. 110-115. Body length 2.4 mm, pronotal width 0.49 mm. Known from Mexico, at altitude of 1300 m (Fig. 387) 7. *S. tuberculicauda* Gusarov, **sp. n.** (males)
- Apex of median lobe in parameral view narrow (Figs. 139-140; 165-166) 13
- 13 Apex of median lobe in parameral view with weak basal constriction (Figs. 139-140). Aedeagus: Figs. 139-148. Body length 2.2-2.8 mm, pronotal width 0.41-0.53 mm. Known from Mexico, at altitudes of 1700-2300 m (Fig. 387) 10. *S. mexicana* Gusarov, **sp. n.** (males)
- Apex of median lobe in parameral view gradually widened basally, not constricted (Figs. 165-166). Aedeagus: Figs. 165-173. Body length 2.3-2.8 mm, pronotal width 0.48-0.54 mm. Known from Honduras, at altitude of 2000-2100 m (Fig. 387) 12. *S. similis* Gusarov, **sp. n.** (males)
- 14 Distal sclerites of internal sac have weak spicules (Fig. 87). Aedeagus: Figs. 83-88. Body length 2.3-2.5 mm, pronotal width 0.46-0.50 mm. Known from Mexico, at altitude of 1700-1900 m (Fig. 387) 5. *S. fusca* Gusarov, **sp. n.** (males)
- Distal sclerites of internal sac have strong spicules (Figs. 99, 101). Aedeagus: Figs. 94-103. Body length 2.3-2.8 mm, pronotal width 0.46-0.50 mm. Known from Mexico and Honduras, at altitude of 1500-2400 m (Fig. 387) 6. *S. castanea* Gusarov, **sp. n.** (males)
- 15 Spermatheca S-shaped (Figs. 149, 160) 16
- Spermatheca L-, J- or C-shaped (Figs. 32, 53, 62, 89, 104) 18
- 16 Umbilicus facing proximally (Fig. 149). Body length 2.2-2.8 mm, pronotal width 0.41-0.53 mm. Known from Mexico, at altitudes of 1700-2300 m (Fig. 387) 10. *S. mexicana* Gusarov, **sp. n.** (females)
- Umbilicus facing laterally (Figs. 160, 174). Two closely related species which cannot be distinguished by females 17
- 17 Body length 2.5 mm, pronotal width 0.50-0.53 mm. Spermatheca: Fig. 160. Known

- from El Salvador, at altitude of 2100 m (Fig. 387) 11. *S. badia* Gusarov, **sp. n.** (females)
 – Body length 2.3-2.8 mm, pronotal width 0.48-0.54 mm. Spermatheca: Fig. 174.
 Known from Honduras, at altitude of 2000-2100 m (Fig. 387) 12. *S. similis* Gusarov, **sp. n.** (females)
 18 Spermatheca without umbilicus (Fig. 32). Body length 2.4-3.3 mm, pronotal width
 0.44-0.54 mm. Widespread in North America, known from Canada to Honduras
 (Figs. 385-387) 1. *S. globicollis* (Bernhauer) (females)
 – Spermatheca with umbilicus (Figs. 53, 89, 104) 19
 Spermatheca with large umbilicus (Figs. 53, 104) 20
 – Spermatheca with small umbilicus (Figs. 62, 89, 116) 21
 20 Spermatheca smaller, C-shaped (Fig. 104). Body length 2.3-2.8 mm, pronotal width
 0.46-0.50 mm. Known from Mexico and Honduras, at altitude of 1500-2400 m (Fig. 387)
 6. *S. castanea* Gusarov, **sp. n.** (females)
 – Spermatheca larger, J-shaped (Fig. 53). Body length 2.5-2.8 mm, pronotal width 0.44-
 0.49 mm. Known from the Guadalupe Mountains, Texas, at altitude of 2400 m (Fig.
 386) 2. *S. texana* Gusarov, **sp. n.** (females)
 21 Spermatheca longer (Fig. 62). Body length 2.3-2.8 mm, pronotal width 0.40-0.44 mm.
 Known from the Huachuca Mountains, Arizona, at altitude of 2150 m (Fig. 386)
 3. *S. sonomotoides* Gusarov, **sp. n.** (females, in part)
 – Spermatheca shorter (Figs. 89, 116) 22
 22 Proximal portion of spermatheca slightly curved (Fig. 89). Body length 2.3-2.5 mm,
 pronotal width 0.46-0.50 mm. Known from Mexico, at altitude of 1700-1900 m (Fig. 387)
 5. *S. fusca* Gusarov, **sp. n.** (females)
 – Proximal portion of spermatheca straight (Fig. 116). Body length 2.4 mm, pronotal
 width 0.49 mm. Known from Mexico, at altitude of 1300 m (Fig. 387)
 7. *S. tuberculicauda* Gusarov, **sp. n.** (females)
 23 Median lobe of aedeagus larger with longer apex (Figs. 58-61; 119-122). Distal scler-
 ites of internal sac strongly sclerotized and dentiform (Figs. 63, 65; 124) 24
 – Median lobe of aedeagus smaller with shorter apex (Figs. 72-75). Distal sclerites of
 internal sac not visible in retracted sac (Fig. 76). Aedeagus: Figs. 72-77. Body length
 2.4 mm, pronotal width 0.41 mm. Known from the Huachuca Mountains, Arizona, at
 altitude of 2470 m (Fig. 386) 4. *S. liliputana* Gusarov, **sp. n.**
 24 Distal sclerites of internal sac wider (Figs. 63, 65). Aedeagus: Figs. 58-61, 63-67.
 Spermatheca: Fig. 62. Body length 2.3-2.8 mm, pronotal width 0.40-0.44 mm.
 Known from the Huachuca Mountains, Arizona, at altitude of 2150 m (Fig. 386)
 3. *S. sonomotoides* Gusarov, **sp. n.** (in part)
 – Distal sclerites of internal sac narrower (Fig. 124). Aedeagus: Figs. 119-125.
 Females unknown. Body length 2.4 mm, pronotal width 0.47 mm. Known from Mex-
 ico, at altitude of 2400 m (Fig. 387) 8. *S. nigriceps* Gusarov, **sp. n.** (in part)

- 25 Body larger. Length 3.7 mm, pronotal width 0.74 mm. Apex of median lobe in parameral view broad (Figs. 128-129). Posterior margin of male tergum 8 without medial emargination (Fig. 126). Tergum 8 with four pairs of macrosetae (Fig. 126). Proximal seta of the apex of paramere is much longer than the other three setae (Fig. 134). Aedeagus: Figs. 129-134. Females unknown. Known from Guatemala, at altitude of 2600 m (Fig. 387) 9. *S. grandis* Gusarov, **sp. n.**
- Body smaller. Length 2.4-3.1 mm, pronotal width 0.40-0.54 mm. Apex of median lobe in parameral view narrow (Figs. 194-196; 212-213). Posterior margin of male tergum 8 with small medial emargination (Figs. 190, 208, 235). Tergum 8 with three pairs of macrosetae (Figs. 190, 192). Proximal seta of the apex of paramere is approximately as long as the other three setae (Fig. 202). Three closely related species which can be distinguished by males only 26
- 26 Apex of median lobe in lateral view straight (Figs. 197-198; 214-215) 27
- Apex of median lobe in lateral view concave (Figs. 241-242). Aedeagus: Figs. 239-245. Spermatheca: Fig. 246. Body length 2.5-2.8 mm, pronotal width 0.44-0.50 mm. Known from Costa Rica, at altitude of 1500-1740 m (Fig. 388) 17. *S. brunnea* Gusarov, **sp. n.**
- 27 Apex of median lobe in parameral view parallel-sided (Figs. 194-196). Aedeagus: Figs. 194-204, 206-207. Spermatheca: Fig. 205. Body length 2.7-3.1 mm, pronotal width 0.49-0.54 mm. Known from Costa Rica and Panama, at altitude of 1450-3300 m (Fig. 388) 14. *S. scabricollis* Gusarov, **sp. n.**
- Apex of median lobe in parameral view constricted basally (Figs. 212-213). Aedeagus: Figs. 212-220. Spermatheca: Fig. 221. Body length 2.4-2.8 mm, pronotal width 0.40-0.44 mm. Known from Costa Rica and Panama, at altitude of 1400-2100 m (Fig. 388) 15. *S. furcaventris* Gusarov, **sp. n.**
- 28 Pronotum glossy, with weak isodiametric microsculpture or completely smooth. Tergum 8 with three or four pairs of macrosetae (Figs. 359, 331). Medial lamellae (not sclerites of lateral diverticula (Figs. 288; 303-304; SLD)) of internal sac short (Figs. 288; 304-305; ML), the apices of lamellae not protruding from retracted sac (Figs. 282, 295) 29
- Pronotum matte, with strong isodiametric microsculpture. Tergum 8 with three pairs of macrosetae (Fig. 247). Medial lamellae of internal sac long (Figs. 258-259; 274; ML), the apices of lamellae protruding from retracted sac (Figs. 256-257; 269) 39
- 29 Punctuation of pronotum asperate 30
- Punctuation of pronotum not asperate 32
- 30 Pronotal punctuation more asperate. In males pronotum with broad medial impression or with medial furrow, posterior angles of tergum 3 not projecting as spines, tergum 7 with short medial carina or without one. Aedeagus: Figs. 311-319; 321-328. Spermatheca long (Fig. 320). (Females of *S. sulcicollis* are unknown) 31
- Pronotal punctuation less asperate. In males pronotum without medial impression or

- furrow, posterior angles of tergum 3 projecting as spines up to half as long as the tergum (measured medially), tergum 7 with medial carina up to half as long as the tergum. Aedeagus: Figs. 335-340, 342-343. Spermatheca short (Fig. 341). Body length 2.5-2.8 mm, pronotal width 0.46-0.50 mm. Known from Cerro de la Muerte, Costa Rica, at altitude of 3000 m (Fig. 389) .. 24. *S. microphthalma* Gusarov, **sp. n.** (in part)
- 31 Body smaller. Length 2.2-2.7 mm. Pronotal width 0.47-0.53. In males pronotum with broad medial impression, posterior margin of tergum 3 not extending as short and obtuse projections, tergum 7 without medial carina, posterior margin of tergum 8 without medial denticles (Fig. 307). Aedeagus: Figs. 311-319. Apex of median lobe in parameral view without carinae (Figs. 311-312). Copulatory piece of internal sac short (Fig. 317). Sclerites of lateral diverticula of internal sac slender (Fig. 318; SLD). Spermatheca: Fig. 320. Known from Cerro Chirripó, Costa Rica, at altitude of 3600 m (Fig. 389) 22. *S. impressicollis* Gusarov, **sp. n.**
- Body larger. Length 3.0 mm. Pronotal width 0.66-0.67 mm. In males pronotum with medial furrow, lateral portions of posterior margin of tergum 3 extending as short and obtuse projections (as in Fig. 19), tergum 7 in front of posterior margin with short medial carina, posterior margin of tergum 8 medially with two obtuse denticles (Fig. 330). Aedeagus: Figs. 321-328. Apex of median lobe with two divergent carinae (in parameral view) (Figs. 321-322). Copulatory piece of internal sac long (Figs. 326, 328). Sclerites of lateral diverticula of internal sac robust (Fig. 326; SLD). Females unknown. Known from Cerro de la Muerte, Costa Rica, at altitude of 3300 m (Fig. 389) 23. *S. sulcicollis* Gusarov, **sp. n.**
- 32 Abdomen parallel-sided, not much wider than elytra (Fig. 19) 33
- Outline of abdomen ovate. Middle abdominal segments broad, much wider than elytra (Fig. 18) 38
- 33 Pubescence in lateral portions of pronotum directed posteriorly. Aedeagus: Figs. 348-354. Spermatheca: Fig. 355. Body length 2.6 mm, pronotal width 0.47-0.50 mm. Known from Cerro de la Muerte, Costa Rica, at altitude of 2750 m (Fig. 389) 25. *S. geostiboides* Gusarov, **sp. n.**
- Pubescence in lateral portions of pronotum directed towards midline and obliquely posteriorly 34
- 34 Tergum 8 with four pairs of macrosetae (Figs. 175, 372) 35
- Tergum 8 with three pairs of macrosetae (Figs. 356, 359) 37
- 35 Body smaller. Length 1.6-2.0 mm. Pronotal width 0.34-0.40 mm. Punctuation and pubescence of head and pronotum scarcer. Aedeagus: Figs. 179-183, 185-189. Apex of median lobe in parameral view wide (Figs. 179-180). Proximal seta of the apex of paramere is much longer than the other three setae (Fig. 183). Proximal portion of spermatheca bulbous, twice as long as distal portion (Fig. 184). Known from Cerro Montecristo, El Salvador, at altitude of 2100 m (Fig. 387) 13. *S. minima* Gusarov, **sp. n.**

- Body larger. Length 2.2-2.8 mm. Pronotal width 0.40-0.50 mm. Punctuation and pubescence of head and pronotum denser. Apex of median lobe in parameral view narrow (Figs. 377-378). Proximal seta of the apex of paramere is approximately as long as the other three setae (Fig. 376). Proximal portion of spermatheca not bulbous, only a little longer than distal portion (Fig. 381) 36
- 36 Apex of median lobe in lateral view concave, but not emarginate (Figs. 338-339). Aedeagus: Figs. 335-340, 342-343. Spermatheca: Fig. 341. Body length 2.5-2.8 mm, pronotal width 0.46-0.50 mm. Known from Cerro de la Muerte, Costa Rica, at altitude of 3000 m (Fig. 389)24. *S. microphthalma* Gusarov, **sp. n.** (in part)
- Apex of median lobe in lateral view emarginate (Figs. 379-380). Aedeagus: Figs. 376-380, 382-384. Spermatheca: Fig. 381. Body length 2.2-2.4 mm, pronotal width 0.40-0.47 mm. Known from Cerro Chirripó, Costa Rica, at altitude of 3600 m (Fig. 389) 28. *S. paramoana* Gusarov, **sp. n.**
- 37 Spermatheca shorter (Fig. 358). Males unknown. Body length 2.0 mm, pronotal width 0.43 mm. Known from Cerro de la Muerte, Costa Rica, at altitude of 3300 m (Fig. 389) 26. *S. adusta* Gusarov, **sp. n.**
- Spermatheca longer (Fig. 371). Aedeagus: Figs. 363-370. Body length 2.2-2.5 mm, pronotal width 0.39-0.43 mm. Known from Cerro de la Muerte, Costa Rica, at altitude of 3200 m (Fig. 389)27. *S. flavida* Gusarov, **sp. n.**
- 38 Antennal segments 4-5 elongate, 6-7 subquadrate. Aedeagus: Figs. 282-289. Apex of median lobe in parameral view wide (Figs. 282-283). Spermatheca S-shaped (Fig. 290). Body length 2.0-2.5 mm, pronotal width 0.46-0.51 mm. Known from Cerro de la Muerte, Costa Rica, at altitude of 3200-3300 m (Fig. 389) 20. *S. luridicollis* Gusarov, **sp. n.**
- Antennal segment 4 elongate, 5 subquadrate, 6-7 slightly transverse. Aedeagus: Figs. 295-305. Apex of median lobe in parameral view narrow (Figs. 295-296). Spermatheca L-shaped (Fig. 306). Body length 2.1-2.5 mm, pronotal width 0.39-0.41 mm. Known from Cerro de la Muerte, Costa Rica, at altitude of 3200-3300 m (Fig. 389)21. *S. micralymma* Gusarov, **sp. n.**
- 39 Basal constriction of apex of median lobe in parameral view weaker (Figs. 251-252). Aedeagus: Figs. 251-254, 256-264. Spermatheca: Fig. 255. Body length 2.6-3.1 mm, pronotal width 0.50-0.56 mm. Known from Volcán Irazú and Cerro Cuerici, Costa Rica, at altitude of 2600-3300 m (Fig. 389) 18. *S. curtipennis* Gusarov, **sp. n.**
- Basal constriction of apex of median lobe in parameral view stronger (Figs. 269-270). Aedeagus: Figs. 269-276. Spermatheca: Fig. 277. Body length 2.0-2.6 mm, pronotal width 0.41-0.47 mm. Known from Cerro de la Muerte, Costa Rica, at altitude of 3000 m (Fig. 389)19. *S. lativentris* Gusarov, **sp. n.**

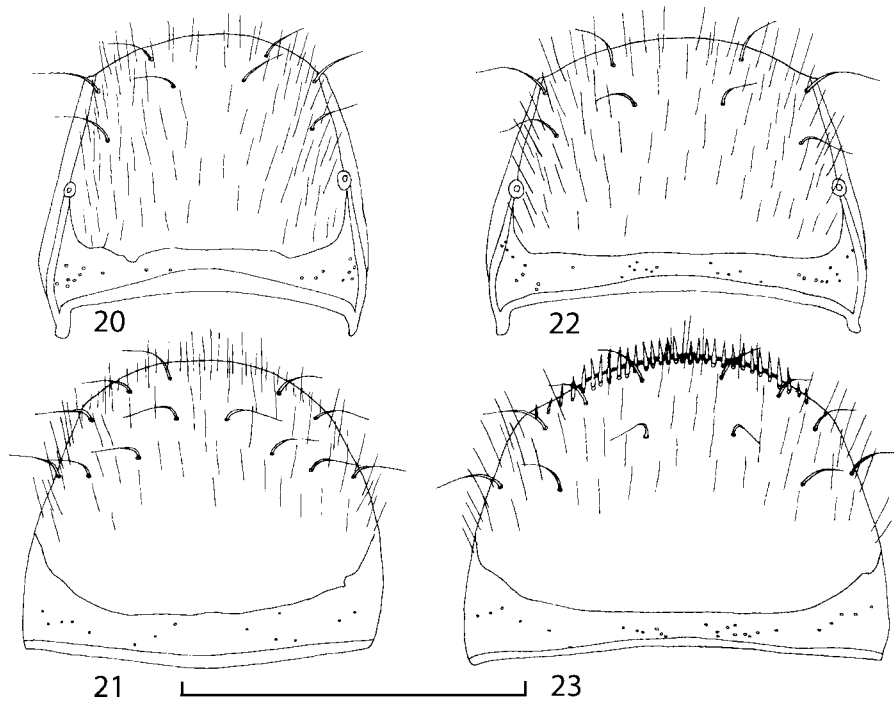
1. *Seeversiella globicollis* (Bernhauer, 1907) (Figs. 1-10, 13, 17, 20-36)

Atheta (Microdota) globicollis Bernhauer, 1907: 388.

Atheta (Microdota) globicollis: Bernhauer & Scheerpeltz, 1926: 632.

Sipalia cristata Fenyès, *in litteris* (manuscript name).

Seeversiella bispinosa Ashe, 1986: 503, *syn. nov.*



FIGURES 20-23. Abdominal segment 8 of *Seeversiella globicollis* (Bernhauer) (20-21, Cloudcroft, New Mexico; 22-23, Salmo, British Columbia). 20 – male tergum 8; 21 – male sternum 8; 22 – female tergum 8; 23 – female sternum 8. Scale bar 0.4 mm.

Type material. Lectotype of *A. globicollis* (here designated): **CANADA: Ontario:** ♀, “Nepigon 06.6.18 Ont[ario]. Dr. A.Fenyès”, “248”, “95.” (in red ink), “globicollis Brh. Cotypus” (yellow label) (FMNH); paralectotype: **CANADA: Ontario:** ♀, “Nepigon 06.6.18 Ont[ario]. Dr. A.Fenyès”, “249”, “globicollis Brh. Typus” (yellow label) (FMNH). The purpose of the lectotype designation is to assure correct and consistent application of the name in the future. The specimen designated as lectotype was supplied with the red lectotype label.

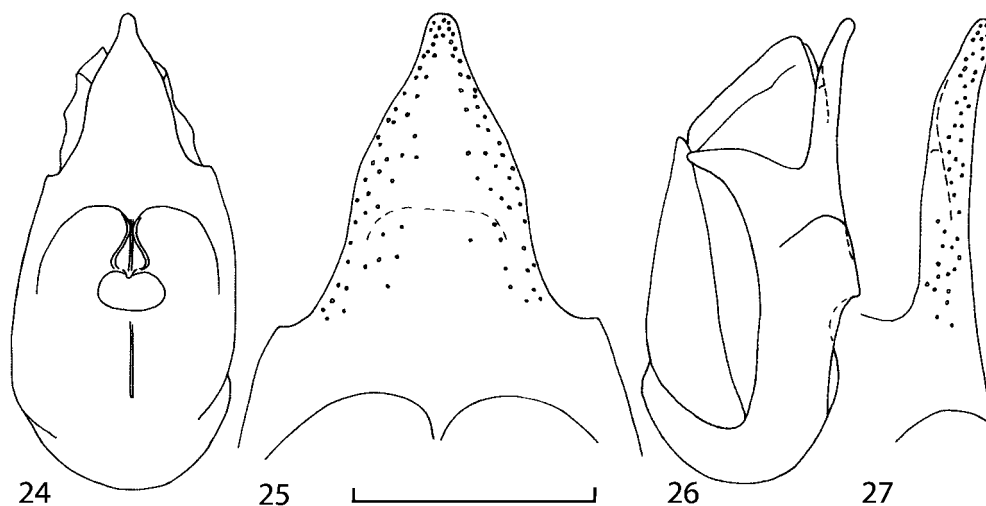
Paratypes of *S. bispinosa*: **UNITED STATES: Arizona:** Coconino Co.: ♂, ♀, San Francisco Mts., Hart Prairie Rd. (418), woody debris, base of dead ponderosa pine (M.W.Sanderson), 11.ix.1982 (FMNH).

Additional material. **CANADA: British Columbia:** ♀, 2 mi. S Salmo (Campbell & Smetana), 9.vi.1968; ♂, Mt. Garibaldi, 9 mi. N Squamish, 1500' (Campbell & Smet-

ana), 30.v.1968; 1 specimen, 26.4 mi. N Quesnel, 2350', soil and moss under log (B.D.Ainscough), 3.xi.1978; 1 specimen, Birkenhead Pr. Pk., 1600', humus under maple (B.D.Ainscough), 16.iii.1977; ♂, McBride, river debris (D.E.Bright), 15.vii.1981; ♀, 46 km W McBride, sifting *Populus* litter at edge of spruce-cedar forest (J.M.Campbell), 26.viii.1983; **Alberta:** 4 specimens, Waterton Lks. N. P., Rowe Cr., 5400', under ground squirrel carcass (J.M.Campbell), 19.vi.1980; 6 specimens, Waterton River meadow, sod (I.M.Smith), 9.vi.1980; 1 specimen, Waterton Lks. N. P., mi. 3 Chief Mt. Hwy., 4500' (J.M.Campbell), 14-17.vi.1980; 1 specimen, George Lake, 53°57'N 114°06'W (R.E.Leech), 10.ix.1966; ♂, Cypress Hills Prov. Pk. (Redner & Starr), 9-15.vi.1973 (all - CNCI); **Quebec:** Hull Co.: ♀, Gatineau Park, King Mountain, pine stump buttress (W.S.Suter), 24.v.1979 (FMNH); ♂, "Sapinière Métis, Fosse L-4, 23.viii.1993"; ♂, Lac des Étang, Bétulaie jaune à sapin, 4-11.viii.1999; ♀, Lac Poissonneux, Bétulaie jaune à sapin, pitfall trap, 4-11.viii.1999; ♂, ditto but 13-20.vii.1999; ♀, ditto but 8-15.vi.1999 (all - SCFK); ♂, ditto but 15-22.vi.1999; ♀, Lac Mitis, sapinière métis (Lindgren), 28.vii.1993; ♀, ditto but 21.vi.1993; ♀, Anticosti (Lindgren), 16.vi.1993 (all - SPSU); **UNITED STATES:** **Arizona:** Apache Co.: 2♀♀, 30 km S Eagar, Apache National Forest, 33°51.57'N 109°11.73'W, 2500 m, in forest litter, *Picea*, *Pinus* (V.I.Gusarov), 6.viii.1999 (KSEM); 1 specimen, Apache N. F., Escudilla Mt., 8 mi. NE Alpine, 2730 m (J.M.Campbell), 17.vii.1976 (CNCI); ♀, 22 mi. SW Eagar, 2700 m, squirrel midden (P.M.Hammond), 15.vii.1976; 2♀♀, Chuska Mts., 2600 m, squirrel midden (P.M.Hammond), 11.vii.1976 (all - BMNH); Cochise Co.: 3 specimens, Huachuca Mts., Bear Saddle, 8100' (A.Smetana), 5.viii.1979 (CNCI); 7 specimens, Huachuca Mts., Carr Cny., 2150 m, leaf oak litter (P.M.Hammond), 23.vii.1976 (BMNH); 2 specimens, Huachuca Mts., Miller Ch., 7200-7800' (A.Smetana), 4.viii.1979; 1 specimen, Huachuca Mts., Miller Cn., 5500' (A.Smetana), 1.viii.1969; 1 specimen, Chiric Mts. Rustler Park, 8400' (A.Smetana), 24.vii.1969; ♀, Chiricahua Mts. Nr. Ash Spg., 6300' (A.Smetana), 29.vii.1979; ♂, Chiricahua Mts., East Turkey Creek, 6400-6800' (A.Smetana), 28.vii.1979; 1 specimen, Chiricahua Mts., near Barfoot Park, 7500' (A.Smetana), 27.vii.1979; 1 specimen, Pinaleno Mts. Wet Canyon, 6000' (A.Smetana), 29.vii.1969 (all - CNCI); Coconino Co.: 15 specimens, Hutch Mountain, *Pseudotsuga menziesi* duff (M.W.Sanderson), 14.x.1984 (KSEM); Gila Co.: 7 specimens, 21 mi. NE Payson, FR 289 between Tonto Creek (6000 ft) and Horton Creek (6500 ft), maple litter near Horton Spring (L.Herman), 5.vi.1986 (AMNH); ♂, Pinal Mts., Pioneer Pass, 1660 m, leaf litter (P.M.Hammond), 25.vii.1976 (BMNH); Graham Co.: ♀, 29 mi. SSE Safford, Rt. 266 in Pinaleno Mts., Alder Spring near Stockton Pass Campground, 5700 ft, oak litter (L.Herman), 13.v.1986 (AMNH); 4 specimens, Pinaleno Mts., Turkey Flat, 7200' (A.Smetana), 27.vii.1969; (CNCI); Navajo Co.: 17 specimens, Black Lake, Sitgreaves National Forest, 2120-2240 m, leaf litter (P.M.Hammond), 13-14.vii.1976 (BMNH); Santa Cruz Co.: 3 specimens, Santa Rita Mts., Madera Canyon, Bog Spring, 5800 ft (L.Herman), 6.vi.1981 (AMNH); 3 specimens, Santa Rita Mts., Mt. Wrightson, 8000-8500' (A.Smetana), 9.viii.1979 (CNCI); Yavapai Co.: ♀, 14 mi. SW

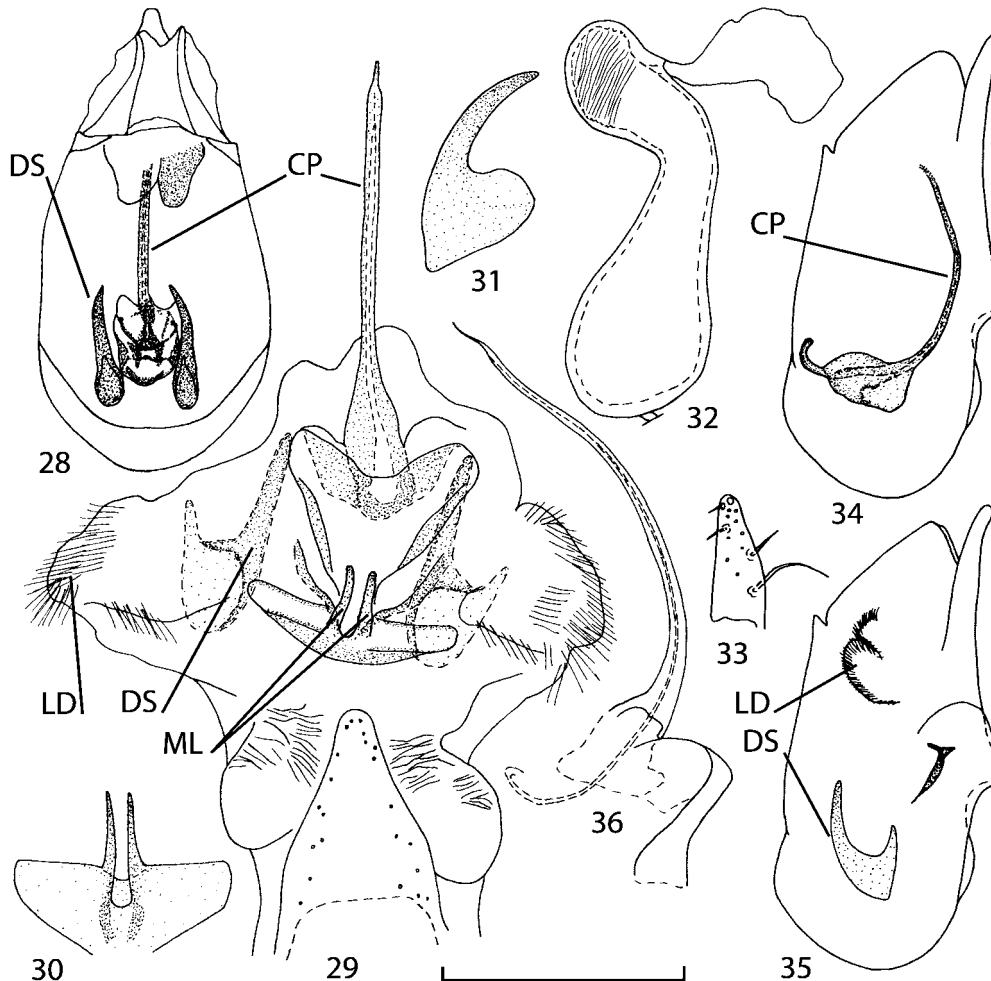
Clarkdale, Forest Road 104, 7200 ft (L.Herman), 2.vi.1986 (AMNH); **New Mexico:** Lincoln Co.: ♂, ♀, 15 mi. N Ruidoso, Sacramento Mts., Kraut Cyn., 7400 ft, litter at seep (L.Herman), 3.ix.1985; ♂, 14 mi. N Ruidoso, Sacramento Mts., Mills Cyn., 7000 ft, litter near spring runoff (L.Herman), 3.ix.1985; Torrance Co.: ♂, ♀, 6 mi. W Manzano Mts., Red Canyon Campground, 7800 ft, oak, willow, pine litter (L.Herman), 12.v.1988 (all - AMNH); Bernalillo Co.: 3 specimens, Sandia Mts., Cibola N. F., Tree Spr. Trail, 8500' (A.Smetana), 6.vii.1969; ♂, ditto but Las Huertas Crk., 8.vii.1969; Otero Co.: 6 specimens, Lincoln N. F., 2 mi. SE Cloudcroft, 8500' (A.Smetana), 13.vii.1969; ♂, ditto but 1 mi. SE Cloudcroft, 8750', 14.vii.1969; 2 specimens, ditto but 13-18.vii.1969 (CNCI); **Utah:** San Juan Co.: 2 specimens, 5 mi. W Monticello, Dalton Spring, poplar, willow, oak litter, 8200 ft (L.Herman), 11.vi.1987; ♀, 8 mi. SW Monticello, South Creek Road, Cold Springs, 8600 ft (L.Herman), 10.vi.1987; Washington Co.: 2 specimens, 20 mi. NE Veyo, via Pine Valley Road, 6800 ft (L.Herman), 10.vi.1987; **Colorado:** Hinsdale Co.: ♀, 20 mi. NW Pagosa Springs, near Bridge Campground, Turkey Peak Spring, 8200 ft (L.Herman), 22.viii.1982; ♂, ♀, ditto but Forest Road 639 to Trail Creek, 8000-8400 ft, 21.viii.1982 (all - AMNH); Las Animas Co.: ♀, 10 km SEE Cuchara, SEE of Cordova Pass, San Isabel National Forest, 37°20.28'N 104°59.66'W, 3150 m, in forest litter, *Picea*, *Pinus*, *Populus* (V.I.Gusarov), 3.viii.1999; Archuleta Co.: ♀, 30 km W Pagosa Springs, N of Hwy. 160, San Juan National Forest, 37°13.88'N 107°21.04'W, 2250 m, in forest litter, *Quercus*, *Pinus*, *Fraxinus*, *Pseudotsuga* (V.I.Gusarov), 4.viii.1999; Rio Grande Co.: ♀, 9.5 km S South Fork, env. of Beaver Creek Reservoir campground, Rio Grande National Forest, 37°34.86'N 106°38.96'W, 2800 m, in forest litter (V.I.Gusarov), 4.viii.1999; **Montana:** Flathead Co.: ♂, 47 km NE Kalispell, Fish Creek, 48°32.71'N 113°59.08'W, 1100 m, in forest litter, *Pinus*, *Tuja* (V.I.Gusarov), 26.viii.2000; **Idaho:** Boundary Co.: ♂, ♀, 19 km NE Bonners Ferry, Meadow Creek, Kaniksu National Forest, 48°49.28'N 116°08.47'W, 2200 m, in forest litter (V.I.Gusarov), 28.viii.2000 (all - KSEM); **South Dakota:** Custer Co.: ♂, ♀, North Pole Spring, 5500 ft (L.Herman), 15.vi.1981; **Wisconsin:** Ashland Co.: ♂, 9 mi. SW Marengo, near Beaver Lake (L.& N.Herman), 7.viii.1978; 2♀♀, ditto but (L.Herman), 4.ix.1982 (all - AMNH); Eau Claire Co.: ♀, 2 mi. S Eau Claire (W.Suter), 6.v.1976 (FMNH); **Minnesota:** Pine Co.: 2♀♀, 16 mi. E Hinckley, St. Croix State Park (L.Herman), 1.ix.1982 (AMNH); **New Hampshire:** Coos Co.: 2♂♂, ♀, Bretton Woods (CASC); **MEXICO:** **Nuevo Leon:** ♂, ♀, 31.5 km SW Linares, 750 m, under leaves (R.Brooks, R.Leschen), 24.iii.1991; ♂, 1 specimen, ditto but under leaves in streambed, 22.iii.1991; 2♂♂, 1 specimen, 37 km SW Linares, 900 m, flight intercept trap (R.Brooks, R.Leschen), 17-24.iii.1991; **Veracruz:** ♂, ♀, 2 specimens, 3.2 km SW Las Vigas, Hwy. 140, 2830 m, pine forest litter (J.S.Ashe), 11.vii.1992; **Puebla:** ♂, 10 km NE Zacatepec, Hwy. 140, 2500 m, leaf litter in barranca (J.S.Ashe), 10.vii.1992; **Michoacan:** ♂, 4.8 km W Mil Cumbres, 2820 m, oak and pine forest litter (R.S.Anderson), 27.vii.1988; **Guerero:** 2♂♂, 9 specimens, 10.3 km SW Filo de Caballo, 2700 m, oak, pine and fir forest litter (R.S.Anderson), 13.vii.1992; ♂, ditto but 15.vii.1992; 2♂♂, ditto but 17.vii.1992; ♂, 3

specimens, ditto but 18.vii.1992; ♂, 3 specimens, 9.3 km SW Filo de Caballo, 2400 m, alder forest litter (R.S.Anderson), 15.vii.1992; ♂, 2 specimens, 15 km SW Filo de Caballo, 2500 m, oak forest litter (R.S.Anderson), 16.vii.1992; ♂, ♀, 8 specimens, 5.6 km SW Filo de Caballo, 2310 m, alder forest litter (R.S.Anderson), 17.vii.1992; **Oaxaca:** ♂, 62.5 km SW Valle Nacional, km 115.5, 2650 m, oak and pine forest litter (R.S.Anderson), 28.vii.1992; ♂, ♀, 5 specimens, 64.5 km SW Valle Nacional, km 117.5, 2600 m, oak forest litter (R.S.Anderson), 28.vii.1992; ♀, 89.5 km SW Valle Nacional, km 142.5, 2430 m, pine forest litter (R.S.Anderson), 28.vii.1992; ♂, 2 mi. S Cerro Pelon, 8000-9000' (M.A.Ivie), 3.vii.1982; ♀♀, 2 mi. S Cerro Pelon, 8000-9000' (R.S.Miller), 2.vii.1982; ♀, 3.2 km S San Jose de Pacifico, Hwy. 175, 2440 m, forest litter (J.S.Ashe), 22.vii.1992; **Chiapas:** 2♂♂, 4 specimens, Cerro Huitepec, ca. 5 km W San Cristobal, 2700 m, oak forest litter (R.S.Anderson), 14.ix.1992; 3♂♂, ♀, 23 specimens, Volcán Tacana, lower slopes, ca. 4 km N Union Juarez, 2000 m, cloud forest litter (R.S.Anderson), 19.ix.1992; **GUATEMALA: Quetzaltenango:** ♂, 8 km SE Zunil, 2480 m, flight intercept trap (J.S.Ashe, R.Brooks), 20.viii.1994; ♀, 12 km SW Zunil, NE Face Cerro Zunil, 2700-2760 m, hardwood forest litter (R.S.Anderson), 28.v.1991; **Guatemala:** ♀, Guatemala City, 1 km SE La Pueblito, 1880 m, oak forest litter (R.S.Anderson), 10.vi.1991; **HONDURAS: Comayagua:** ♂, 2♀♀, 18 km E Comayagua, 2000 m, liquidambar litter (R.S.Anderson), 20.viii.1994; **Ocatepeque:** ♂, 24 km E Ocatepeque, El Guisayote, 14°25'N 89°04'W, 2170 m, flight intercept trap (J.S.Ashe, R.Brooks), 14-16.vi.1994; ♀, ditto but 16.vi.1994; ♀, 12.7 km E and 10.6 km S Ocatepeque, lower slopes El Pital, 14°25'N 89°04'W, 2050 m, oak litter (R.S.Anderson), 15.vi.1994; **El Paraiso:** ♀, 6.9 km W Yuscarán, Cerro Monserrat, 13°55'N 86°24'W, 1760 m, forest litter (R.S.Anderson), 7.vii.1994 (all - KSEM).



FIGURES 24-27. Aedeagus of *Seeverssiella globicollis* (Bernhauer) (Cypress Hills Provincial Park, Alberta). 24 – median lobe, parameral view; 25 – apex of median lobe, parameral view; 26 – median lobe, lateral view; 27 – apex of median lobe, lateral view. Scale bar 0.2 mm (24, 26), 0.1 mm (25, 27).

Diagnosis. *Seeversiella globicollis* can be distinguished from other species of *Seeversiella* by having dark brown body; temples 0.8-2.5 times as long as eyes; glossy pronotum with weak microsculpture; elytra longer than pronotum; wings fully developed, 4 times as long as elytra; tergum 8 with four pairs of macrosetae; the distinct shape of aedeagus (Figs. 24-31, 33-36), especially the hook-shaped distal sclerites of internal sac (Figs. 31, 35); and the shape of spermatheca (Fig. 32).



FIGURES 28-36. Genitalia of *Seeversiella globicollis* (Bernhauer) (28, 34-35, Cypress Hills Provincial Park, Alberta; 29-31, 33, 36, Cloudcroft, New Mexico; 32, Salmo, British Columbia). 28 – details of internal sac retracted into median lobe, abparameral view; 29 – everted internal sac, parameral view; 30 – medial lamellae, parameral view; 31 – right hook of internal sac; 32 – spermatheca; 33 – apex of left paramere; 34-35 – details of internal sac retracted into median lobe, lateral view; 36 – copulatory piece. Scale bar 0.2 mm (28, 34-35), 0.1 mm (29-33, 36). CP – copulatory piece; DS – distal sclerite of internal sac; LD – lateral diverticulum of internal sac; ML – medial lamellae.

Seeversiella globicollis differs from closely related *S. texana* in having darker body colour; less distinct microsculpture of head and pronotum; elytra longer than pronotum; fully developed wings, 4 times as long as elytra; straight apex of median lobe (in lateral view) (Figs. 26-27; 43-44); longer copulatory piece of internal sac (Figs. 29, 34; 46, 49-50) and spermatheca without umbilicus (Fig. 32).

Seeversiella globicollis differs from the other similar species of *Seeversiella* (3, 5-8, 10-12) with long elytra and weak pronotal microsculpture in having strongly sclerotized hook-shaped distal sclerites of internal sac and L-shaped spermatheca without umbilicus.

Description. Length 2.4-3.3 mm. Body dark brown, sometimes with lighter elytra and mouthparts.

Head surface glossy, partially with weak isodiametric microsculpture, with fine and weak punctation, distance between punctures equals 2-3 times their diameter. Temples 0.8-2.5 times as long as eyes. Antennal article 2 longer than article 3, article 4 slightly transverse, 5-10 transverse or strongly transverse (ratio 1.5-2.0) (Fig. 9).

Pronotum slightly transverse, 1.2 times as wide as head, width 0.44-0.54 mm, length 0.40-0.47 mm, width to length ratio 1.1, surface glossy, with weak and poorly visible (at 70x) isodiametric microsculpture; punctation as on head. Elytra wider and longer (measured from humeral angle) than pronotum (pronotal length to elytral length ratio 0.9), 1.2 times wider than long, glossy, with fine and weak isodiametric microsculpture, with fine and slightly asperate punctation, distance between punctures equal to 1-2 times their diameter. Wings fully developed, 4 times as long as elytra.

Abdominal terga glossy, with fine microsculpture consisting of strongly transverse meshes, with fine punctation, distance between punctures equals 2-4 times their diameter on terga 3-5 and 4-6 times on tergum 7. Apical margin of tergum 7 with white palisade fringe. Tergum 8 with four pairs of macrosetae (Figs. 20, 22).

In males posterior angles of tergum 3 projecting as spines up to 1 time as long as tergum 3 (measured medially) (Fig. 17), tergum 7 with medial carina along midline, the carina up to 2/3 as long as tergum length (Fig. 17). Posterior margin of male tergum 8 without emargination (Fig. 20).

Aedeagus as in Figs. 24-31, 33-36. Distal sclerites of internal sac hook-shaped (Figs. 31, 35). Proximal seta of the apex of paramere is much longer than the other three setae (Fig. 33).

Spermatheca as in Fig. 32, without umbilicus.

Synonyms. The types of *A. globicollis* agree completely with the detailed description (Ashe 1986) and with two examined paratypes of *S. bispinosa* from the type locality, in external characters and in male and female genitalia.

Three specimens in Fenyes collection (CASC) bear a label with the manuscript name "*Sipalia cristata* Fenyes". Fenyes never published a description of this species.

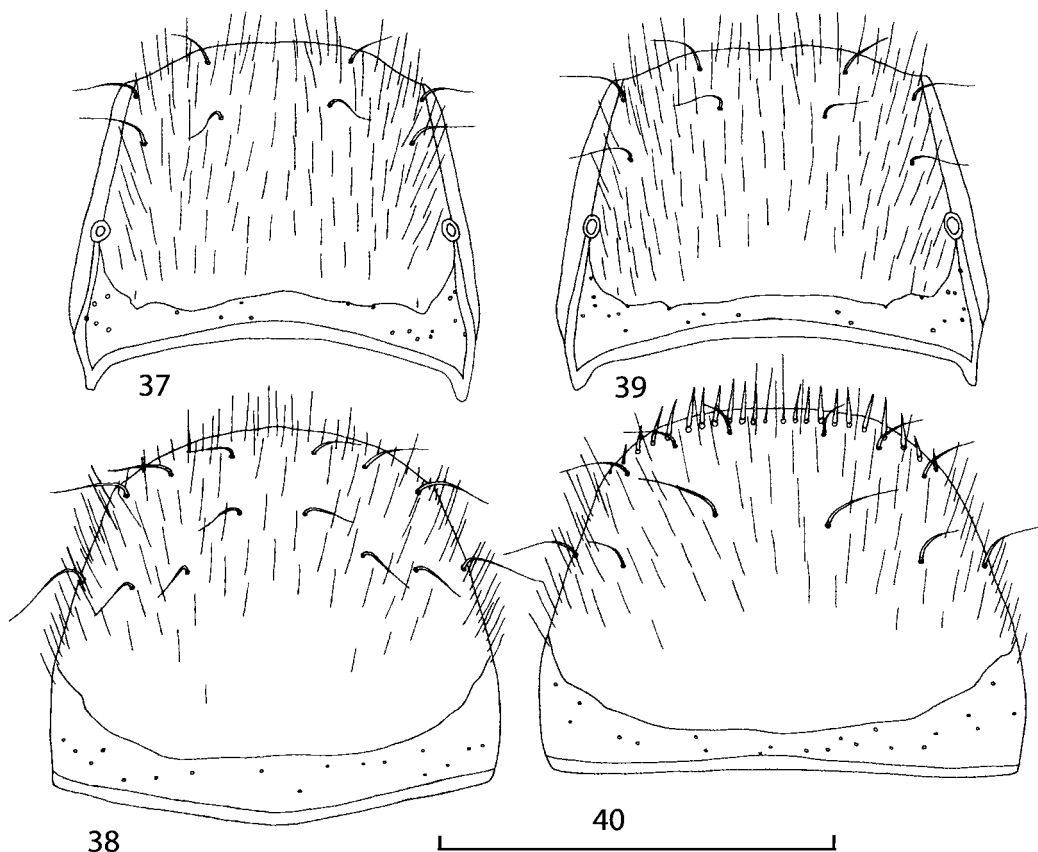
Distribution. Widespread in North America, from Canada to Honduras (Figs. 385-387).

Natural History. *Seeversiella globicollis* was collected in leaf litter, often near water. In the north of its range *S. globicollis* occurs at the sea level, in the southern United States and further south the species is restricted to mountainous forests, mostly above 2000 m.

2. *Seeversiella texana* Gusarov, sp. n. (Figs. 37-53)

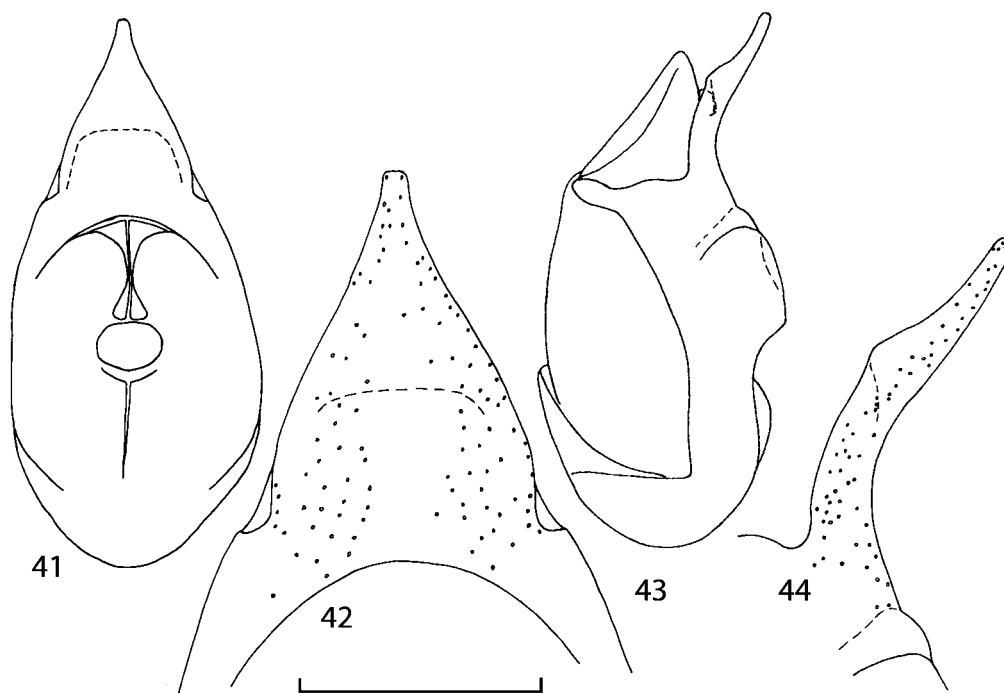
Type material. Holotype, ♂, **UNITED STATES: Texas:** Culberson Co.: Guadalupe Mts. N. P., The Bowl, jct. Tejas Tr. and Juniper Tr., 2407 m, berlese maple, oak, pine, ironwood litter (R.Anderson), 31.vii.1989 (KSEM).

Paratypes: **UNITED STATES: Texas:** Culberson Co.: 14 specimens, same data as the holotype; 4 specimens, ditto but mixed hardwood litter; 8 specimens, ditto but oak, conifer litter, 13.ix.1988 (all – KSEM).



FIGURES 37-40. Abdominal segment 8 of *Seeversiella texana* Gusarov, sp. n. (paratypes from Guadalupe Mountains National Park, Texas). 37 – male tergum 8; 38 – male sternum 8; 39 – female tergum 8; 40 – female sternum 8. Scale bar 0.4 mm.

Diagnosis. *Seeversiella texana* can be distinguished from other species of *Seeversiella* by having brown or brownish yellow body; small eyes (temples 2.1-2.7 times as long as eyes); glossy pronotum with weak microsculpture; wings reduced, 2 times as long as elytra; tergum 8 with four pairs of macrosetae; the distinct shape of aedeagus (Figs. 41-52), especially the hook-shaped distal sclerites of internal sac (Figs. 48, 51); and the shape of spermatheca (Fig. 53).

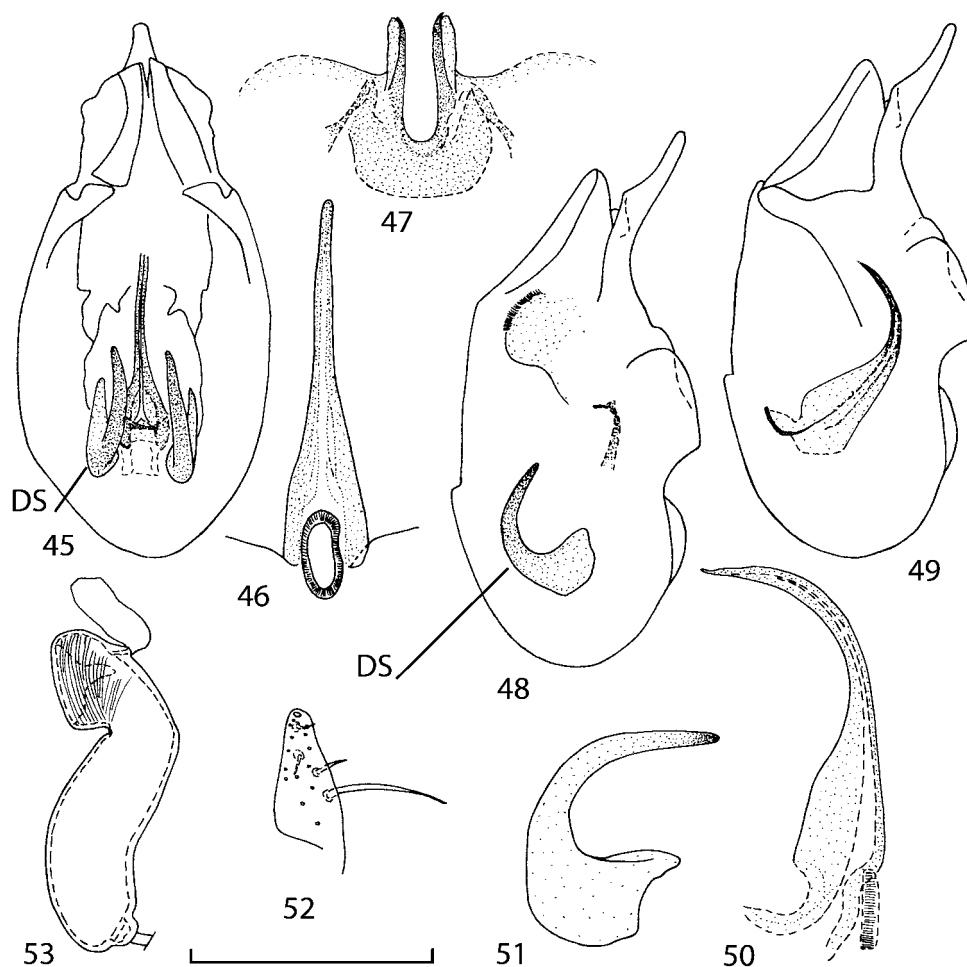


FIGURES 41-44. Aedeagus of *Seeversiella texana* Gusarov, **sp. n.** (paratypes from Guadalupe Mountains National Park, Texas). 41 – median lobe, parameral view; 42 – apex of median lobe, parameral view; 43 – median lobe, lateral view; 44 – apex of median lobe, lateral view. Scale bar 0.2 mm (41, 43), 0.1 mm (42, 44).

Seeversiella texana differs from closely related *S. globicollis* in having lighter body colour; more distinct microsculpture of head and pronotum; elytra shorter than pronotum; reduced wings, 2 times as long as elytra; apex of median lobe bent paramerally (in lateral view) (Figs. 43-44; 26-27), shorter copulatory piece of internal sac (Figs. 46, 49-50; 29, 34) and spermatheca with umbilicus (Fig. 53).

Seeversiella texana differs from the other similar species of *Seeversiella* with long elytra and weak pronotal microsculpture in having strongly sclerotized hook-shaped distal sclerites of internal sac and J-shaped spermatheca with large umbilicus.

Description. Length 2.5-2.8 mm. Body from brownish yellow to brown, head and abdominal segments 6-7 often darker, legs and mouthparts brownish yellow.



FIGURES 45-53. Genitalia of *Seeversiella texana* Gusarov, **sp. n.** (paratypes from Guadalupe Mountains National Park, Texas). 45 – details of internal sac retracted into median lobe, abparameral view; 46 – copulatory piece, parameral view; 47 – medial lamellae, parameral view; 48-49 – details of internal sac retracted into median lobe, lateral view; 50 – copulatory piece, lateral view; 51 – right hook of internal sac; 52 – apex of left paramere; 53 – spermatheca. Scale bar 0.2 mm (45, 48-49, 53), 0.1 mm (46-47, 50-52).

DS – distal sclerite of internal sac.

Head surface glossy, with weak isodiametric microsculpture, with fine, weak and poorly visible (at 70x) punctation, distance between punctures equals 2-3 times their diameter. Temples 2.1-2.7 times as long as eyes. Antennal article 2 longer than article 3, article 4 slightly transverse, 5-10 transverse or strongly transverse (ratio 1.5-2.0).

Pronotum slightly transverse, 1.2 times as wide as head, width 0.44-0.49 mm, length 0.41-0.46 mm, width to length ratio 1.1, surface glossy, with weak isodiametric microsculpture; punctation as on head. Elytra wider and shorter (measured from humeral angle)

than pronotum (pronotal length to elytral length ratio 1.1), 1.4 times wider than long, glossy, with weak isodiametric microsculpture, with fine and slightly asperate punctation, distance between punctures equal to 1-2 times their diameter. Wings reduced, 2 times as long as elytra.

Abdominal terga glossy, with fine microsculpture consisting of transverse meshes, with fine punctation, distance between punctures equals 2-3 times their diameter on terga 3-5 and 3-6 times on tergum 7. Apical margin of tergum 7 with white palisade fringe. Tergum 8 with four pairs of macrosetae (37, 39).

In males posterior angles of tergum 3 projecting as spines up to half as long as tergum 3 (measured medially), tergum 7 with medial carina along midline, the carina up to half as long as tergum length. Posterior margin of male tergum 8 without emargination (Fig. 37).

Aedeagus as in Figs. 41-52. Distal sclerites of internal sac hook-shaped (Figs. 48, 51). Proximal seta of the apex of paramere is much longer than the other three setae (Fig. 52).

Spermatheca as in Fig. 53.

Distribution. Known from the Guadalupe Mountains, Texas (Fig. 386).

Natural History. *Seeversiella texana* was collected at altitude of 2400 m in leaf litter.

3. *Seeversiella sonomotoides* Gusarov, sp. n. (Figs. 54-67)

Type material. Holotype, ♂, **UNITED STATES: Arizona:** Cochise Co.: Huachuca Mts., Carr Cny., 2150 m, leaf oak litter (P.M.Hammond), 23.vii.1976 (BMNH).

Paratypes: **UNITED STATES: Arizona:** Cochise Co.: 44 specimens, same data as the holotype (BMNH); 2 ♀♀, ditto but (J.M.Campbell) (CNCI, SPSU).

Diagnosis. *Seeversiella sonomotoides* can be distinguished from other species of *Seeversiella* by having brown body; large eyes (temples 1.7-2.1 times as long as eyes); glossy pronotum without microsculpture or with weak isodiametric microsculpture; tergum 8 with four pairs of macrosetae; the distinct shape of aedeagus (Figs. 58-61, 63-67), especially the dentiform distal sclerites of internal sac (Figs. 63, 65); and the shape of spermatheca (Fig. 62).

Seeversiella sonomotoides differs from closely related *S. nigriceps* in having wider distal sclerites of internal sac of aedeagus (Figs. 63, 65; 124).

Seeversiella sonomotoides differs from *S. liliputana* in having larger median lobe of aedeagus with longer apex (Figs. 58-61; 72-75).

Seeversiella sonomotoides differs from the similar species of *Seeversiella* with long elytra and weak pronotal microsculpture in having strongly dentiform distal sclerites of internal sac (Figs. 63, 65) and L-shaped spermatheca with small umbilicus (Fig. 62).

Description. Length 2.3-2.8 mm. Body brown, in some elytra and pronotum lighter, legs yellowish brown.

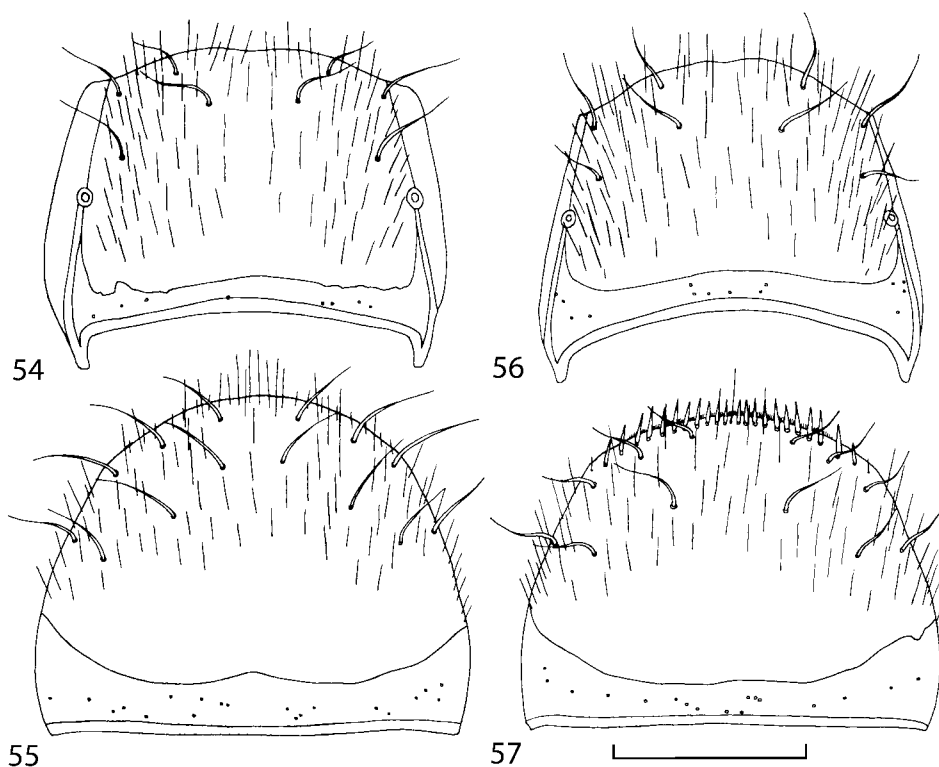
Head surface glossy, without microsculpture or with weak isodiametric microsculpture, with fine, weak and poorly visible punctation, distance between punctures equals 2-3

times their diameter. Temples 1.7-2.1 times as long as eyes. Antennal article 2 longer than article 3, articles 4-10 transverse or strongly transverse (ratio 1.5-2.0).

Pronotum slightly transverse, 1.2 times as wide as head, width 0.40-0.44 mm, length 0.36-0.43 mm, width to length ratio 1.1, surface glossy, without microsculpture; punctuation as on head. Elytra wider than pronotum and as long (measured from humeral angle) as pronotum (pronotal length to elytral length ratio 1.0), 1.3 times wider than long, glossy, with weak isodiametric microsculpture, with fine and slightly asperate punctuation, distance between punctures equal to 1-2 times their diameter. Wings fully developed, 3-4 times as long as elytra.

Abdominal terga glossy, with fine microsculpture consisting of transverse meshes, with fine punctuation, distance between punctures equals 2-3 times their diameter on terga 3-5 and 3-6 times on tergum 7. Apical margin of tergum 7 with white palisade fringe. Tergum 8 with four pairs of macrosetae (54, 56).

In males posterior angles of tergum 3 not projecting, tergum 7 without medial carina. Posterior margin of male tergum 8 slightly concave medially, but without emargination (Fig. 54).



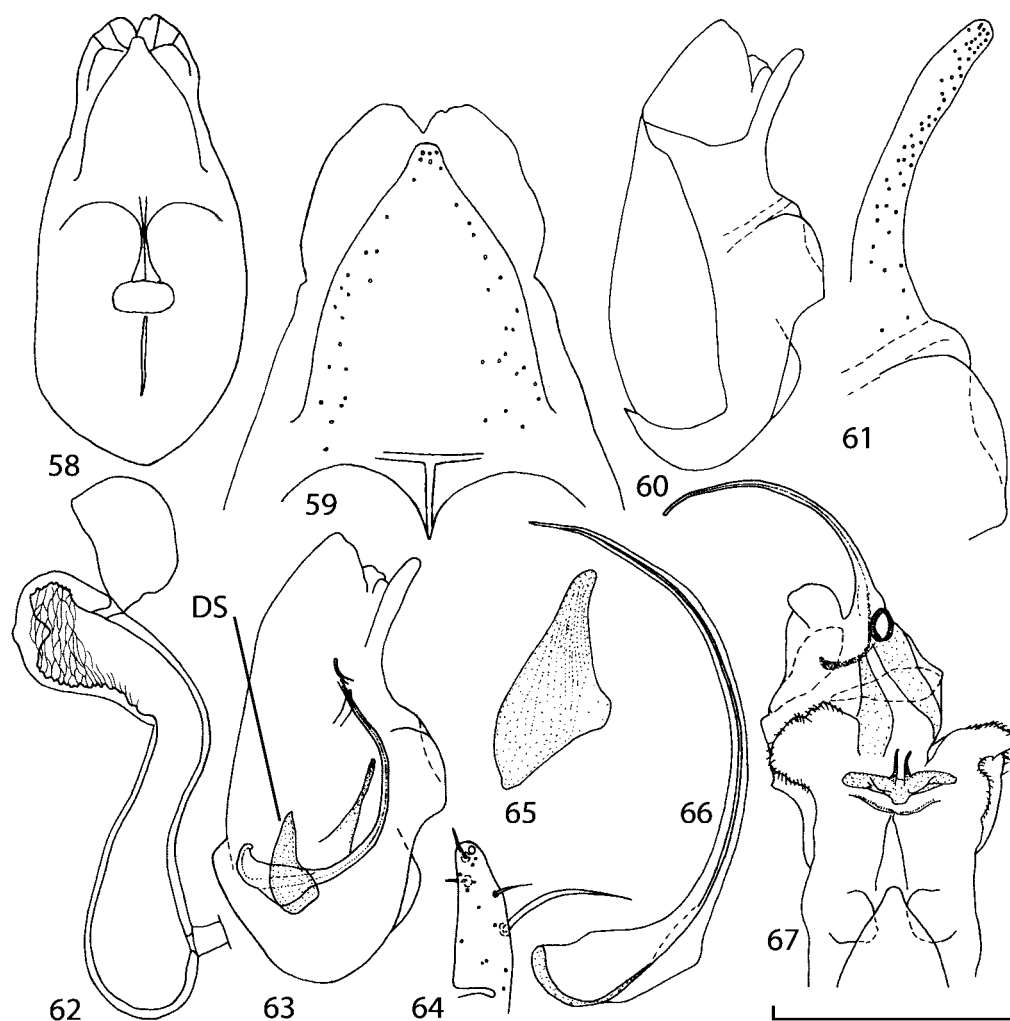
FIGURES 54-57. Abdominal segment 8 of *Seeversiella sonomotoides* Gusarov, **sp. n.** (paratypes from Carr Canyon, Arizona). 54 – male tergum 8; 55 – male sternum 8; 56 – female tergum 8; 57 – female sternum 8. Scale bar 0.2 mm.

Aedeagus as in Figs. 58-61, 63-67. Distal sclerites of internal sac dentiform (Figs. 63, 65). Proximal seta of the apex of paramere is much longer than the other three setae (Fig. 64).

Spermatheca as in Fig. 62.

Distribution. Known from the Huachuca Mountains, Arizona (Fig. 386).

Natural History. *Seeversiella sonomotoides* was collected in oak leaf litter at altitude of 2150 m.



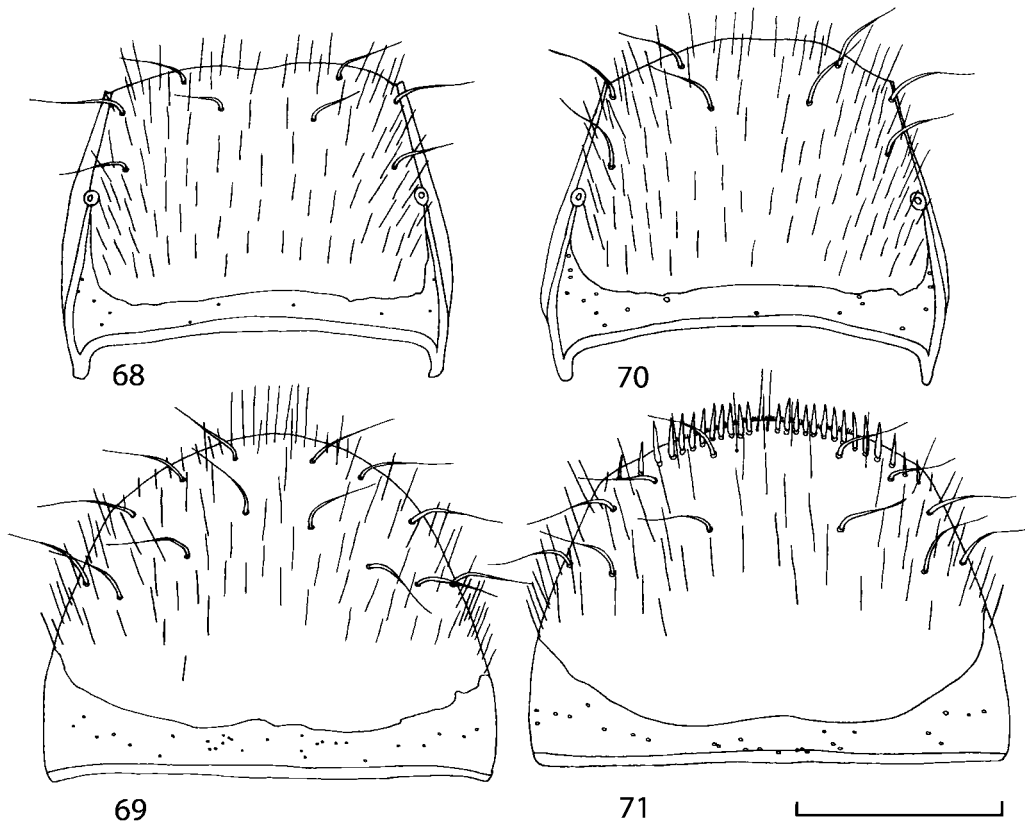
FIGURES 58-67. Genitalia of *Seeversiella sonomotoides* Gusarov, **sp. n.** (paratypes from Carr Canyon, Arizona). 58 – median lobe, parameral view; 59 – apex of median lobe, parameral view; 60 – median lobe, lateral view; 61 – apex of median lobe, lateral view; 62 – spermatheca; 63 – details of internal sac retracted into median lobe, lateral view; 64 – apex of left paramere; 65 – right hook of internal sac; 66 – copulatory piece, lateral view; 67 – everted internal sac, parameral view. Scale bar 0.2 mm (58, 60, 63, 67), 0.1 mm (59, 61-62, 64-66).

DS – distal sclerite of internal sac.

4. *Seeversiella liliputana* Gusarov, sp. n. (Figs. 68-78)

Type material. Holotype, ♂, UNITED STATES: Arizona: Cochise Co.: Huachuca Mts., Bear Saddle, 8100' (A.Smetana), 5.viii.1979 (CNCI).

Additional material. UNITED STATES: Arizona: Cochise Co.: ♀, same data as the holotype (CNCI).



FIGURES 68-71. Abdominal segment 8 of *Seeversiella liliputana* Gusarov, sp. n. (68-69, holotype; 70-71, possible female of *S. liliputana* from Bear Saddle, Arizona). 68 – male tergum 8; 69 – male sternum 8; 70 – female tergum 8; 71 – female sternum 8. Scale bar 0.2 mm.

Diagnosis. *Seeversiella liliputana* can be distinguished from other species of *Seeversiella* by having brown body; temples 2 times as long as eyes; pronotum without microsculpture; elytra as long as pronotum; tergum 8 with four pairs of macrosetae, and the distinct shape of aedeagus (Figs. 72-77).

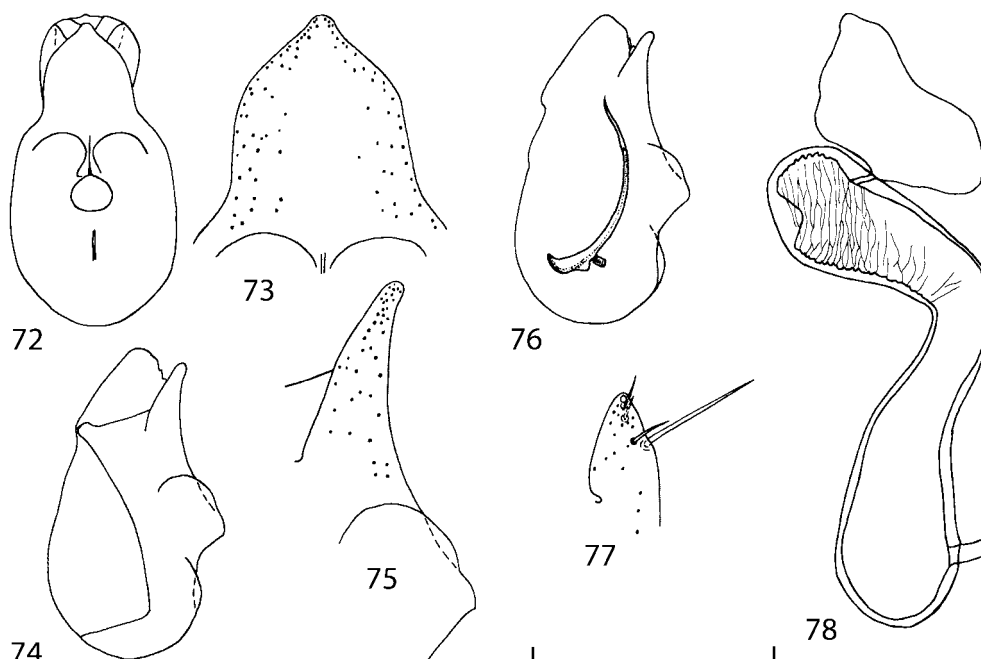
Seeversiella liliputana differs from *S. sonomotoides* in having smaller median lobe of aedeagus with shorter apex (Figs. 72-75; 58-61).

Description. Length 2.4 mm, pronotal width 0.41mm. Body brown, elytra and antennae light brown, legs and mouthparts brownish yellow.

In all character states *S. liliputana* is very similar to *S. sonomotoides*, but differs in the shape of the median lobe as described in the diagnosis.

In the only known male specimen the posterior angles of tergum 3 not projecting, tergum 7 without carina or tubercle.

Aedeagus as in Figs. 72-77.



FIGURES 72-78. Genitalia of *Seeversiella liliputana* Gusarov, **sp. n.** (72-77, holotype; 78, possible female of *S. liliputana* from Bear Saddle, Arizona). 72 – median lobe, parameral view; 73 – apex of median lobe, parameral view; 74 – median lobe, lateral view; 75 – apex of median lobe, lateral view; 76 – details of internal sac retracted into median lobe, lateral view; 77 – apex of left paramere; 78 – spermatheca. Scale bar 0.2 mm (72, 74, 76), 0.1 mm (73, 75, 77-78).

One female specimen, externally similar to the holotype of *S. liliputana*, was collected together with this holotype. However that female specimen has the spermatheca like in *S. sonomotoides* (Figs. 78, 62) and may belong to the latter species.

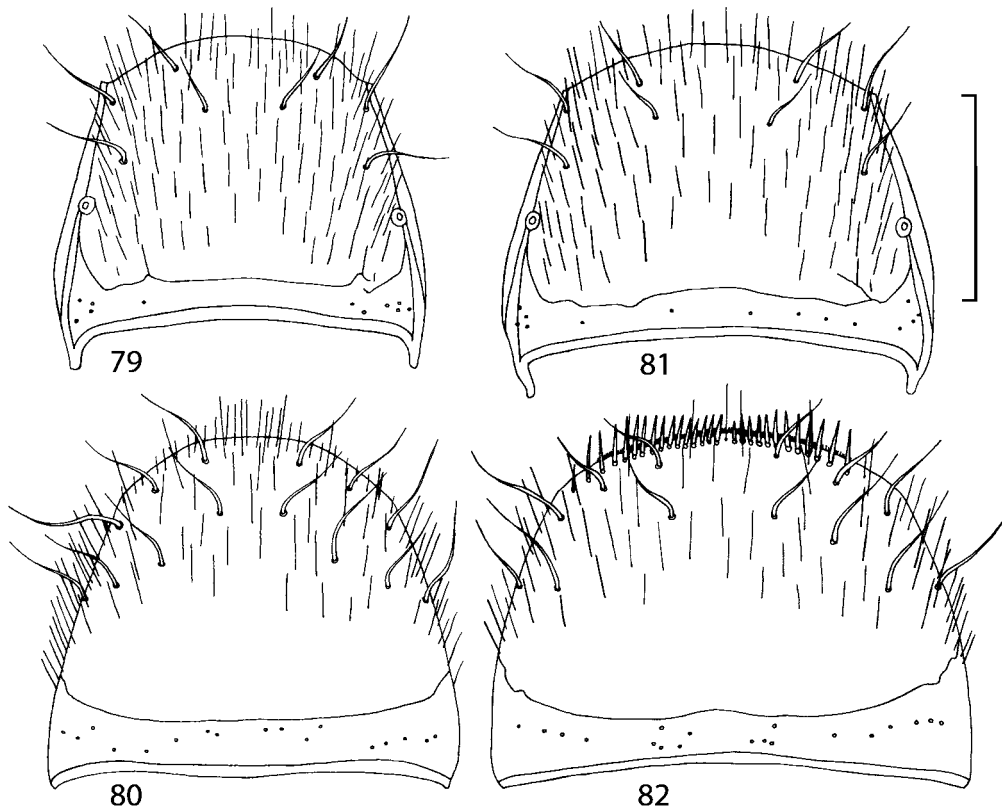
Distribution. Known from the Huachuca Mountains, Arizona (Fig. 386).

Natural History. *Seeversiella liliputana* was collected at altitude of 2470 m.

5. *Seeversiella fusca* Gusarov, sp. n. (Figs. 79-89)

Type material. Holotype, ♂, **MEXICO: Guerrero:** 71 km NE Atoyac de Alvarez, 1700 m, flight intercept trap (J.S.Ashe), 27.vii.1992 (KSEM).

Paratypes: **MEXICO: Guerrero:** ♂, 2♀♀, same data as the holotype; ♀, ditto but 25.vii.1992, forest litter; **Oaxaca:** 2♂♂, ♀, 38.4 km N Telixtlahuaca, Hwy. 131, 1880 m, forest litter (J.S.Ashe), 19.vii.1992 (all - KSEM).

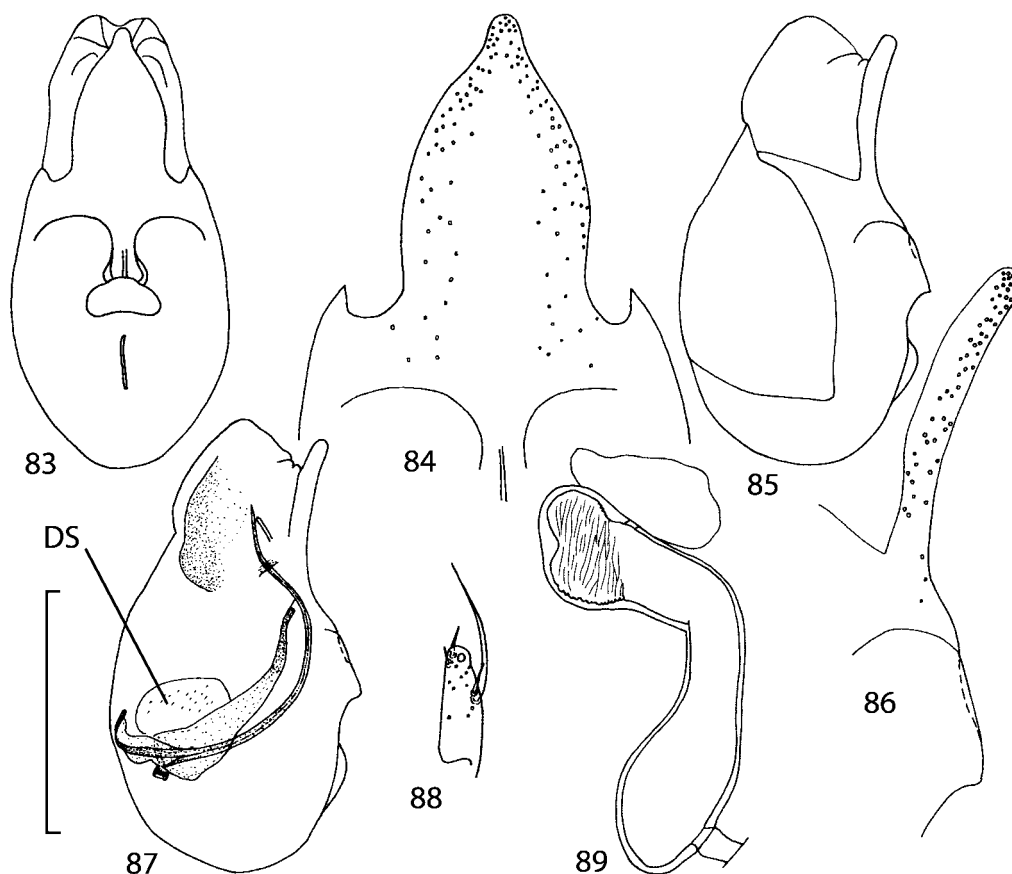


FIGURES 79-82. Abdominal segment 8 of *Seeversiella fusca* Gusarov, sp. n. (paratypes, 71 km NE Atoyac de Alvarez, Mexico). 79 – male tergum 8; 80 – male sternum 8; 81 – female tergum 8; 82 – female sternum 8. Scale bar 0.2 mm.

Diagnosis. *Seeversiella fusca* can be distinguished from other species of *Seeversiella* by having dark brown body; temples as long as eyes; glossy pronotum with weak microsculpture; elytra longer than pronotum; wings fully developed, tergum 8 with four pairs of macrosetae, the distinct shape of aedeagus (Figs. 83-88) and spermatheca (Fig. 89).

Seeversiella fusca can be distinguished from *S. globicollis* and the other similar species (3, 6-8, 10-12) with long elytra and weak pronotal microsculpture by the combination

of the following characters: distal sclerites of internal sac poorly sclerotized, not denticiform or hook-shaped and have weak spicules (Fig. 87); apex of median lobe in lateral view not widened subapically (Figs. 85-86); spermatheca L-shaped with small umbilicus and slightly curved in the proximal portion (Fig. 89).



FIGURES 83-89. Genitalia of *Seeversiella fusca* Gusarov, **sp. n.** (paratypes, 71 km NE Atoyac de Alvarez, Mexico). 83 – median lobe, parameral view; 84 – apex of median lobe, parameral view; 85 – median lobe, lateral view; 86 – apex of median lobe, lateral view; 87 – details of internal sac retracted into median lobe, lateral view; 88 – apex of left paramere; 89 – spermatheca. Scale bar 0.2 mm (83, 85, 87), 0.1 mm (84, 86, 88-89).

DS – distal sclerite of internal sac.

Description. Length 2.3-2.5 mm, pronotal width 0.46-0.50 mm. Body dark brown with lighter elytra, legs brown.

In all external character states *S. fusca* is very similar to *S. globicollis*, but differs in the shape of the aedeagus and spermatheca as described in the diagnosis.

In four examined males posterior angles of tergum 3 not projecting at all or projecting as spines up to 1/3 as long as tergum 3 (measured medially), tergum 7 without medial carina or tubercle.

Aedeagus as in Figs. 83-88.

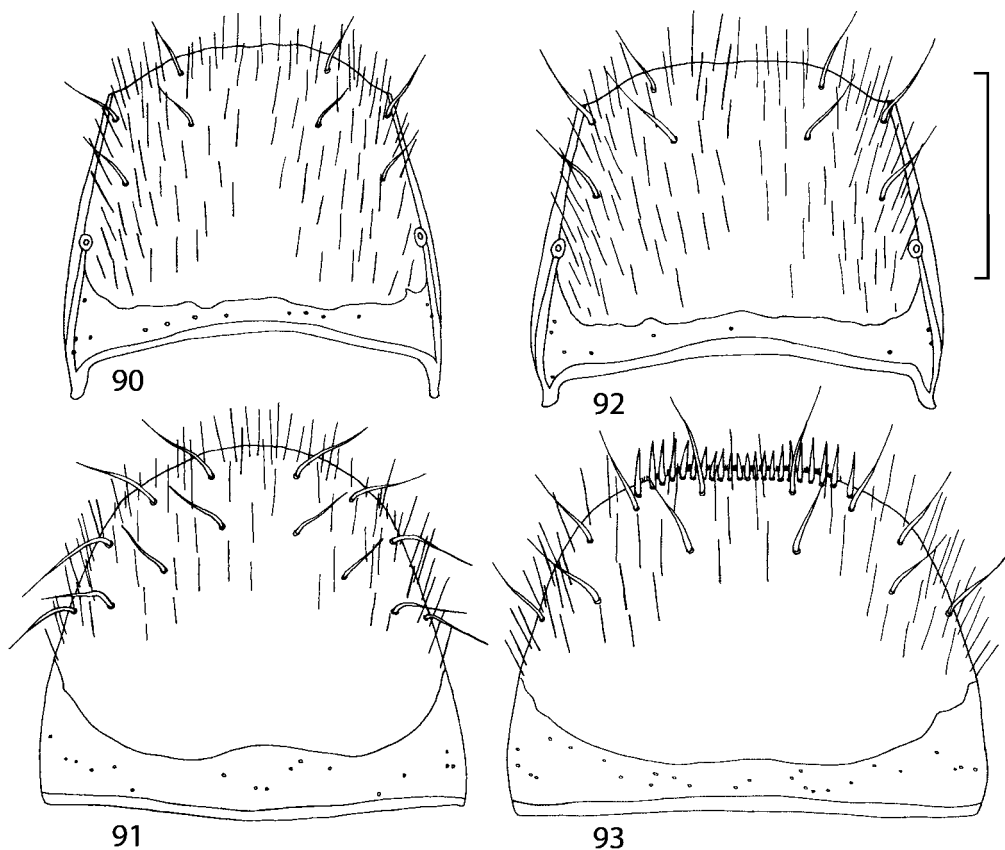
Spermatheca as in Fig. 89.

Distribution. Known from Mexico (Fig. 387).

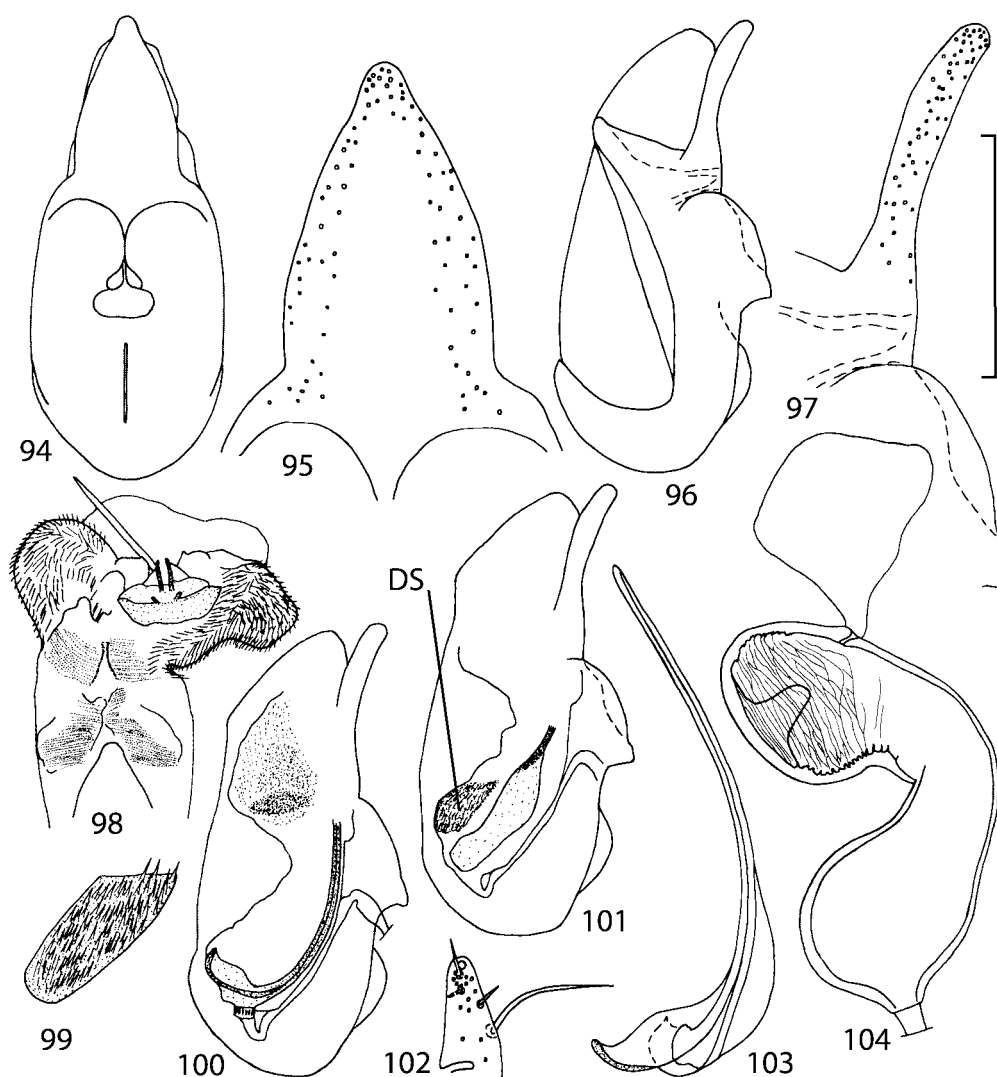
Natural History. *Seeversiella fusca* was collected in forest litter and with flight intercept traps at altitude of 1700-1900 m.

6. *Seeversiella castanea* Gusarov, sp. n. (Figs. 90-104)

Type material. Holotype, ♂, **MEXICO: Chiapas:** 2.8 km NW Las Piedrecitas, 5 km NW San Cristobal de las Casas, 2400 m, oak and pine forest litter (R.Anderson), 20.ix.1991 (KSEM).



FIGURES 90-93. Abdominal segment 8 of *Seeversiella castanea* Gusarov, sp. n. (paratypes from Rayon (90-91) and Las Piedrecitas (92-93), Mexico). 90 – male tergum 8; 91 – male sternum 8; 92 – female tergum 8; 93 – female sternum 8. Scale bar 0.2 mm.



FIGURES 94-104. Genitalia of *Seeversiella castanea* Gusarov, **sp. n.** (paratypes from Rayon (94-97, 99-102) and Las Piedrecitas (98, 103-104), Mexico). 94 – median lobe, parameral view; 95 – apex of median lobe, parameral view; 96 – median lobe, lateral view; 97 – apex of median lobe, lateral view; 98 – everted internal sac, parameral view; 99 – right hook of internal sac; 100-101 – details of internal sac retracted into median lobe, lateral view; 102 – apex of left paramere; 103 – copulatory piece, lateral view; 104 – spermatheca. Scale bar 0.2 mm (94, 96, 98, 100-101), 0.1 mm (95, 97, 99, 102-104).

DS – distal sclerite of internal sac.

Paratypes: **MEXICO: Chiapas:** 10 specimens, same data as the holotype; 6 specimens, Yerbabuena Reserve, 2.1 km NW Pueblo Nuevo Solistahuacan, 2070 m, liquidambar forest litter (R.Anderson), 23.ix.1992; 6 specimens, 8.9 km E Rayon, 1500 m, cloud

forest litter (R.Anderson), 19.ix.1991; **HONDURAS: La Paz:** 2♂♂, 4♀♀, Cord. Montecillos, 18 km NW La Paz, 14°21'N 87°47'W, 2000 m, pine and hardwood forest litter (R.Anderson), 21.viii.1994 (all - KSEM).

Diagnosis. *Seeversiella castanea* can be distinguished from other species of *Seeversiella* by having brown body; temples 1.5-1.7 times as long as eyes; glossy pronotum with weak isodiametric microsculpture; elytra longer or as long as pronotum; wings fully developed; tergum 8 with four pairs of macrosetae; the distinct shape of aedeagus (Figs. 94-103) and spermatheca (Fig. 104).

Seeversiella castanea can be distinguished from *S. globicollis* and the other similar species (3, 5, 7-8, 10-12) with long elytra and weak pronotal microsculpture by the combination of the following characters: distal sclerites of internal sac poorly sclerotized, not dentiform or hook-shaped and have strong spicules (Figs. 99, 101); apex of median lobe in lateral view not widened subapically (Figs. 96-97); spermatheca C-shaped with large umbilicus (Fig. 104).

Description. Length 2.3-2.8 mm, pronotal width 0.46-0.50 mm. Body brown to dark brown with lighter pronotum and elytra, legs brown.

In all external character states *S. castanea* is similar to *S. globicollis*, but differs in the shape of the aedeagus and spermatheca as described in the diagnosis.

In large males posterior angles of male tergum 3 projecting as spines up to 1 time as long as tergum 3 (measured medially), tergum 7 with medial carina along midline, the carina up to 2/3 as long as tergum length.

Aedeagus as in Figs. 94-103.

Spermatheca as in Fig. 104.

Distribution. Known from Mexico and Honduras (Fig. 387).

Natural History. *Seeversiella castanea* was collected in forest litter at altitude of 2000-2400 m.

7. *Seeversiella tuberculicauda* Gusarov, sp. n. (Figs. 105-116)

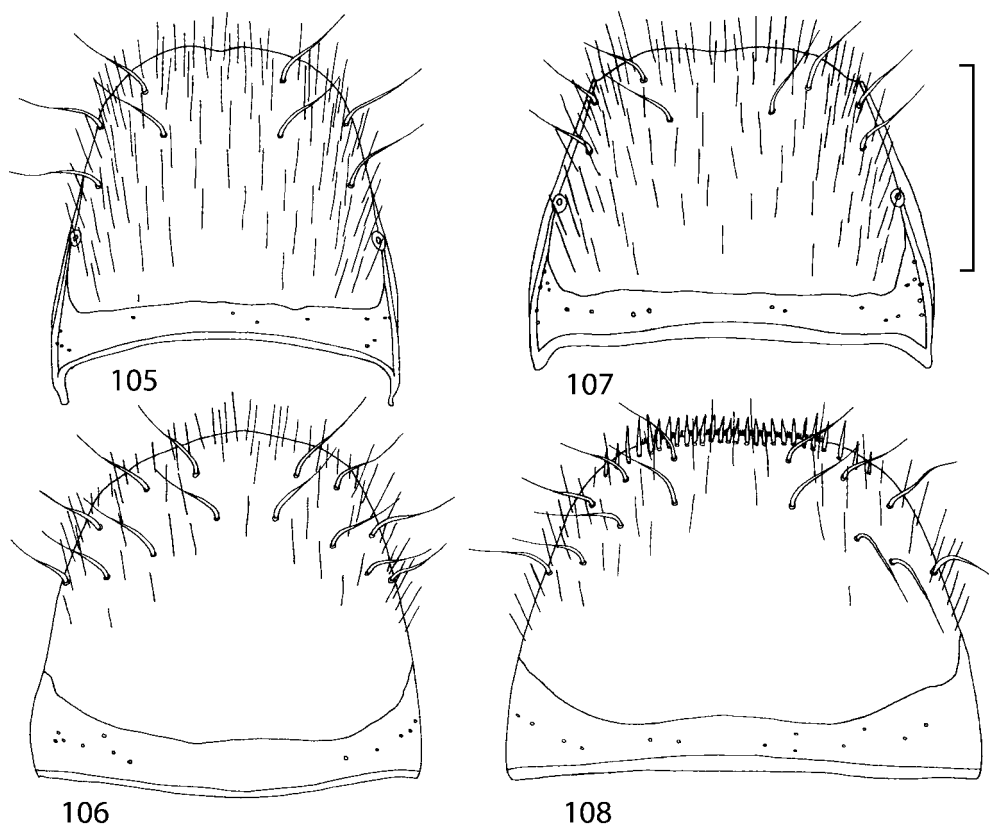
Type material. Holotype, ♂, **MEXICO: Veracruz:** 2.3 km S Jalapa, 1320 m, stream-side litter (J.S.Ashe), 13.vii.1992 (KSEM).

Paratypes: **MEXICO: Veracruz:** ♀, same data as the holotype (KSEM).

Diagnosis. *Seeversiella tuberculicauda* can be distinguished from other species of *Seeversiella* by having brown body; temples 1.2 times as long as eyes; glossy pronotum with weak isodiametric microsculpture; elytra longer than pronotum; wings fully developed; tergum 8 with four pairs of macrosetae; the distinct shape of aedeagus (Figs. 110-115) and spermatheca (Fig. 116).

Seeversiella tuberculicauda can be distinguished from *S. globicollis* and the other similar species (3, 5-6, 8, 10-12) with long elytra and weak pronotal microsculpture by the combination of the following characters: distal sclerites of internal sac poorly sclerotized,

not dentiform or hook-shaped and have weak spicules (Fig. 114); apex of median lobe in lateral view widened subapically and not emarginate on parameral side (Figs. 112-113), in parameral view wide (Figs. 110-111); spermatheca L-shaped with small umbilicus and straight proximal portion (Fig. 116).



FIGURES 105-108. Abdominal segment 8 of *Seeversiella tuberculicauda* Gusarov, **sp. n.** (105-106, holotype; 107-108, paratype from Jalapa, Mexico). 105 – male tergum 8; 106 – male sternum 8; 107 – female tergum 8; 108 – female sternum 8. Scale bar 0.2 mm.

Description. Length 2.4 mm, pronotal width 0.49 mm. Body dark brown, legs brown.

In all external character states *S. tuberculicauda* is very similar to *S. globicollis*, but differs in the shape of the aedeagus and spermatheca as described in the diagnosis.

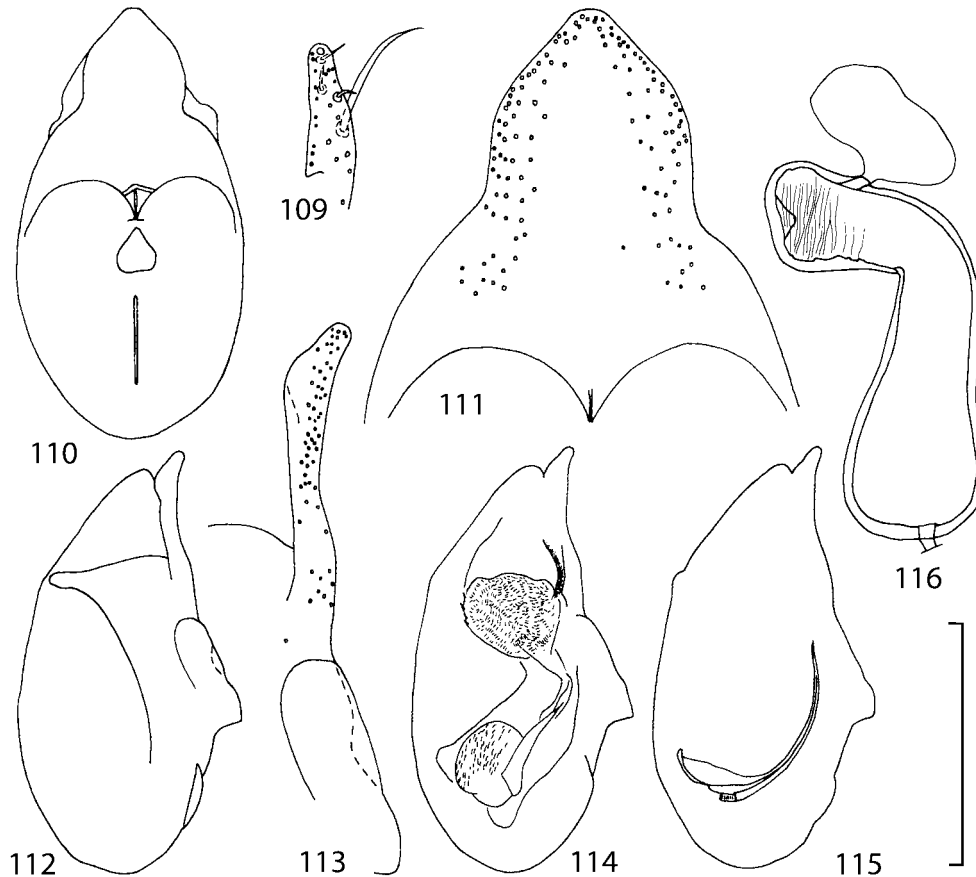
In the only known male specimen the posterior angles of male tergum 3 projecting as spines twice as long as tergum 3 (measured medially), tergum 7 in basal third with medial tubercle.

Aedeagus as in Figs. 110-115.

Spermatheca as in Fig. 116.

Distribution. Known from Mexico (Fig. 387).

Natural History. *Seeversiella tuberculicauda* was collected in streamside litter at altitude of 1320 m.



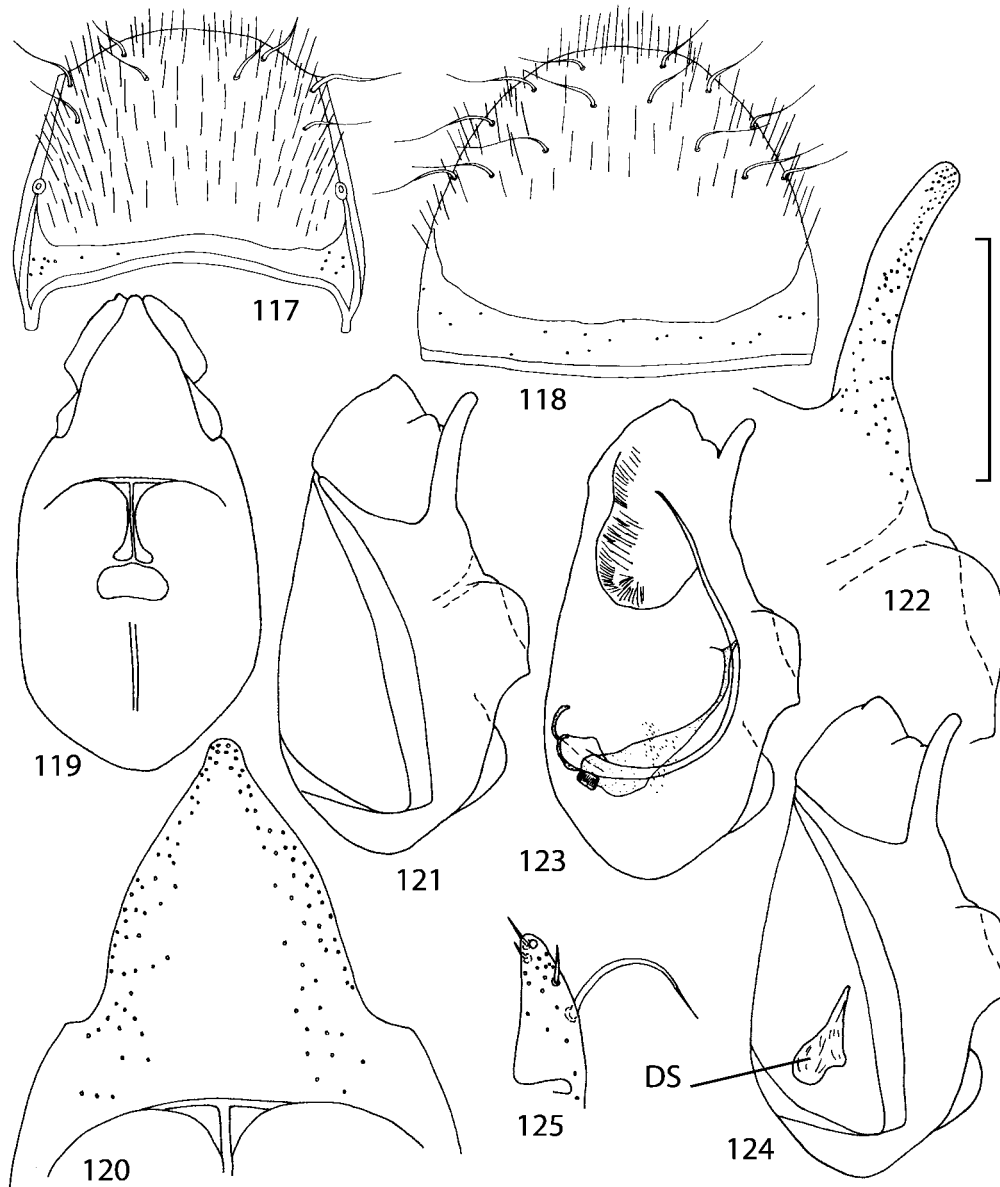
FIGURES 109-116. Genitalia of *Seeversiella tuberculicauda* Gusarov, *sp. n.* (109-115, holotype; 116, paratype from Jalapa, Mexico). 109 – apex of left paramere; 110 – median lobe, parameral view; 111 – apex of median lobe, parameral view; 112 – median lobe, lateral view; 113 – apex of median lobe, lateral view; 114-115 – details of internal sac retracted into median lobe, lateral view; 116 – spermatheca. Scale bar 0.1 mm (109, 111, 113, 116), 0.2 mm (110, 112, 114-115).

8. *Seeversiella nigriceps* Gusarov, *sp. n.* (Figs. 117-125)

Type material. Holotype, ♂, **MEXICO: Puebla:** 1.6 km E Nicolas Bravo, 2410 m, forest litter (J.S.Ashe), 17.vii.1992 (KSEM).

Diagnosis. *Seeversiella nigriceps* can be distinguished from other species of *Seeversiella* by having brown body; temples twice as long as eyes; glossy pronotum with weak and partially missing microsculpture; elytra longer than pronotum; wings fully developed; tergum 8 with four pairs of macrosetae; and the distinct shape of aedeagus (Figs. 119-125).

Seeversiella nigriceps differs from closely related *S. sonomotoides* in having narrower distal sclerites of internal sac of aedeagus (Figs. 124; 63, 65).



FIGURES 117-125. Abdominal segment 8 and aedeagus of *Seeversiella nigriceps* Gusarov, **sp. n.** (holotype). 117 – male tergum 8; 118 – male sternum 8; 119 – median lobe, parameral view; 120 – apex of median lobe, parameral view; 121 – median lobe, lateral view; 122 – apex of median lobe, lateral view; 123-124 – details of internal sac retracted into median lobe, lateral view; 125 – apex of left paramere. Scale bar 0.3 mm (117-118), 0.2 mm (119, 121, 123-124), 0.1 mm (120, 122, 125). DS – distal sclerite of internal sac.

Seeversiella nigriceps can be distinguished from *S. globicollis* and the other similar species (5-7, 10-12) with long elytra and weak pronotal microsculpture by the combination of the following characters: distal sclerites of internal sac sclerotized and dentiform (Fig. 124); apex of median lobe in lateral view not widened subapically (Figs. 121-122).

Description. Length 2.4 mm, pronotal width 0.47 mm. Body dark brown, elytra and legs brown.

In all character states *S. nigriceps* is very similar to *S. sonomotoides*, but differs in the shape of the distal sclerites of internal sac as described in the diagnosis.

In the only known male specimen the posterior angles of male tergum 3 not projecting as spines, tergum 7 in front of posterior margin with small medial tubercle.

Aedeagus as in Figs. 119-125.

Female unknown.

Distribution. Known from Mexico (Fig. 387).

Natural History. The only known specimen of *S. nigriceps* was collected in forest litter at altitude of 2410 m.

9. *Seeversiella grandis* Gusarov, sp. n. (Figs. 126-134)

Type material. Holotype, ♂, GUATEMALA: Quetzaltenango: 8 km SE Zunil, 2620 m, flight intercept trap (J.S.Ashe & R.Brooks), 19-21.vi.1993 (KSEM).

Diagnosis. *Seeversiella grandis* can be distinguished from other species of *Seeversiella* by having large body (3.7 mm), brownish black body with brown elytra and legs; large eyes (temple length to eye length ratio 0.9); matte pronotum with strong isodiametric microsculpture; elytra longer than pronotum; wings fully developed; tergum 8 with four pairs of macrosetae; and the distinct shape of aedeagus (Figs. 129-134).

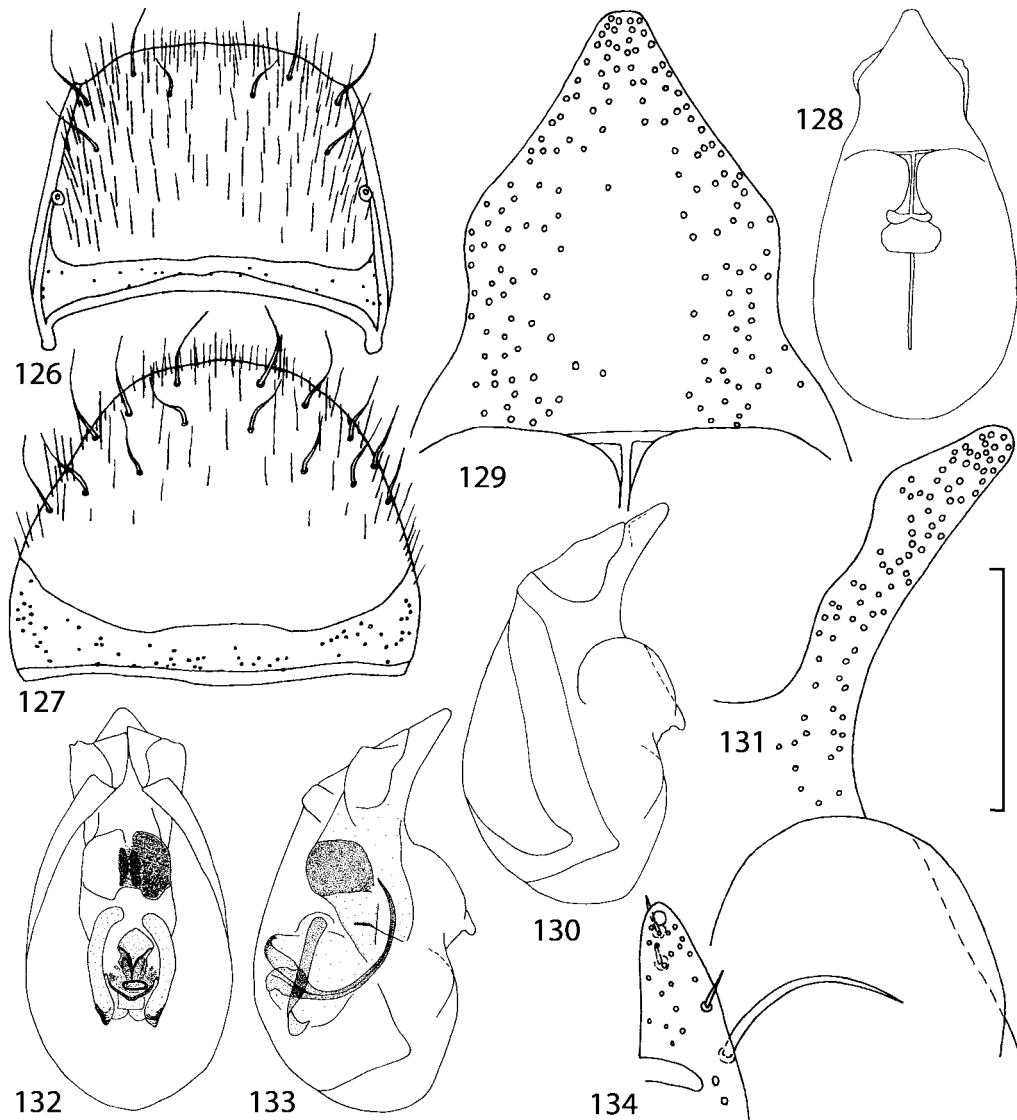
Description. Length 3.7 mm. Body brownish black, elytra and legs brown.

Head surface matte, with fine isodiametric microsculpture, fine punctation, distance between punctures equals 1-2 times their diameter, anteromedial portion of the disc without punctation. Temple length to eye length ratio 0.9. Antennal article 2 as long as 3, article 4 elongate (ratio 1.2), 5 quadrate, 6-10 transverse (ratio 1.2-1.3).

Pronotum slightly transverse, 1.3 times as wide as head, width 0.74 mm, length 0.66 mm, width to length ratio 1.1, surface matte, with fine isodiametric microsculpture and fine punctation, distance between punctures equals ½-1 times their diameter. Elytra wider and longer (measured from humeral angle) than pronotum (pronotal length to elytral length ratio 0.8), 1.3 times wider than long, glossy, with fine and weak isodiametric microsculpture; with fine and asperate punctation, distance between punctures equal to ½-1 time their diameter. Wings fully developed.

Abdominal terga glossy, terga 3-6 with fine microsculpture consisting of transverse waves and strongly transverse meshes, with fine punctation, distance between punctures equals 3-6 times their diameter. Tergum 7 with microsculpture consisting of transverse

meshes and with fine and sparse punctation, distance between punctures equal to 4-7 times their diameter. Apical margin of tergum 7 with white palisade fringe. Tergum 8 with four pairs of macrosetae (Fig. 126).



FIGURES 126-134. Abdominal segment 8 and aedeagus of *Seeversiella grandis* Gusarov, **sp. n.** (holotype). 126 – male tergum 8; 127 – male sternum 8; 128 – median lobe, parameral view; 129 – apex of median lobe, parameral view; 130 – median lobe, lateral view; 131 – apex of median lobe, lateral view; 132 – details of internal sac retracted into median lobe, abparameral view; 133 – details of internal sac retracted into median lobe, lateral view; 134 – apex of left paramere. Scale bar 0.4 mm (126-127), 0.3 mm (128, 130, 132-133), 0.1 mm (129, 131, 134).

In the only known male specimen pronotum with wide medial impression, posterior margin of male tergum 3 with two short and obtuse projections (as in Fig. 19), tergum 7 with medial tubercle in front of posterior margin. Posterior margin of male tergum 8 without emargination (Fig. 126). Aedeagus as in Figs. 129-134. Proximal seta of the apex of paramere is much longer than the other three setae (Fig. 134).

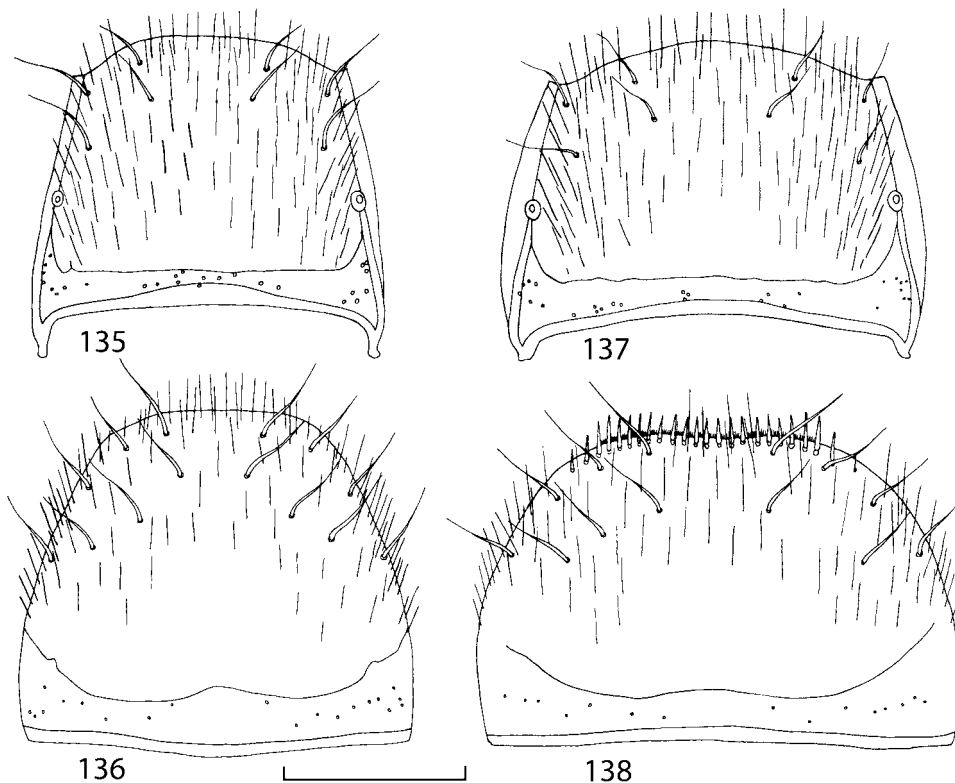
Female unknown.

Distribution. Known from Guatemala (Fig. 387).

Natural History. The only known specimen of *S. grandis* was collected with a flight intercept trap at altitude of 2620 m.

10. *Seeversiella mexicana* Gusarov, sp. n. (Figs. 135-149)

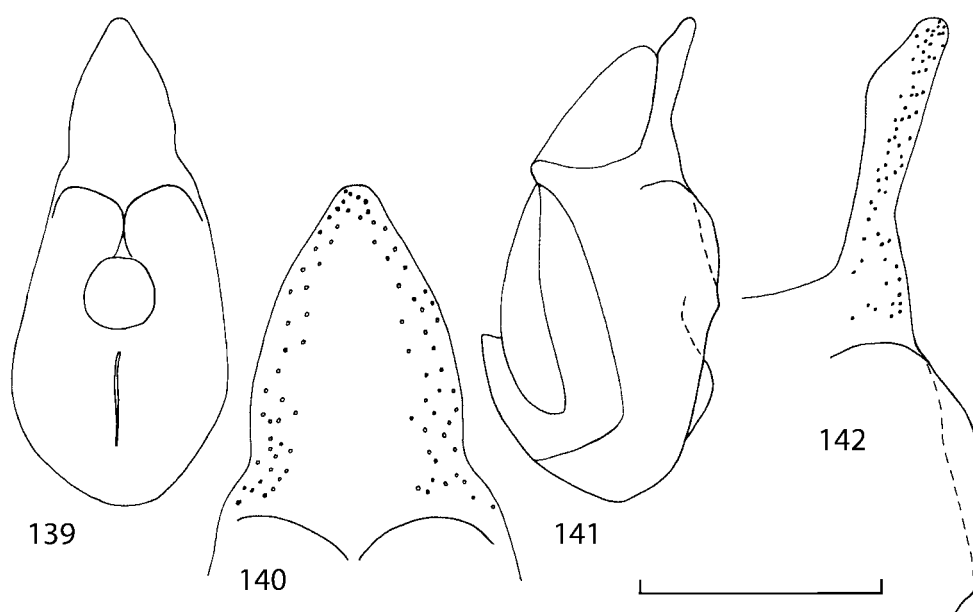
Type material. Holotype, ♂, MEXICO: Oaxaca: 4.6 km S Suchixtepec, 2150 m, leaf litter in riparian alder forest (R.S.Anderson), 23.vii.1992 (KSEM).



FIGURES 135-138. Abdominal segment 8 of *Seeversiella mexicana* Gusarov, sp. n. (paratypes from Filo de Caballo (135-136) and Suchixtepec (137-138), Mexico). 135 – male tergum 8; 136 – male sternum 8; 137 – female tergum 8; 138 – female sternum 8. Scale bar 0.2 mm.

Paratypes: **MEXICO: Oaxaca:** 2♂♂, 5♀♀, same data as the holotype; ♂, 2♀♀, ditto but 5.1 km S Suchixtepec, oak, pine and alder forest litter, 25.vii.1992; ♂, 4♀♀, ditto but 24.vii.1992; **Guerrero:** 3♂♂, 4♀♀, 71 km NE Atoyac de Alvarez, 1700 m, forest litter (J.S.Ashe), 25.vii.1992; 3♂♂, ♀, 5.6 km SW Filo de Caballo, 2310 m, alder forest litter (R.S.Anderson), 13.vii.1992 (all - KSEM).

Diagnosis. *Seeversiella mexicana* can be distinguished from other species of *Seeversiella* by having brown body; temples 1.2-2.0 times as long as eyes; glossy pronotum with weak isodiametric microsculpture; elytra longer or a little shorter than pronotum (elytral length to pronotal length ratio 1.2-0.9); wings fully developed or reduced; tergum 8 with four pairs of macrosetae; the distinct shape of aedeagus (Figs. 139-148) and spermatheca (Fig. 149).



FIGURES 139-142. Aedeagus *Seeversiella mexicana* Gusarov, **sp. n.** (paratypes from Filo de Caballo, Mexico). 139 – median lobe, parameral view; 140 – apex of median lobe, parameral view; 141 – median lobe, lateral view; 142 – apex of median lobe, lateral view. Scale bar 0.2 mm (139, 141), 0.1 mm (140, 142).

Seeversiella mexicana can be distinguished from *S. globicollis* and the other similar species (3, 5-8, 11-12) with long elytra and weak pronotal microsculpture by the combination of the following characters: distal sclerites of internal sac poorly sclerotized, not dentiform or hook-shaped and have strong spicules (Fig. 146); apex of median lobe in lateral view widened subapically and not emarginate on parameral side (Figs. 141-142), in parameral view narrow and with weak basal constriction (Figs. 139-140); spermatheca S-shaped with umbilicus facing proximally (Fig. 149).

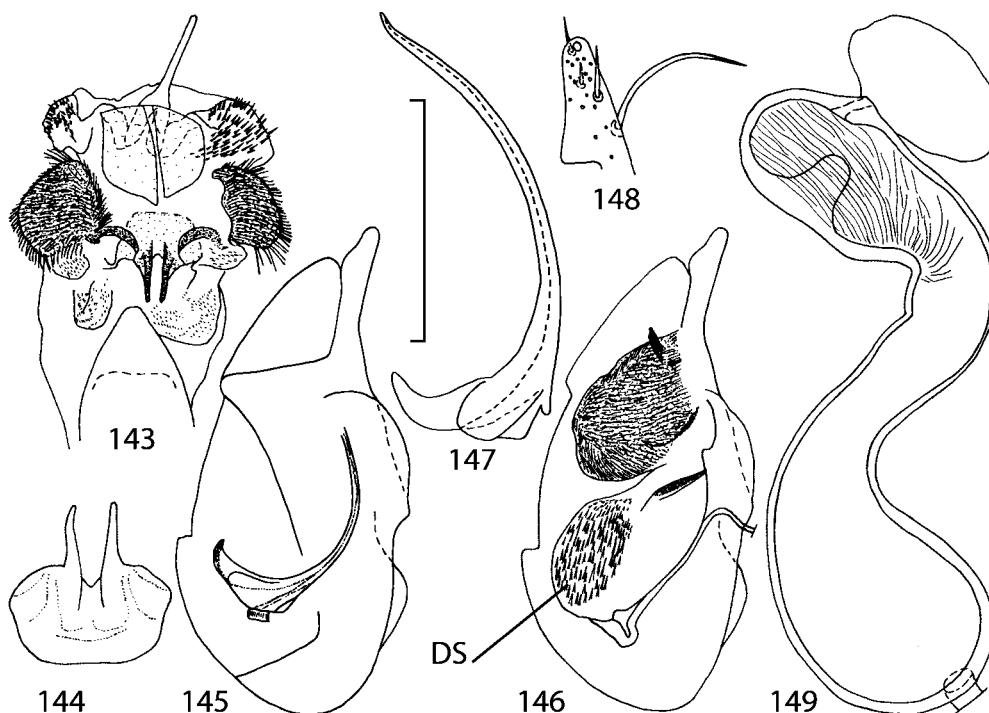
Description. Length 2.2-2.8 mm, pronotal width 0.41-0.53 mm. Body brown to dark brown with lighter elytra, legs brown to yellowish brown.

In all character states *S. mexicana* is very similar to *S. globicollis*, but differs in the shape of the aedeagus and spermatheca as described in the diagnosis.

In large males posterior angles of male tergum 3 projecting as spines up to twice as long as tergum 3 (measured medially), tergum 7 with medial carina along midline, the carina up to 2/3 as long as tergum length.

Aedeagus as in Figs. 139-148.

Spermatheca as in Fig. 149.



FIGURES 143-149. Genitalia of *Seeversiella mexicana* Gusarov, **sp. n.** (paratypes from Filo de Caballo (143, 145-148) Suchixtepec (144, 149), Mexico). 143 – everted internal sac, parameral view; 144 – medial lamellae, parameral view; 145-146 – details of internal sac retracted into median lobe, lateral view; 147 – copulatory piece, lateral view; 148 – apex of left paramere; 149 – spermatheca. Scale bar 0.2 mm (143, 145-146), 0.1 mm (144, 147-149). DS – distal sclerite of internal sac.

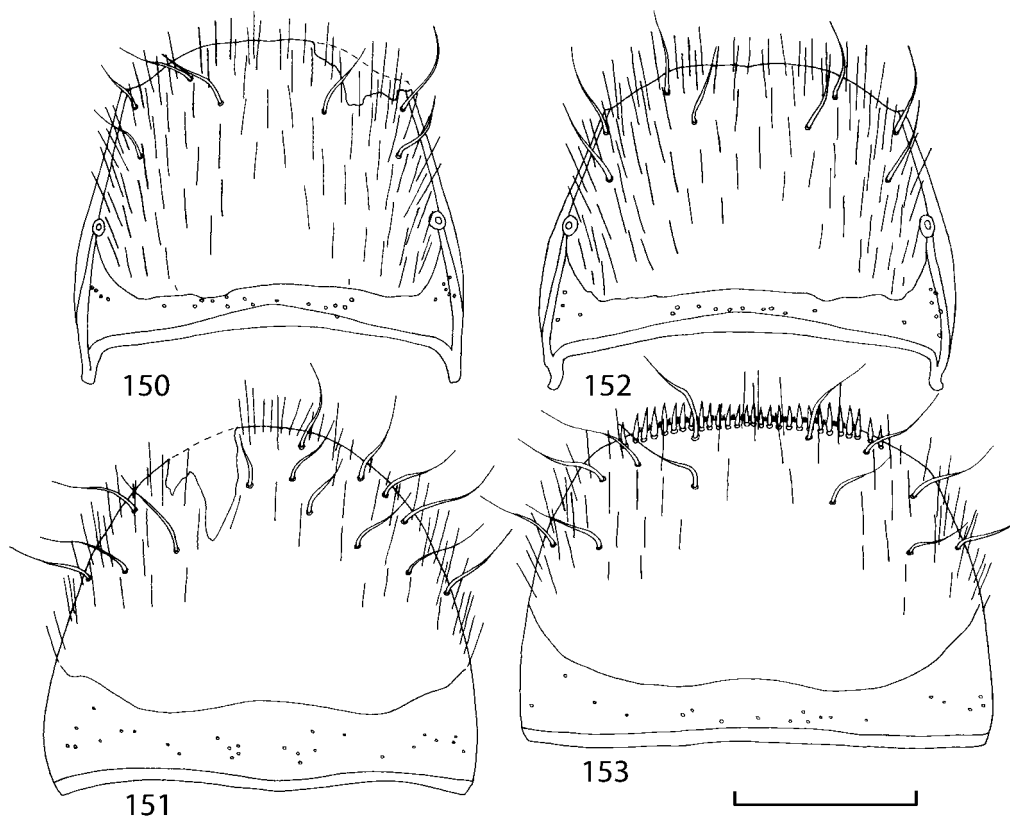
Distribution. Known from Mexico (Fig. 387).

Natural History. *Seeversiella mexicana* was collected in forest litter at altitude of 1700-2310 m.

11. *Seeversiella badia* Gusarov, sp. n. (Figs. 150-160)

Type material. Holotype, ♂, **EL SALVADOR: Santa Ana:** Montecristo, 21.7 km NE Metapan, 2100 m, cloud forest litter (R.S.Anderson), 29.viii.1994 (KSEM).

Paratypes: **EL SALVADOR: Santa Ana:** 2♀, same data as the holotype (all - KSEM).

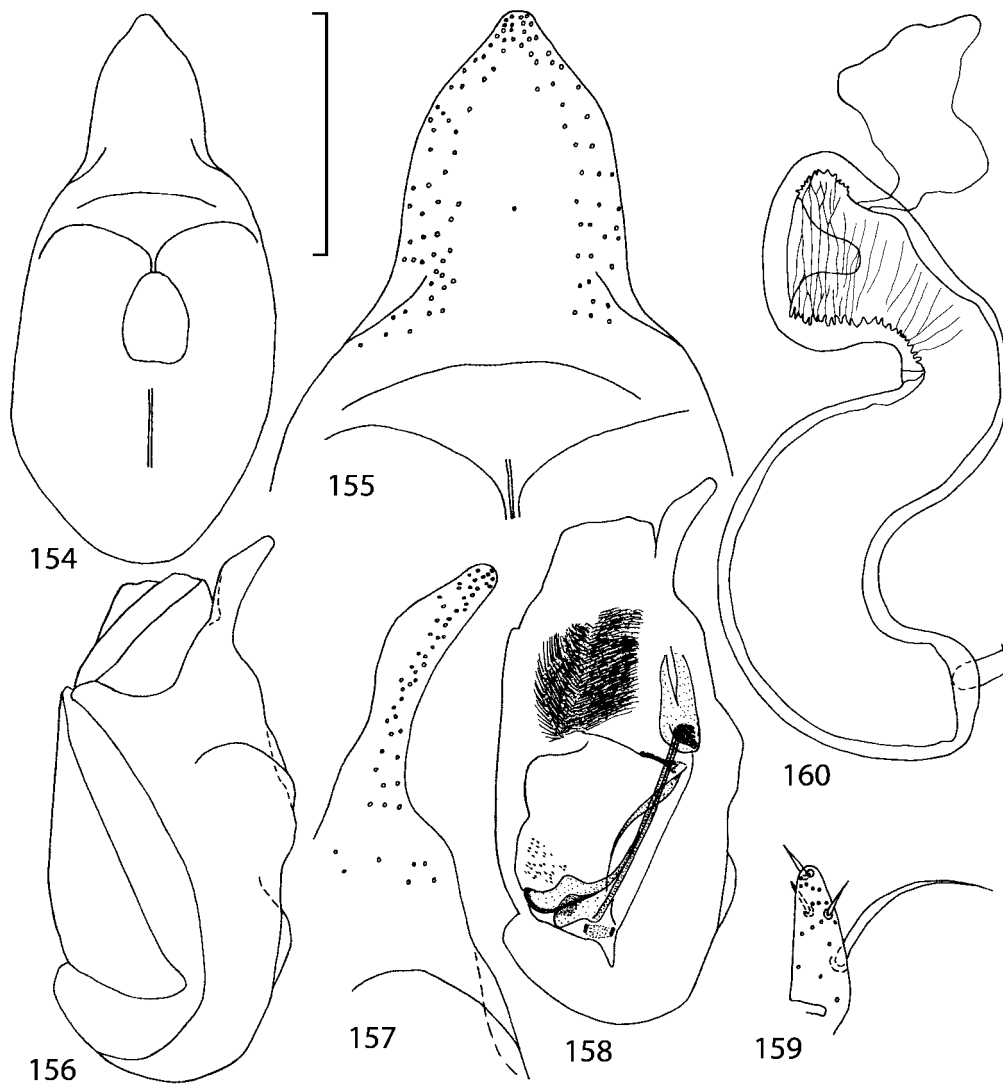


FIGURES 150-153. Abdominal segment 8 of *Seeversiella badia* Gusarov, sp. n. (150-151, holotype; 152-153, paratype, 21.7 km NE Metapan, El Salvador). 150 – male tergum 8; 151 – male sternum 8; 152 – female tergum 8; 153 – female sternum 8. Scale bar 0.2 mm.

Diagnosis. *Seeversiella badia* can be distinguished from other species of *Seeversiella* by having brown body; temples 1.7-2.0 times as long as eyes; glossy pronotum with weak isodiametric microsculpture; elytra as long as pronotum; tergum 8 with four pairs of macrosetae; the distinct shape of aedeagus (Figs. 154-159) and spermatheca (Fig. 160).

Seeversiella badia differs from closely related *S. similis* in that the apex of median lobe in lateral view is emarginate on parameral side (Figs. 156-157; 167-168).

Seeversiella badia can be distinguished from *S. globicollis* and the other similar species (3, 5-8, 10) with long elytra and weak pronotal microsculpture by the combination of the following characters: distal sclerites of internal sac poorly sclerotized, not dentiform or hook-shaped and have small spicules (Fig. 158); apex of median lobe in lateral view widened subapically and emarginate on parameral side (Figs. 156-157); spermatheca S-shaped with umbilicus facing laterally (Fig. 160).



FIGURES 154-160. Genitalia of *Seeversiella badia* Gusarov, **sp. n.** (154-159, holotype; 160, paratype, 21.7 km NE Metapan, El Salvador). 154 – median lobe, parameral view; 155 – apex of median lobe, parameral view; 156 – median lobe, lateral view; 157 – apex of median lobe, lateral view; 158 – details of internal sac retracted into median lobe, lateral view; 159 – apex of left paramere; 160 – spermatheca. Scale bar 0.2 mm (154, 156, 158), 0.1 mm (155, 157, 159-160).

Description. Length 2.5 mm, pronotal width 0.50-0.53 mm. Body brown to dark brown with lighter elytra, legs brown to yellowish brown.

In all character states *S. badia* is very similar to *S. globicollis*, but differs in the shape of the aedeagus and spermatheca as described in the diagnosis.

In the only known male specimen the posterior angles of tergum 3 projecting as spines, as long as tergum 3 (measured medially), tergum 7 with medial carina along mid-line, the carina up to 2/3 as long as tergum length.

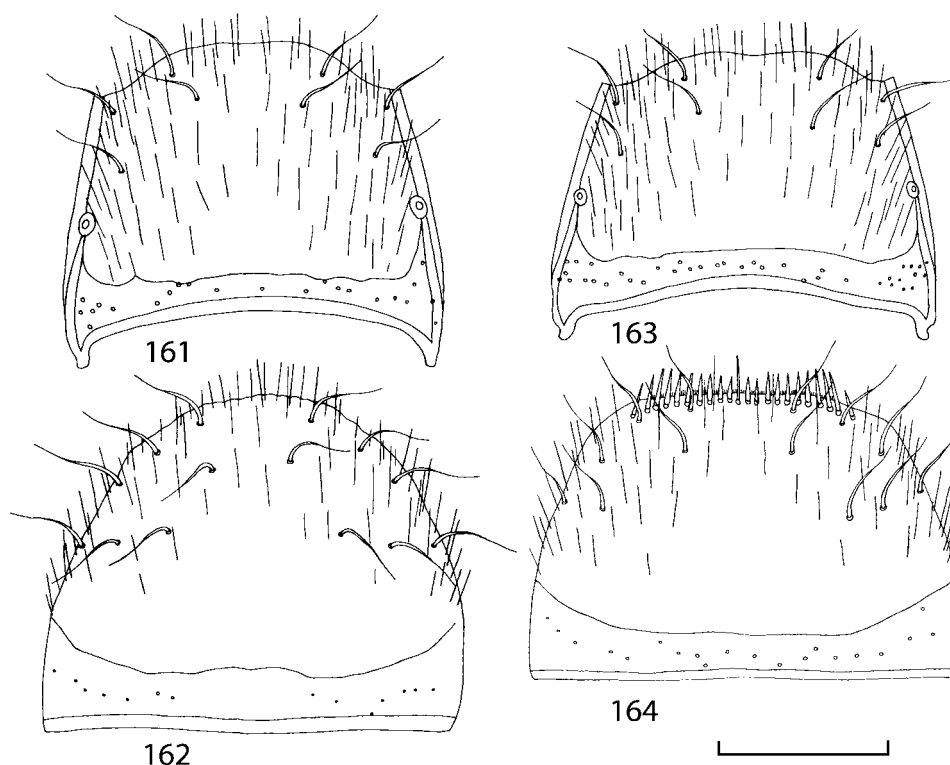
Aedeagus as in Figs. 154-159.

Spermatheca as in Fig. 160.

Distribution. Known from El Salvador (Fig. 387).

Natural History. *Seeversiella badia* was collected in cloud forest litter at altitude of 2100 m.

12. *Seeversiella similis* Gusarov, sp. n. (Figs. 161-174)

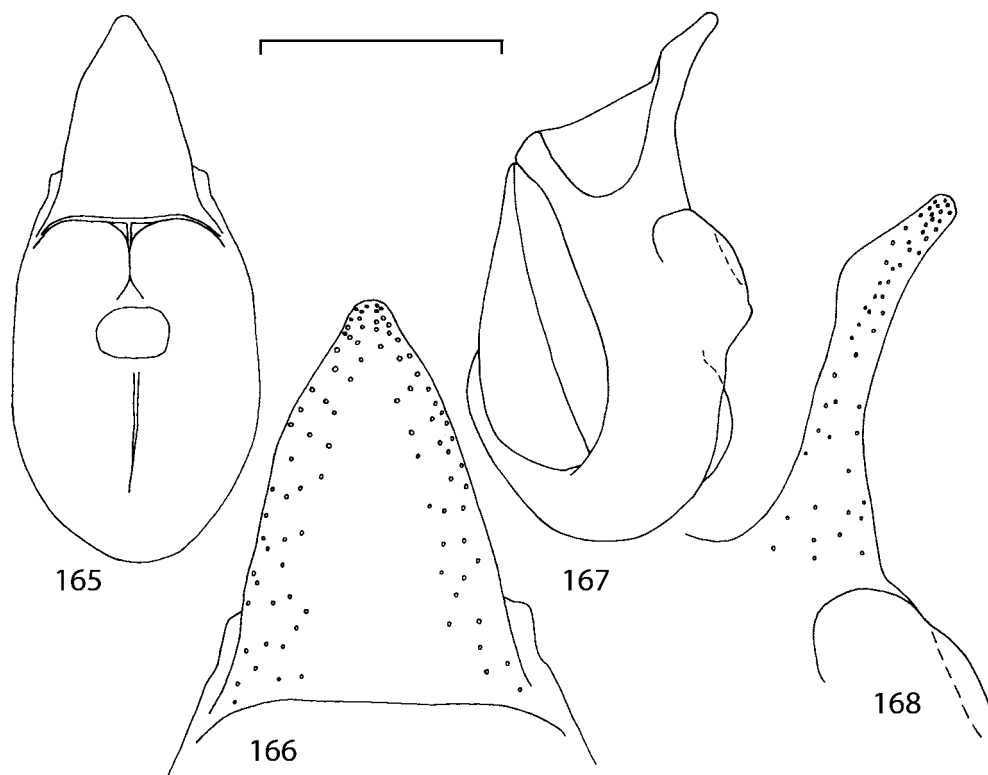


FIGURES 161-164. Abdominal segment 8 of *Seeversiella similis* Gusarov, sp. n. (161-162, holotype; 163-164, paratype from La Tigra, Honduras). 161 – male tergum 8; 162 – male sternum 8; 163 – female tergum 8; 164 – female sternum 8. Scale bar 0.2 mm.

Type material. Holotype, ♂, **HONDURAS: Francisco Morazán:** 21.3 km N Tegucigalpa, La Tigra, 2100 m, 14°12'N 86°06'W, forest litter (R.S.Anderson), 7.vi.1994 (KSEM).

Paratypes: **HONDURAS: Francisco Morazán:** 4♀♀, same data as the holotype; 2♂♂, ditto but 15.viii.1994; 2♂♂, 4♀♀, ditto but 22.2 km N Tegucigalpa, 2030 m, 15.viii.1994 (all - KSEM).

Diagnosis. *Seeversiella similis* can be distinguished from other species of *Seeversiella* by having brown body; temples 1.4-1.8 times as long as eyes; glossy pronotum with weak isodiametric microsculpture; elytra as long or slightly shorter than pronotum (elytral length to pronotal length ratio 1.0-0.9); reduced wings; tergum 8 with four pairs of macrosetae; the distinct shape of aedeagus (Figs. 165-173) and spermatheca (Fig. 174).



FIGURES 165-168. Aedeagus of *Seeversiella similis* Gusarov, **sp. n.** (holotype). 165 – median lobe, parameral view; 166 – apex of median lobe, parameral view; 167 – median lobe, lateral view; 168 – apex of median lobe, lateral view. Scale bar 0.2 mm (165, 167), 0.1 mm (166, 168).

Seeversiella similis differs from closely related *S. badia* in that apex of median lobe in lateral view lacks clear emargination on parameral side (Figs. 167-168; 156-157).

Seeversiella similis can be distinguished from *S. globicollis* and the other similar species (3, 5-8, 10) with long elytra and weak pronotal microsculpture by the combination of

the following characters: distal sclerites of internal sac poorly sclerotized, not dentiform or hook-shaped and have small spicules (Fig. 173); apex of median lobe in lateral view widened subapically and not emarginate on parameral side (Figs. 167-168); spermatheca S-shaped with umbilicus facing laterally (Fig. 174).

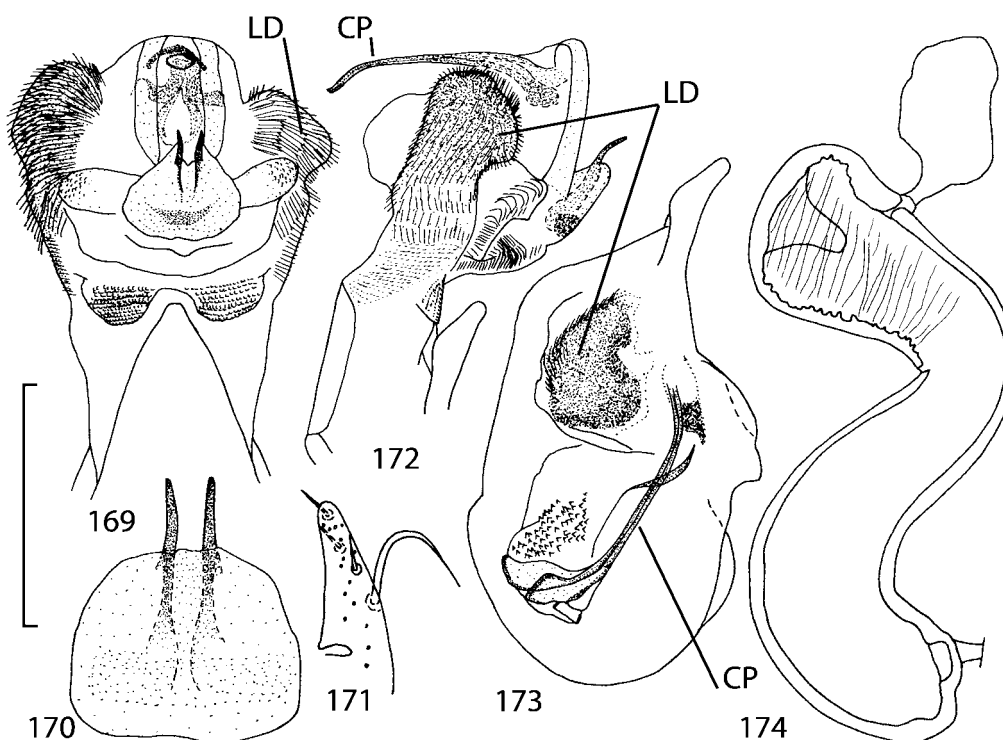
Description. Length 2.3-2.8 mm, pronotal width 0.48-0.54 mm. Body brown to dark brown with lighter elytra, legs brown to yellowish brown.

In all character states *S. similis* is very similar to *S. globicollis*, but differs in the shape of the aedeagus and spermatheca as described in the diagnosis.

In males posterior angles of tergum 3 projecting as spines, up to 1 time as long as tergum 3 (measured medially), tergum 7 with medial carina along midline, the carina up to 2/3 as long as tergum length.

Aedeagus as in Figs. 165-173.

Spermatheca as in Fig. 174.



FIGURES 169-174. Genitalia of *Seeversiella similis* Gusarov, **sp. n.** (171, 173, holotype; 169-170, 172, 174, paratypes from La Tigra, Honduras). 169 – everted internal sac, parameral view; 170 – medial lamellae, parameral view; 171 – apex of left paramere; 172 – everted internal sac, lateral view; 173 – details of internal sac retracted into median lobe, lateral view; 174 – spermatheca. Scale bar 0.2 mm (169, 172-173), 0.1 mm (170-171, 174).

CP – copulatory piece; LD – lateral diverticulum of internal sac.

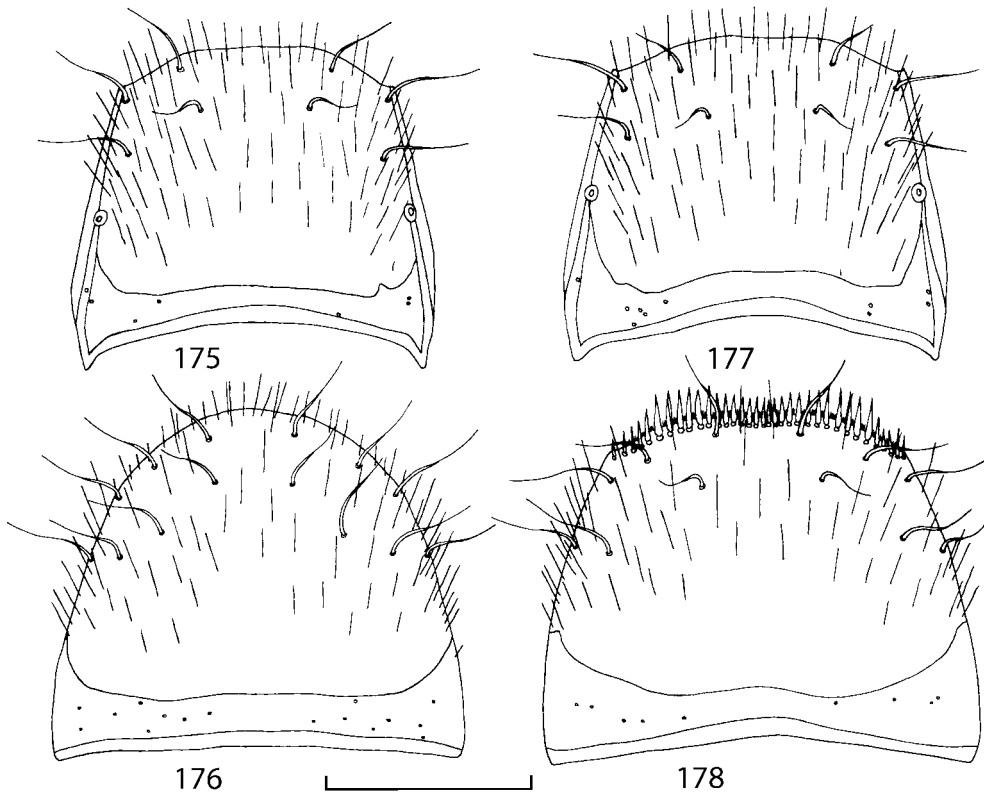
Distribution. Known from Honduras (Fig. 387).

Natural History. *Seeversiella similis* was collected in forest litter at altitude of 2000-2100 m.

13. *Seeversiella minima* Gusarov, sp. n. (Figs. 175-189)

Type material. Holotype, ♂, **EL SALVADOR: Santa Ana:** Montecristo, 21.7 km NE Metapan, 2100 m, forest litter (R.S.Anderson), 29.viii.1994 (KSEM).

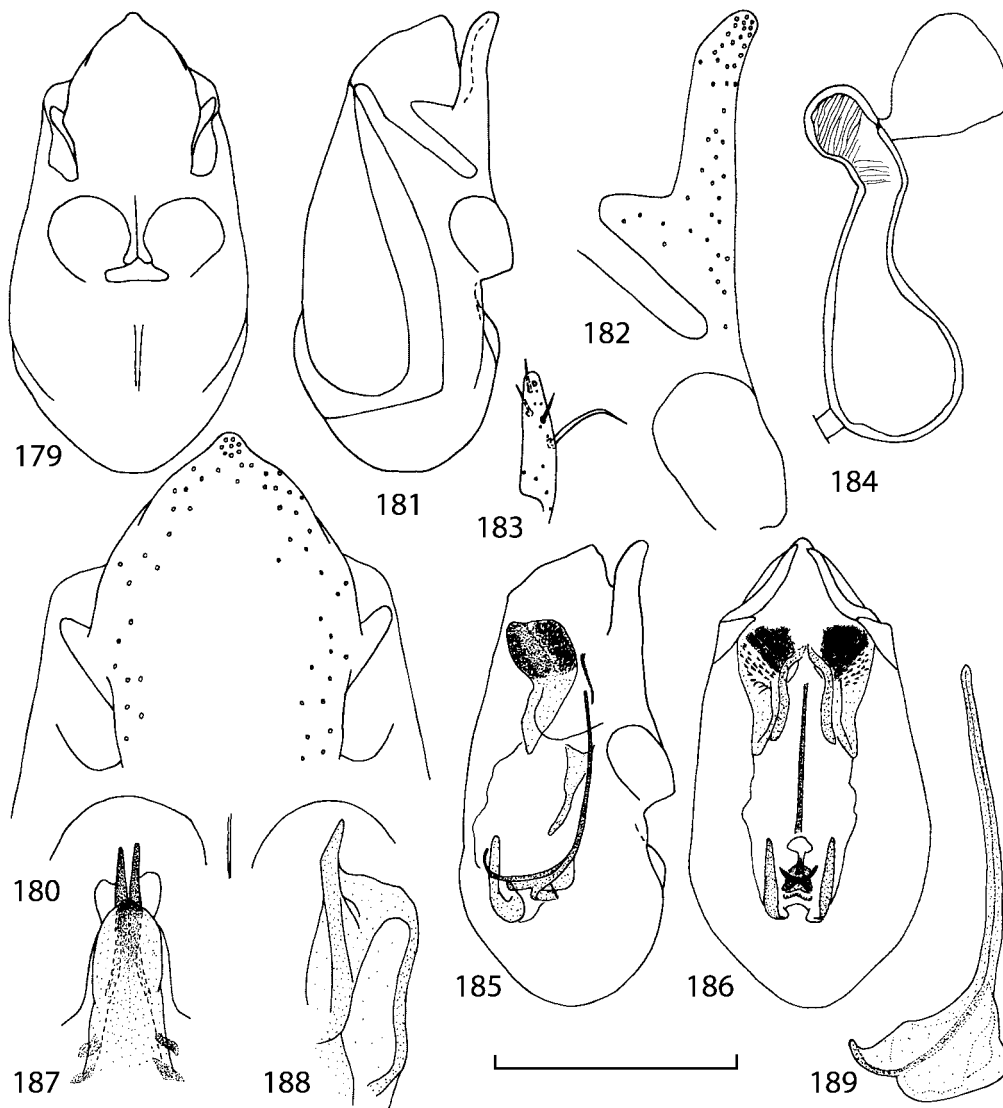
Paratypes: **EL SALVADOR: Santa Ana:** ♂, 4♀♀, same data as the holotype (KSEM).



FIGURES 175-178. Abdominal segment 8 of *Seeversiella minima* Gusarov, **sp. n.** (175-176, holotype; 177-178, paratype, 21.7 km NE Metapan, El Salvador). 175 – male tergum 8; 176 – male sternum 8; 177 – female tergum 8; 178 – female sternum 8. Scale bar 0.2 mm.

Diagnosis. *Seeversiella minima* can be distinguished from other species of *Seeversiella* by having brownish yellow; small eyes (temple length to eye length ratio 4.0-7.0);

glossy pronotum with fine and weak microsculpture; elytra much shorter than pronotum; reduced wings; tergum 8 with four pairs of macrosetae; the shape of aedeagus (Figs. 179-183, 185-189) and the distinct shape of spermatheca (Fig. 184).



FIGURES 179-189. Genitalia of *Seeversiella minima* Gusarov, **sp. n.** (179-183, 185-186, holotype; 184, 187-189, paratypes, 21.7 km NE Metapan, El Salvador). 179 – median lobe, parameral view; 180 – apex of median lobe, parameral view; 181 – median lobe, lateral view; 182 – apex of median lobe, lateral view; 183 – apex of left paramere; 184 – spermatheca; 185 – details of internal sac retracted into median lobe, lateral view; 186 – details of internal sac retracted into median lobe, abparameral view; 187 – medial lamellae, parameral view; 188 – medial lamellae, lateral view; 189 – copulatory piece, lateral view. Scale bar 0.2 mm (179, 181, 185-186), 0.1 mm (180, 182-184, 187-189).

Seeversiella minima can be distinguished from *S. flavida* and other similar species (24-28) with small body and very short elytra by the combination of the following characters: pubescence in lateral portions of pronotum directed towards midline and obliquely posteriorly; tergum 8 with four pairs of macrosetae; proximal seta of the apex of paramere is much longer than the other three setae (Fig. 183); apex of median lobe in parameral view wide (Figs. 179-180); spermatheca J-shaped with bulbous proximal portion and without umbilicus (Fig. 184).

Description. Length 1.6-2.0 mm. Body brownish-yellow with yellow legs, antennae and mouthparts.

Head surface glossy, with fine and weak isodiametric microsculpture, fine and sparse punctation, distance between punctures equals 3-4 times their diameter. Temple length to eye length ratio 4.0-7.0. Antennal article 2 as long as 3, article 4 transverse (ratio 1.5), 5-10 strongly transverse (ratio 2.0).

Pronotum slightly transverse, 1.2 times as wide as head, width 0.34-0.40 mm, length 0.31-0.36 mm, width to length ratio 1.1, surface glossy, microsculpture and punctation as on head. Elytra wider and much shorter (measured from humeral angle) than pronotum (pronotal length to elytral length ratio 1.4), 1.9 times wider than long, glossy, with fine and poorly visible isodiametric microsculpture; punctation asperate and stronger than on pronotum, distance between punctures equals 2-3 times their diameter. Wings shorter than elytra or absent.

Abdominal terga glossy, with fine microsculpture consisting of transverse meshes, with fine punctation, distance between punctures equals 2-3 times their diameter on terga 3-5 and 3-6 times on tergum 7. Apical margin of tergum 7 without white palisade fringe. Tergum 8 with four pairs of macrosetae (Figs. 175, 177).

In males posterior angles of tergum 3 not projecting, tergum 7 without medial carina or tubercle, posterior margin of tergum 8 without emargination (Fig. 175).

Aedeagus as in Figs. 179-183, 185-189. Proximal seta of the apex of paramere is much longer than the other three setae (Fig. 183).

Spermatheca as in Fig. 184.

Distribution. Known from Cerro Montecristo, El Salvador (Fig. 387).

Natural History. *Seeversiella minima* was collected in forest litter at altitude of 2100 m.

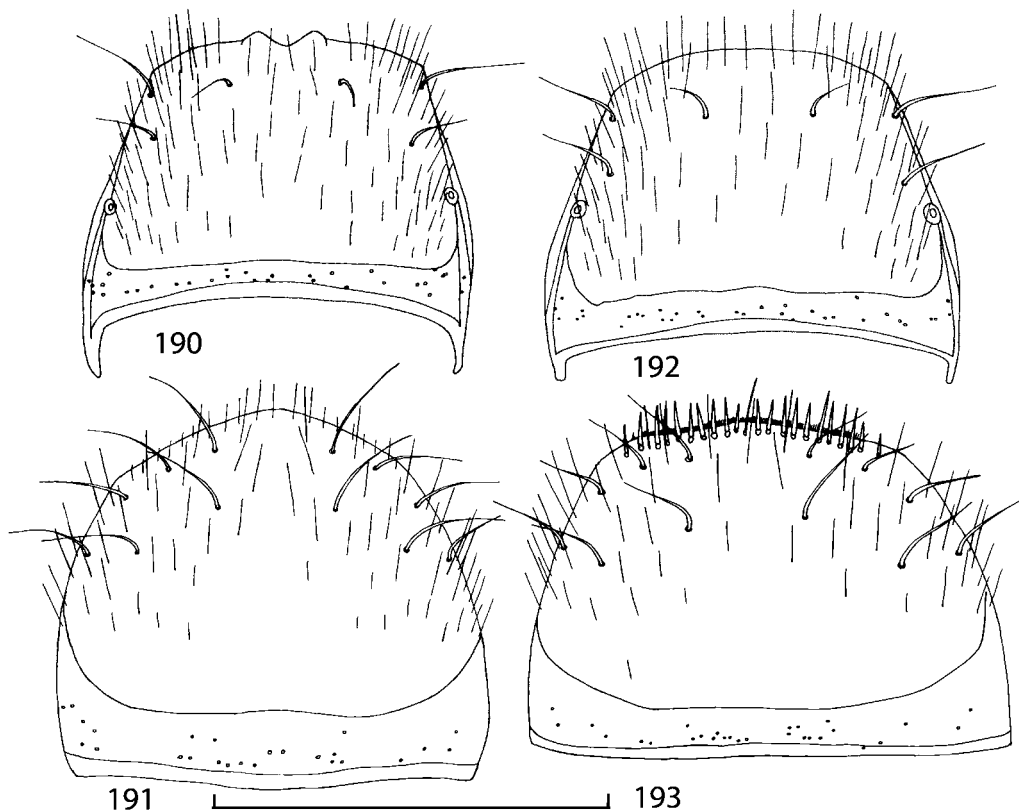
14. *Seeversiella scabricollis* Gusarov, sp. n. (Figs. 11, 15, 190-207)

Type material. Holotype, ♂, COSTA RICA: Cartago: Sendero a Cerro Chirripó, 9°26'47"N 83°32'12"W, 2800 m, mixed oak forest litter (R.Anderson), 27.vi.1999 (KSEM).

Paratypes: COSTA RICA: Cartago: 42 specimens, same data as the holotype; 50 specimens, ditto but 9°26'37"N 83°32'14", 2950 m, oak forest litter; ♂, Cerro Chirripó,

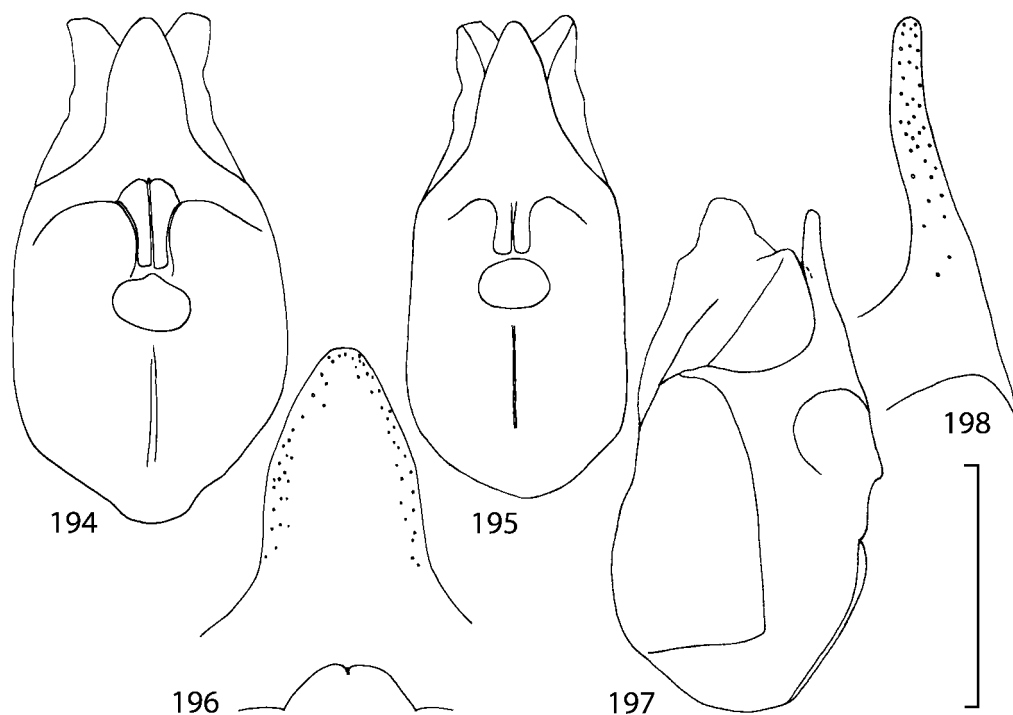
Base Crestones, 9°27'17"N 83°30'16"W, 3350 m, elfin forest litter (R.Anderson), 25.vi.1999; 17 specimens, 2 km S Villa Mills, 3000 m, ridgetop oak forest litter (R.S.Anderson), 10.ii.1996; ♀, 2.0 km E Villa Mills, 9°34'00"N 83°41'50"W, 2750 m, oak forest litter (R.S.Anderson), 15.ii.1998; ♂, Cerro Buenavista, 9°43'02"N 83°45'14"W, 3300 m, subparamo litter (R.Anderson); 10 specimens, Cerro de la Muerte, 4 km NE Cañon, 2350 m, malaise trap (P.Hanson), i.1995; 2 specimens, ditto but 1-i-30.iii.1995; 3 specimens, ditto but 1-30.iv.1995; 1 specimen, ditto but 1-30.v.1995; 2 specimens, ditto but 1-30.vi.1995; 6 specimens, ditto but 1-30.vii.1995; 2 specimens, ditto but 1-30.viii.1995; 1 specimen, ditto but 1-30.i.1996; 1 specimen, ditto but 1.iv-30.v.1996; 7 specimens, ditto but 1-30.vii.1996; 3 specimens, ditto but 1-30.ix.1996; 4 specimens, 2 km N P. N. Volcán Irazú, 10°00'00"N 83°51'00"W, 2900 m, berlese forest litter (R.Anderson), 18.vi.1997; 6 specimens, 3 km N P. N. Volcán Irazú, 9°59'45"N 83°51'00"W, 2750 m, berlese forest litter (R.Anderson), 18.vi.1997; ♀, Madreselva, Finca Los Lagos, A. C. Amistad, 2000-2600 m, 12-19.vi.1993; 2 ♀ ♀, ditto but 28.vi-10.vii.1993; ♀, ditto but ix.1993; ♀, ditto but x.1993; **San Jose / Cartago:** 11 specimens, km 71, Int. Amer. Hwy., nr. Tres de Junio, 9°37'44"N 83°50'13"W, 2900 m, wet cloud forest litter (R.Anderson), 23.vi.1999; 3 ♂♂, km 69, Int. Amer. Hwy., nr. Tres de Junio, 9°39'30"N 83°51'30"W, 2600 m, flight intercept trap (S. & J.Peck), 7-19.vi.1997; 11 specimens, km 78, Int. Amer. Hwy., nr. Ojo de Agua, 9°36'30"N 83°50'20"W, 2800 m, cloud forest litter (R.Anderson), 8.vii.1999; 9 specimens, km 72, Int. Amer. Hwy., 3 km W Ojo de Agua, 9°37'30"N 83°50'30"W, 2950 m, berlese forest litter (R.Anderson), 7.vi.1997; ♂, km 87, Int. Amer. Hwy., nr. Cerro Buenavista, 9°36'30"N 83°46'00"W, 3150 m, berlese forest litter (R.Anderson), 8.vi.1997; 8 specimens, Cerro Buenavista, km 89, Int. Amer. Hwy., 9°33'00"N 83°45'30"W, 3200 m, berlese leaf litter (R.Anderson), 18.vi.1998; ♂, 2 ♀ ♀, km 55, Int. Amer. Hwy., 3 km S El Empalme, 9°42'30"N 83°57'00"W, 2350 m, berlese forest litter (R.Anderson), 8.vi.1997; **San Jose:** 15 specimens, Estación Cuerici, 4.6 km E Villa Mills, 9°34'00"N 83°40'00"W, 2600 m, berlese forest litter (R.Anderson), 26.vi.1997; 3 specimens, ditto but 19.vi.1997; ♂, 2.0 km E Villa Mills, 9°33'30"N 83°42'00"W, 2800 m, berlese forest litter (R.Anderson), 26.vi.1997; ♂, 2 ♀ ♀, km 97, Int. Amer. Hwy., Villa Mills, 3000 m, flight intercept traps (S. & J.Peck), 26.vi.1997; 3 ♂♂, ♀, Cerros de Escazú, 2 km S San Antonio, 9°53'30"N 84°09'00"W, 1650 m, berlese forest litter (R.Anderson), 13.vi.1997; 8 specimens, Cerro de la Muerte, 6 km N San Gerardo, 2800 m (P.Hanson), viii-ix.1992; 4 specimens, ditto but x-xii.1992; 2 specimens, ditto but iv.1992; 2 ♂♂, malaise trap, ditto but iv.1993; ♂, Cerro de la Muerte, 19 km S and 3 km W of Empalme, 2600 m, malaise trap (P.Hanson), ix-x.1992; 7 ♂♂, 26 km N San Isidro, 2100 m (P.Hanson), xi.1992-i.1993; ♂, ditto but vi-vii.1990; ♂, ditto but ix-x.1992; 2 specimens, 2 km W Empalme, Cerro de la Muerte, 2300 m (P.Hanson), 1-30.vii.1995, malaise trap; **Heredia:** 2 ♂♂, 2 ♀ ♀, 3 specimens, Porrosati, 6 km N San José de la Montana, 10°05'30"N 84°07'00"W, 1900 m, berlese forest litter (R.Anderson); 44 specimens, P. N. Braulio Carrillo Volcán Barva, 10°07'30"N 84°07'30"W, 2600 m, berlese forest litter (R.Anderson), 11.vi.1997; 21 speci-

mens, ditto but, flight intercept trap (S. & J.Peck), 11-27.vi.1997; 4 specimens, Vara Blanca, Finca Georgina, 2100 m (P.Hanson), vi-vii.1990; **Alajuela**: 28 specimens, P. N. Volcán Poás, 10°11'30"N 84°14'00"W, 2500 m, berlese forest litter (R.Anderson), 6.vi.1997; ♂, ♀, ditto but flight intercept trap (S. & J.Peck), 6-28.vi.1997; **PANAMA**: **Chiriquí**: 31 specimens, 5.9 km NE Cerro Punta, Par. Nac. Volcán Barú, 8°52'N [the latitude on the label (8°22'0"N) is incorrect] 82°34'W, 2100 m, flight intercept traps (J.S.Ashe & R.Brooks), 14-16.vi.1995; ♂, ditto but 2400 m, bamboo forest litter (R.S.Anderson), 14.vi.1995; 12 specimens, ditto but 2150 m, alder forest litter (R.S.Anderson), 14.vi.1995; ♂, 27.7 km W Volcán Hartmann's Finca, 1450 m, 8°51'48"N 82°44'36"W, 1450 m, forest litter (R.S.Anderson), 14.vi.1995; 22 specimens, NNE of Las Nubes @ continental divide, 2490 m (A.R.Gillogly), 14-15.vi.1995; 5 specimens, N of Las Nubes, 2350-2450 m, continental divide (A.R.Gillogly), 15.vi.1995; 2♂♂, Cerro Pando, 1875 m, 8°54'42"N 82°43'18"W, 1875 m, flight intercept trap (J.S.Ashe, R.Brooks), 17-18.vi.1996; ♂, ditto but 1850 m; 6 specimens, 11 km NW Boquete, Volcán Barú, 2150 m, 8°48'00"N 82°29'00"W, 2150 m, oak forest litter (R.S.Anderson), 18.vi.1995 (all - KSEM).



FIGURES 190-193. Abdominal segment 8 of *Seeverisiella scabricollis* Gusarov, **sp. n.** (190-191, holotype; 192-193, paratype, Sendero a Cerro Chirripó, Costa Rica). 190 – male tergum 8; 191 – male sternum 8; 192 – female tergum 8; 193 – female sternum 8. Scale bar 0.4 mm.

Diagnosis. *Seeversiella scabricollis* can be distinguished from other species of *Seeversiella* by having dark brown body with brown elytra, legs and mouthparts; large eyes (temple length to eye length ratio 0.9-1.1); matte pronotum with strong microsculpture; elytra longer than pronotum; wings fully developed or reduced; tergum 8 with three pairs of macrosetae; the distinct shape of aedeagus (Figs. 194-204, 206-207) and the shape of spermatheca (Fig. 205).



FIGURES 194-198. Aedeagus of *Seeversiella scabricollis* Gusarov, **sp. n.** (194, 196-198, holotype; 195, paratype, San José de la Montana, Costa Rica). 194-195 – median lobe, parameral view; 196 – apex of median lobe, parameral view; 197 – median lobe, lateral view; 198 – apex of median lobe, lateral view. Scale bar 0.2 mm (194-195, 197), 0.1 mm (196, 198).

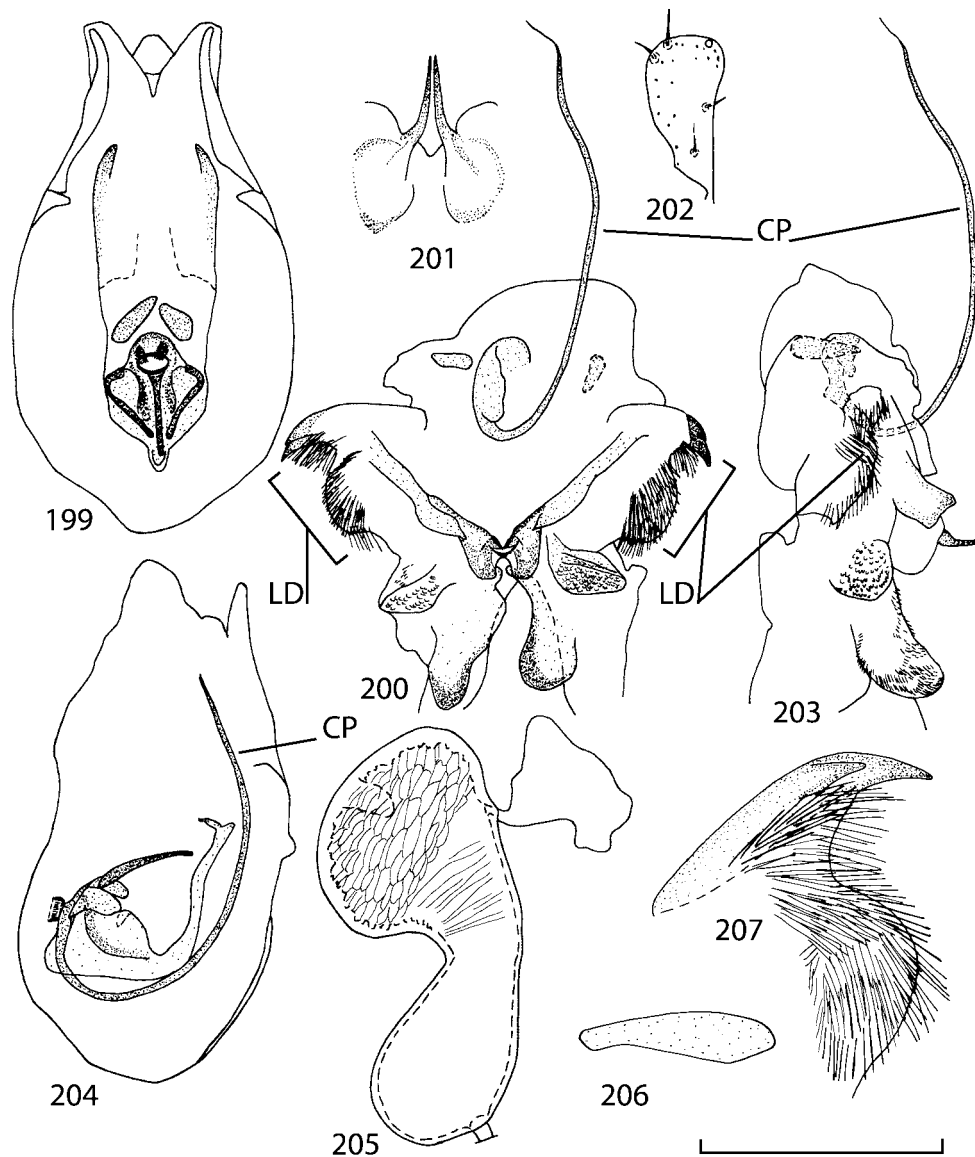
Seeversiella scabricollis differs from *S. furciventris* in having parallel-sided apex of median lobe (in parameral view) (Figs. 194-196; 212-213).

Seeversiella scabricollis differs from *S. brunnea* in having straight apex of median lobe (in lateral view) (Figs. 197-198; 241-242).

Seeversiella scabricollis differs from *S. brevipennis* in having matte pronotum; pronotal punctation not asperate; elytra longer than pronotum; apex of median lobe parallel-sided (in parameral view) (Figs. 194-196; 226-227).

Seeversiella scabricollis differs from *S. curtipennis* in having larger eyes; longer elytra; wings longer than elytra; posterior margin of male tergum 8 with medial emargin-

ation (Fig. 190); narrow apex of the median lobe (in parameral view) (Figs. 194-196; 251-252); short medial lamellae of the internal sac (Figs. 201; 258); lateral diverticula with sclerotized denticles (Figs. 200, 207; 259); and shorter spermatheca (Figs. 205, 255).



FIGURES 199-207. Genitalia of *Seeversiella scabricollis* Gusarov, **sp. n.** (199, 204, holotype; 200-203, 205-207, paratypes, sendero a Cerro Chirripó, Costa Rica). 199 – details of internal sac retracted into median lobe, abparameral view; 200 – everted internal sac, parameral view; 201 – medial lamellae, parameral view; 202 – apex of left paramere; 203 – everted internal sac, lateral view; 204 – details of internal sac retracted into median lobe, lateral view; 205 – spermatheca; 206 – right distal sclerite of internal sac; 207 – left lateral diverticulum of internal sac, with denticulate sclerotized portion. Scale bar 0.2 mm (199-200, 203-204), 0.1 mm (201-202, 205-207). CP – copulatory piece; LD – lateral diverticulum of internal sac.

Description. Length 2.7-3.1 mm. Body dark brown, with brown elytra, legs and mouthparts.

Head surface matte, with fine isodiametric microsculpture, fine and slightly asperate punctation, distance between punctures equals 2 times their diameter. Temple length to eye length ratio 0.9-1.1. Antennal article 2 longer than article 3, article 4 subquadrate, 5 slightly transverse, 6-10 transverse (ratio 1.5-2.0).

Pronotum slightly transverse, 1.2 times as wide as head, width 0.49-0.54 mm, length 0.41-0.46 mm, width to length ratio 1.2, surface matte, with fine isodiametric microsculpture; punctation fine and weak, distance between punctures equal to their diameter. Elytra wider and longer (measured from humeral angle) than pronotum (pronotal length to elytral length ratio 0.8), 1.3 times as wide as long, glossy, with fine and weak isodiametric microsculpture; with fine punctation, distance between punctures equal to ½-1 time their diameter. Wings fully developed or partially reduced, longer than elytra.

Abdominal terga glossy, with fine microsculpture consisting of strongly transverse meshes, with fine punctation, distance between punctures equals 2-4 times their diameter on terga 3-5 and 4-7 times on tergum 7. Apical margin of tergum 7 with white palisade fringe. Tergum 8 with three pairs of macrosetae (Figs. 190, 192).

In males posterior angles of tergum 3 projecting as spines up to 3 times as long as tergum 3 (measured medially); tergum 7 with medial carina along midline, the carina up to 2/3 as long as tergum length; posterior margin of tergum 8 with medial emargination delimited by short dentiform projections (Fig. 190).

Aedeagus as in Figs. 194-204, 206-207. Apex of paramere broad, proximal seta approximately as long as the other three setae (Fig. 202).

Spermatheca as in Fig. 205.

Distribution. Known from Costa Rica and Panama (Fig. 388).

Natural History. *Seeversiella scabricollis* was collected in leaf litter and with flight intercept and malaise traps, at altitudes of 1450-3300 m.

15. *Seeversiella furcativentris* Gusarov, sp. n. (Figs. 208-221)

Type material. Holotype, ♂, **COSTA RICA: Puntarenas:** Monte Verde, 1800 m (J.Ashe, R.Brooks & R.Leschen), 5.v.1989 (KSEM).

Paratypes: **COSTA RICA: Puntarenas:** 5 specimens, same data as the holotype; ♂, ditto but 1580 m, ex *Auricularia* sp.; ♂, ditto but 1520 m, flight intercept trap (J.Ashe, R.Brooks & R.Leschen), 11.v.1989; 3 specimens, ditto but 14.v.1989; 1 specimen, ditto but 9.v.1989; 1 specimen, ditto but pitfall trap, 24.v.1989; 2 specimens, ditto but 1550 m, flight intercept trap, 23.v.1989; ♂, ditto but 1570 m, flight intercept trap, 9.v.1989; 1 specimen, ditto but 11.v.1989; ♂, ditto but 1770 m, ex *Collybia* sp., 21.v.1989; ♂♂, Monteverde reserve, trail near lab, flight intercept trap (C.Michalski), 3.vi.1993; 1 specimen, ditto but 1.vi.1993; 9 specimens, Monte Verde, Cerro Amigos, 1780 m, flight intercept

trap (J.Ashe, R.Brooks & R.Leschen), 14.v.1989; 1 specimen, ditto but pitfall trap; 11 specimens, ditto but flight intercept trap, 21.v.1989; 12 specimens, ditto but 24.v.1989; 3 specimens, ditto but 17.v.1989; **Puntarenas / Guanacaste:** ♂, Monte Verde, Cerro Amigos, 1780 m, sifted leaf litter (J.Ashe, R.Brooks & R.Leschen), 9.v.1989; 11 specimens, ditto but 1760 m, but flight intercept trap, 12.v.1989; 6 specimens, ditto but pitfall traps; 29 specimens, ditto but flight intercept trap, 10.v.1989; **Guanacaste:** ♂, Guanacaste Conservation Area, Cacao Field Station, 1400 m, wet cloud forest litter (R.S.Anderson), 12.ii.1996; **Heredia:** ♂, ♀, Cerro Chompipe, 2 km N Monte de la Cruz, 10°05'20"N 84°04'30"W, 2000 m, berlese forest litter (R.Anderson), 12.vi.1997; 13 specimens, ditto but 2100m, flight intercept trap (S. & J.Peck), 12-27.vi.1997; **San Jose:** 5 specimens, Zurquí de Moravia [10°03'N 84°01'W], 1600 m, malaise traps (P.Hanson), iv.1992; 7 specimens, ditto but v.1992; 5 specimens, ditto but vi.1992; 5 specimens, ditto but vii.1992; 10 specimens, ditto but ii.1993; 6 specimens, ditto but iii-iv.1993; 36 specimens, ditto but iv-v.1993; 7 specimens, ditto but ix-x.1993; 2 specimens, ditto but xi-xii.1993; 5 specimens, ditto but ii.1994; 8 specimens, ditto but iii.1994; 3 specimens, ditto but iv.1994; 3 specimens, ditto but v.1994; 9 specimens, ditto but 1-31.i.1995; 3 specimens, ditto but 1-30.iv.1995; 2 specimens, ditto but 1-30.ix.1995; 2 specimens, ditto but 1-30.x.1995; 1 specimen, ditto but 1-30.vi.1996; ♂, 26 km N San Isidro, 2100 m (P.Hanson), xi.1992-i.1993; ♂, ♀, San Antonio de Escazú, 2000 m, flight intercept trap (C.Flores & P.Hanson), 1.ix-30.x.1996; **San Jose / Cartago:** ♂, km 45, Int. Amer. Hwy., 6 km NE El Empalme, 9°45'00"N 83°58'30"W, 1975 m, flight intercept trap (S. & J.Peck), 8-26.vi.1997; **Cartago:** 10 ♂♂, 26 specimens, La Cangreja, 1950 m, (P.Hanson), ix-xii.1992; 2 specimens, ditto but iii-v.1992; 17 specimens, ditto but vi-vii.1992; 2 ♀♀, ditto but 1450 m, malaise trap, 1.iv-30.v.1995; ♂, Tapantí, (M.L.Jameson), 23.vi.1992; **PANAMA: Chiriquí:** ♂, ♀, 5.6 km N Boquete, La Culebra Trail, 8°49'23"N 82°25'18"W, 1800 m, cloud forest litter (R.S.Anderson), 15.vi.1996; 3 ♂♂, ditto but 6.0 km NE Boquete, 8°48'N 82°26'W, 1650 m, flight intercept traps (J.S.Ashe & R.Brooks), 14-19.vi.1996 (all – KSEM).

Diagnosis. *Seeversiella furcativestris* can be distinguished from other species of *Seeversiella* by brown body; large eyes (temples as long as eyes); matte pronotum with strong microsculpture; elytra longer than pronotum; wings fully developed or partially reduced, longer than elytra; the distinct shape of aedeagus (Figs. 212-220) and spermatheca (Fig. 221).

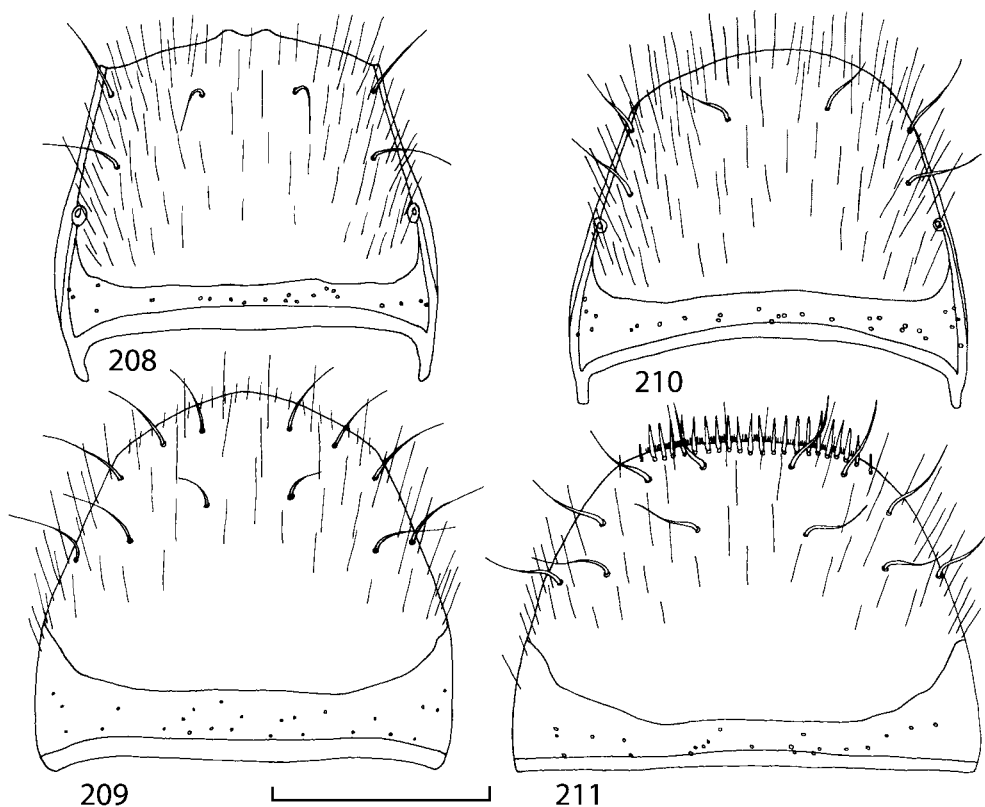
Seeversiella furcativestris differs from *S. scabricollis* in having the apex of median lobe constricted basally (in parameral view) (Figs. 212-213; 194-196).

Seeversiella furcativestris differs from *S. brunnea* in having straight apex of median lobe (in lateral view) (Figs. 214-215; 241-242).

Seeversiella furcativestris differs from *S. brevipennis* in having matte pronotum; pronotal punctation not asperate; elytra longer than pronotum; and smaller median lobe with shorter apex (Figs. 212-215; 226-229).

Description. Length 2.4-2.8 mm, pronotal width 0.40-0.44 mm. Body brown, with darker head and lighter legs and mouthparts.

In all character states *S. furcativentris* is very similar to *S. scabricollis*, but differs in the shape of the median lobe as described in the diagnosis.



FIGURES 208-211. Abdominal segment 8 of *Seeversiella furcativentris* Gusarov, **sp. n.** (208-209, holotype; 210-211, paratype, Zurquí de Moravia, Costa Rica). 208 – male tergum 8; 209 – male sternum 8; 210 – female tergum 8; 211 – female sternum 8. Scale bar 0.2 mm.

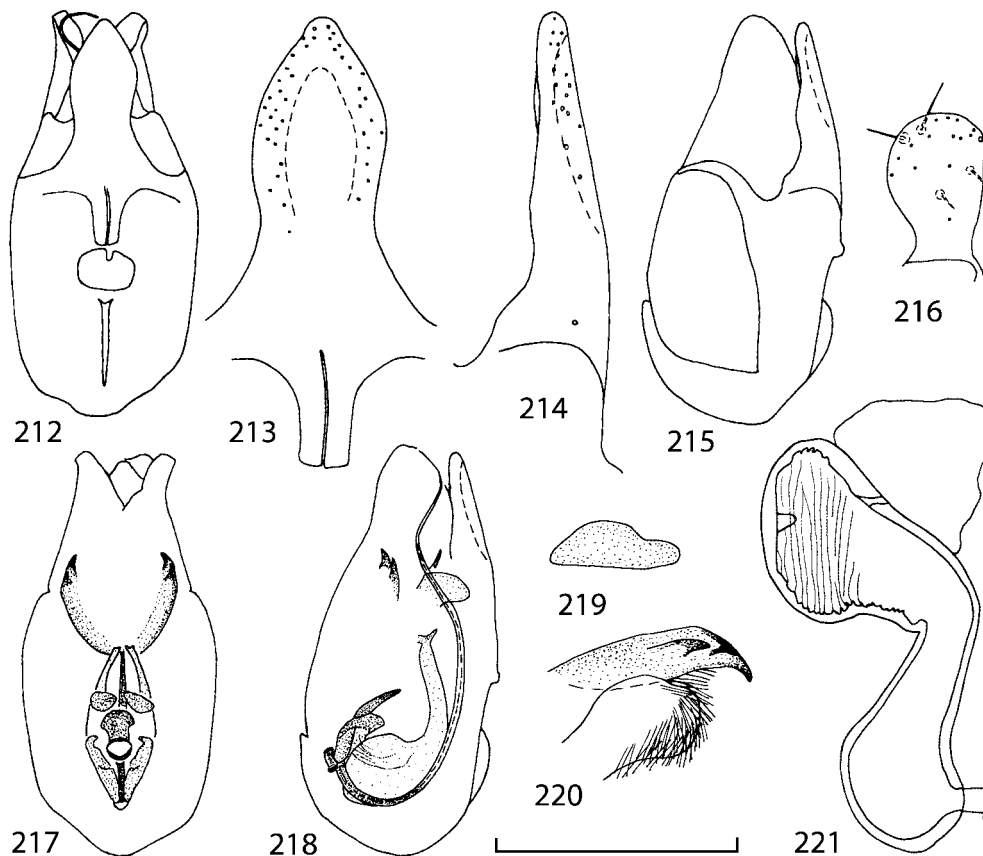
Aedeagus as in Figs. 212-220.

Spermatheca as in Fig. 221.

Discussion. Despite the fact that *S. furcativentris* and *S. scabricollis* are very similar in their genitalia, the difference in the shape of the apex of median lobe is stable and no intermediate forms have been observed. In one locality both species have been collected in the same sample, which also confirms their status of separate species. The two species appear to be parapatric: *S. furcativentris* occurs mostly below 2000 m (has never been collected above 2100 m), while *S. scabricollis* occurs mostly above 2000 m (occasionally collected as low as 1450 m).

Distribution. Known from Costa Rica and Panama (Fig. 388).

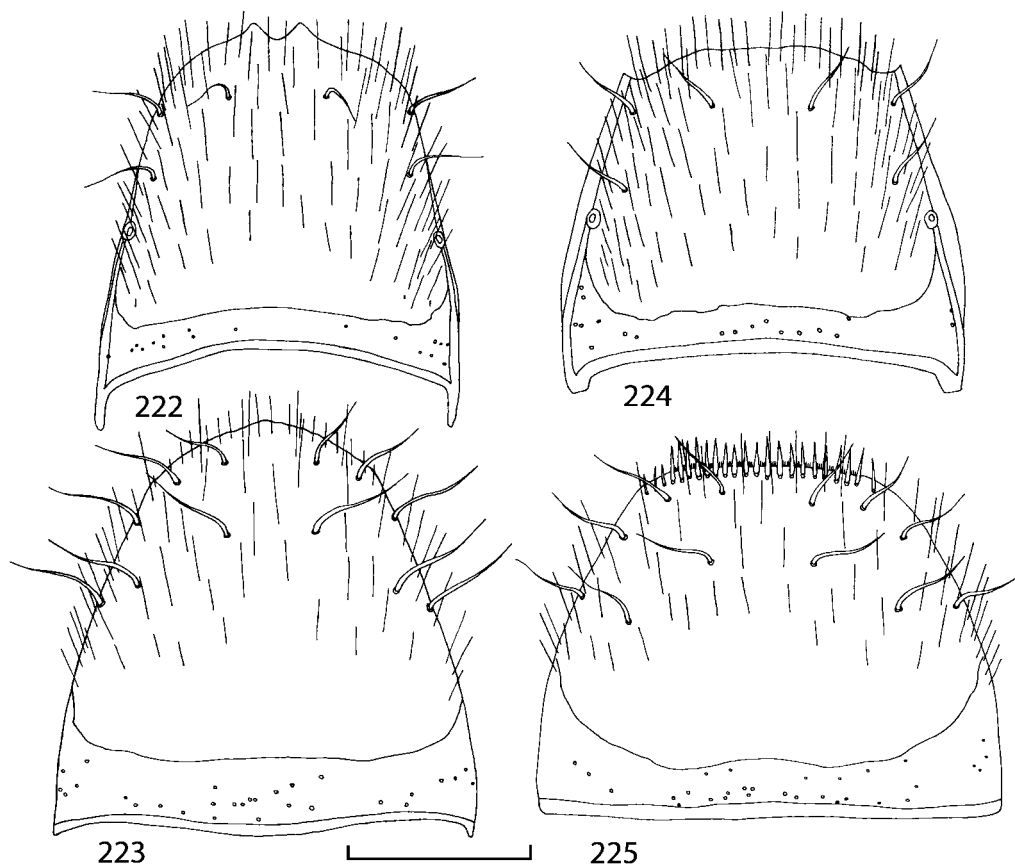
Natural History. *Seeversiella furcativevtris* was collected in forest litter and with flight intercept and malaise traps, at altitudes of 1400-2100 m.



FIGURES 212-221. Genitalia of *Seeversiella furcativevtris* Gusarov, **sp. n.** (212-218, 221, holotype; 219-220, paratype from Monte Verde, Costa Rica). 212 – median lobe, parameral view; 213 – apex of median lobe, parameral view; 214 – apex of median lobe, lateral view; 215 – median lobe, lateral view; 216 – apex of left paramere, 217 – details of internal sac retracted into median lobe, abparameral view; 218 – details of internal sac retracted into median lobe, lateral view; 219 – right distal sclerite of internal sac; 220 – left lateral diverticulum of internal sac, with denticulate sclerotized portion; 221 – spermatheca. Scale bar 0.2 mm (212, 215, 217-218), 0.1 mm (213-214, 216, 219-221).

16. *Seeversiella brevipennis* Gusarov, sp. n. (Figs. 222-234)

Type material. Holotype, ♂, **PANAMA: Chiriquí:** 5.9 km N Cerro Punta, Par. Nac. Volcán Barú, 8°52'N [the latitude on the label (8°22'0"N) is incorrect] 82°34'0"W, 2150 m, alder forest litter (R.Anderson), 14.vi.1995 (KSEM).



FIGURES 222-225. Abdominal segment 8 of *Seeversiella brevipennis* Gusarov, **sp. n.** (222-223, holotype; 224-225, paratype, 5.9 km N Cerro Punta, Panama). 222 – male tergum 8; 223 – male sternum 8; 224 – female tergum 8; 225 – female sternum 8. Scale bar 0.2 mm.

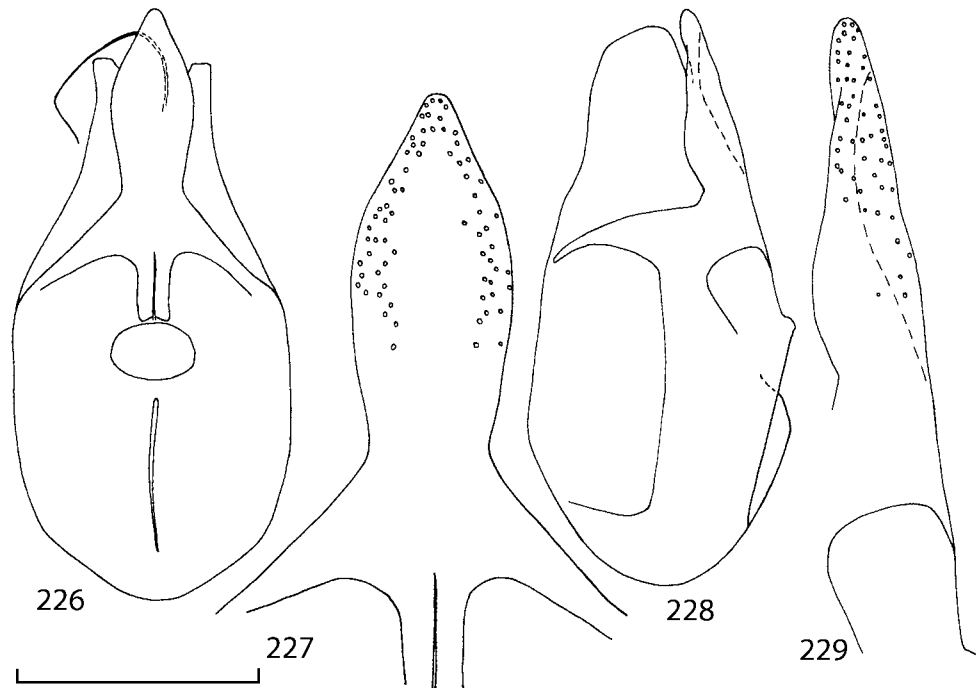
Paratypes: **PANAMA: Chiriquí:** ♂♂, ♀, same data as the holotype (KSEM).

Diagnosis. *Seeversiella brevipennis* can be distinguished from other species of *Seeversiella* by having brown or reddish brown body with yellowish brown elytra, abdominal segments 3-4, legs and mouthparts; large eyes (temple length to eye length ratio 1.6-2.0); glossy pronotum with weak isodiametric microsculpture and asperate punctation; elytra as long as pronotum; wings partially reduced; tergum 8 with three pairs of macrosetae; the distinct shape of aedeagus (Figs. 226-233) and spermatheca (Fig. 234).

Seeversiella brevipennis differs from *S. scabricollis* in having glossy pronotum with asperate punctation; elytra as long as pronotum; apex of median lobe in parameral view constricted basally (Figs. 226-227; 194-196).

Seeversiella brevipennis differs from *S. furciventris* in having glossy pronotum with asperate punctation; elytra as long as pronotum; larger median lobe with longer apex (Figs. 226-229; 212-215).

Seeversiella brevipennis differs from *S. brunnea* in having glossy pronotum with asperate punctation; elytra as long as pronotum; straight apex of median lobe (in lateral view) (Figs. 228-229; 241-242).



FIGURES 226-229. Aedeagus of *Seeversiella brevipennis* Gusarov, **sp. n.** (holotype). 226 – median lobe, parameral view; 227 – apex of median lobe, parameral view; 228 – median lobe, lateral view; 229 – apex of median lobe, lateral view. Scale bar 0.2 mm (226, 228), 0.1 mm (227, 229).

Description. Length 2.6-3.0 mm. Body brown or reddish brown, elytra, abdominal segments 3 and 4, legs and mouthparts yellowish brown.

Head surface glossy, with fine isodiametric microsculpture, fine and slightly asperate punctation, distance between punctures equals 2-3 times their diameter. Temple length to eye length ratio 1.6-2.0. Antennal article 2 as long as 3, articles 4-10 transverse (ratio 1.3-1.6).

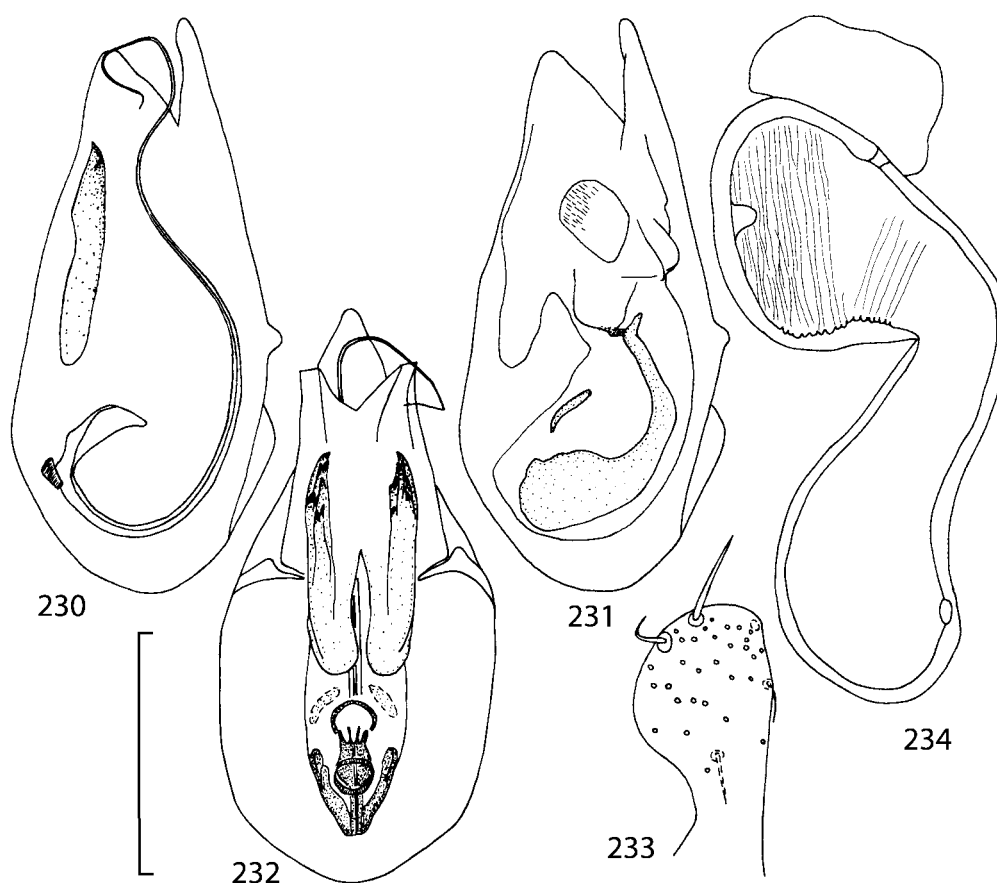
Pronotum slightly transverse, 1.2 times as wide as head, width 0.53-0.56 mm, length 0.47-0.5 mm, width to length ratio 1.1, surface glossy, with fine and weak isodiametric microsculpture; punctation fine and asperate, distance between punctures equal to 1-1.5 times their diameter. Elytra wider and as long (measured from humeral angle) as pronotum (pronotal length to elytral length ratio 1.0), 1.4 times wider than long, glossy, with fine and weak isodiametric microsculpture; with fine and asperate punctation, distance between punctures equal to 1-2 times their diameter. Wings partially reduced.

Abdominal terga glossy, with fine microsculpture consisting of transverse meshes, with fine punctation, distance between punctures equals 3-6 times their diameter on terga 3-5 and 4-7 times on tergum 7. Apical margin of tergum 7 with white palisade fringe. Tergum 8 with three pairs of macrosetae (Figs. 222, 224).

In males posterior angles of tergum 3 projecting as spines up to 2 times as long as tergum 3 (measured medially); tergum 7 in front of posterior margin with medial tubercle; posterior margin of male tergum 8 with emargination delimited by short projections (Fig. 222).

Aedeagus as in Figs. 226-233. Apex of paramere broad, proximal seta approximately as long as the other three setae (Fig. 233).

Spermatheca as in Fig. 234.



FIGURES 230-234. Genitalia of *Seeversiella brevipennis* Gusarov, **sp. n.** (230-233, holotype; 234, paratype, 5.9 km N Cerro Punta, Panama). 230-231 – details of internal sac retracted into median lobe, lateral view; 232 – details of internal sac retracted into median lobe, abparameral view; 233 – apex of left paramere; 234 – spermatheca. Scale bar 0.2 mm (230-232), 0.1 mm (233-234).

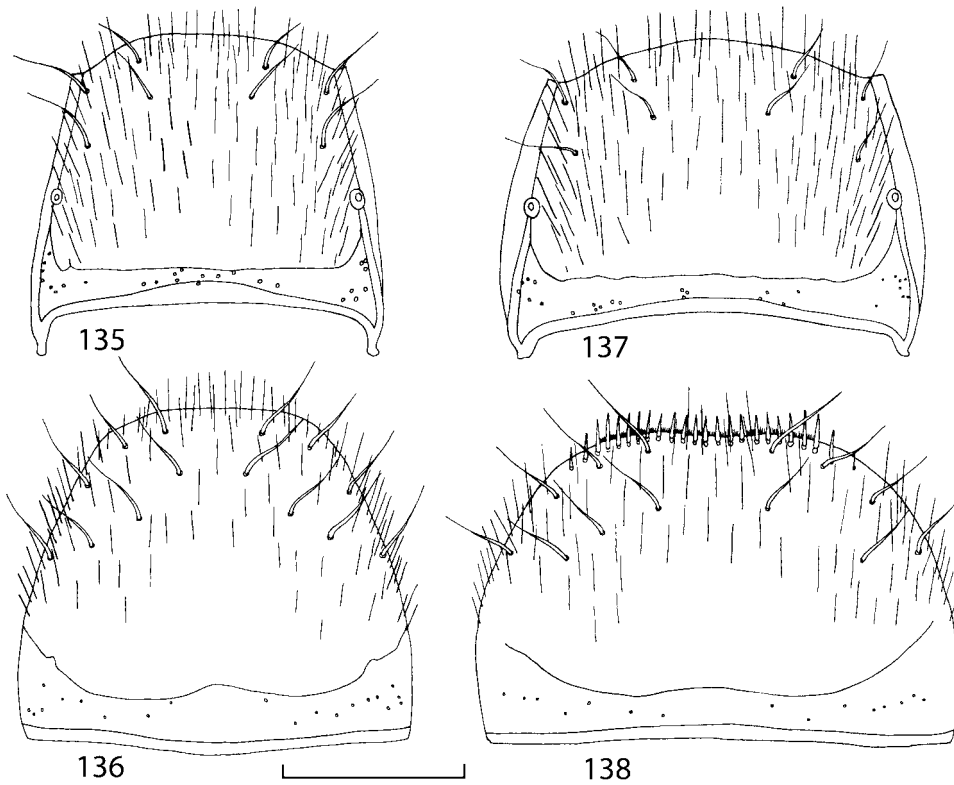
Distribution. Known from Cerro Punta, Panama (Fig. 388). In this locality *S. brevipennis* is sympatric *S. scabricollis*.

Natural History. *Seeversiella brevipennis* was collected in forest litter at altitude of 2150 m.

17. *Seeversiella brunnea* Gusarov, sp. n. (Figs. 235-246)

Type material. Holotype, ♂, **COSTA RICA: Cartago:** P. N. Tapantí, 9°45'00"N 83°49'00"W, 1500 m, berlese forest litter (R.Anderson), 4.vi.1997 (KSEM).

Paratypes: **COSTA RICA: Cartago:** ♂, ♀, ditto but, 9°44'30"N 83°48'30"W, 1740 m (KSEM).



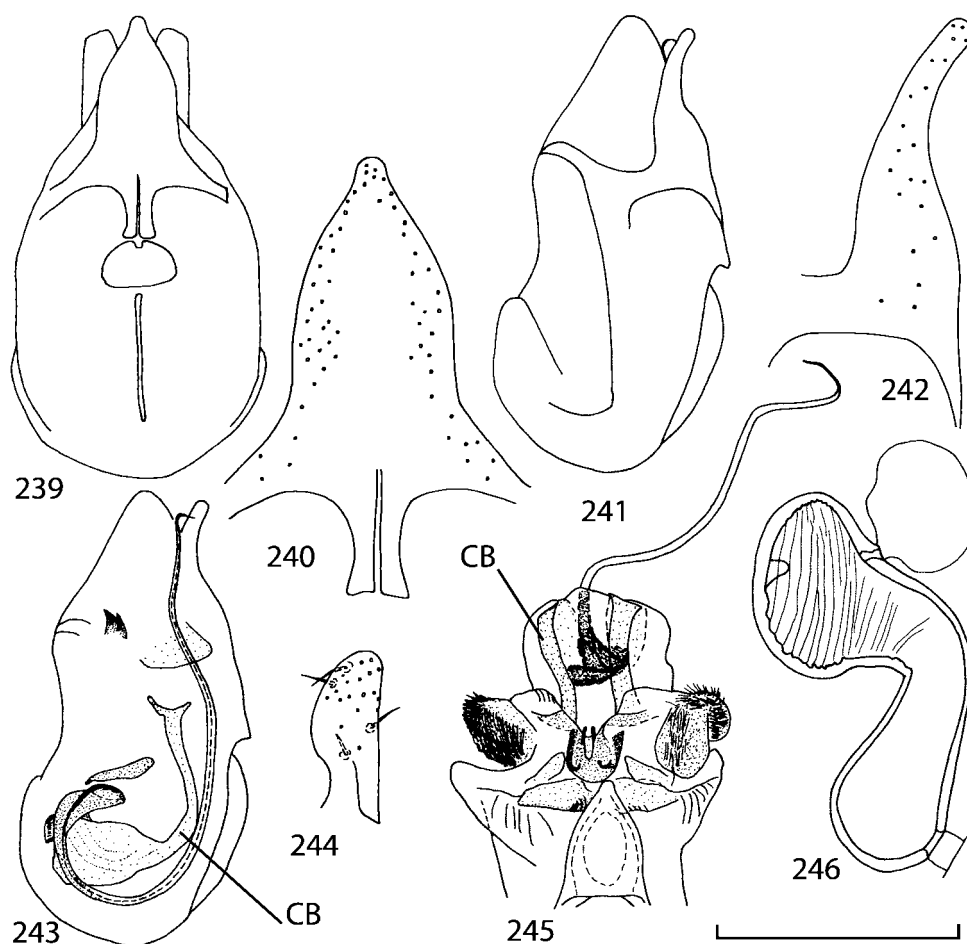
FIGURES 235-238. Abdominal segment 8 of *Seeversiella brunnea* Gusarov, **sp. n.** (235-236, holotype; 237-238, paratype, P. N. Tapantí, Costa Rica). 235 – male tergum 8; 236 – male sternum 8; 237 – female tergum 8; 238 – female sternum 8. Scale bar 0.2 mm.

Diagnosis. *Seeversiella brunnea* can be distinguished from other species of *Seeversiella* by having brown body; temples 0.8-1.2 times as long as eyes; matte pronotum with

strong microsculpture; elytra longer than pronotum; wings fully developed or partially reduced, 2-4 times as long as elytra; tergum 8 with three pairs of macrosetae; the distinct shape of aedeagus (Figs. 239-245) and spermatheca (Fig. 246).

Seeversiella brunnea differs from *S. scabricollis* and *S. furcativebris* in having concave apex of median lobe (in lateral view) (Figs. 241-242; 197-198; 214-215).

Seeversiella brunnea differs from *S. brevipennis* in having matte pronotum; pronotal punctation not asperate; elytra longer than pronotum; and concave apex of median lobe (in lateral view) (Figs. 241-242; 228-229).



FIGURES 239-246. Genitalia of *Seeversiella brunnea* Gusarov, **sp. n.** (239-244, holotype; 245-246, paratypes, P. N. Tapantí, Costa Rica). 239 – median lobe, parameral view; 240 – apex of median lobe, parameral view; 241 – median lobe, lateral view; 242 – apex of median lobe, lateral view; 243 – details of internal sac retracted into median lobe, lateral view; 244 – apex of left paramere; 245 – everted internal sac, parameral view; 246 – spermatheca. Scale bar 0.2 mm (239, 241, 243, 245), 0.1 mm (240, 242, 244, 246).

CB – connecting band.

Description. Length 2.5-2.8 mm. Pronotal width 0.44-0.50 mm. Body brown.

In all character states *S. brunnea* is very similar to *S. scabricollis* and *S. furciventris*, but differs in the shape of the median lobe as described in the diagnosis.

Aedeagus as in Figs. 239-245.

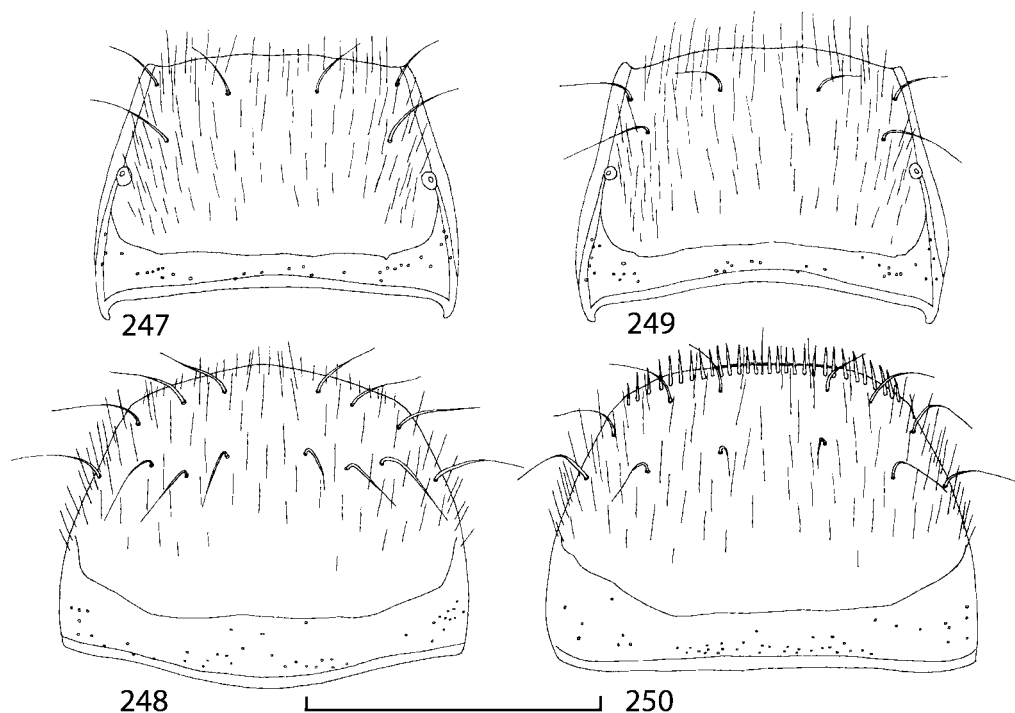
Spermatheca as in Fig. 246.

Discussion. Despite the similarity of *S. brunnea* to *S. furciventris* and *S. scabricollis* in external characters and the shape of genitalia, the difference between *S. brunnea* and the two species in the shape of the apex of median lobe (Figs. 239-242; 194-198; 212-215) is of the same scale as the difference between *S. scabricollis* and *S. furciventris*. Since no intermediate forms have been found, *S. brunnea* is considered to represent a separate species, possibly a local endemic of the area near Tapantí (Fig. 388).

Distribution. Known from the area near Tapantí, Costa Rica (Fig. 388).

Natural History. *Seeversiella brunnea* was collected in forest litter at altitude of 1500-1740 m.

18. *Seeversiella curtipennis* Gusarov, sp. n. (Figs. 247-264)

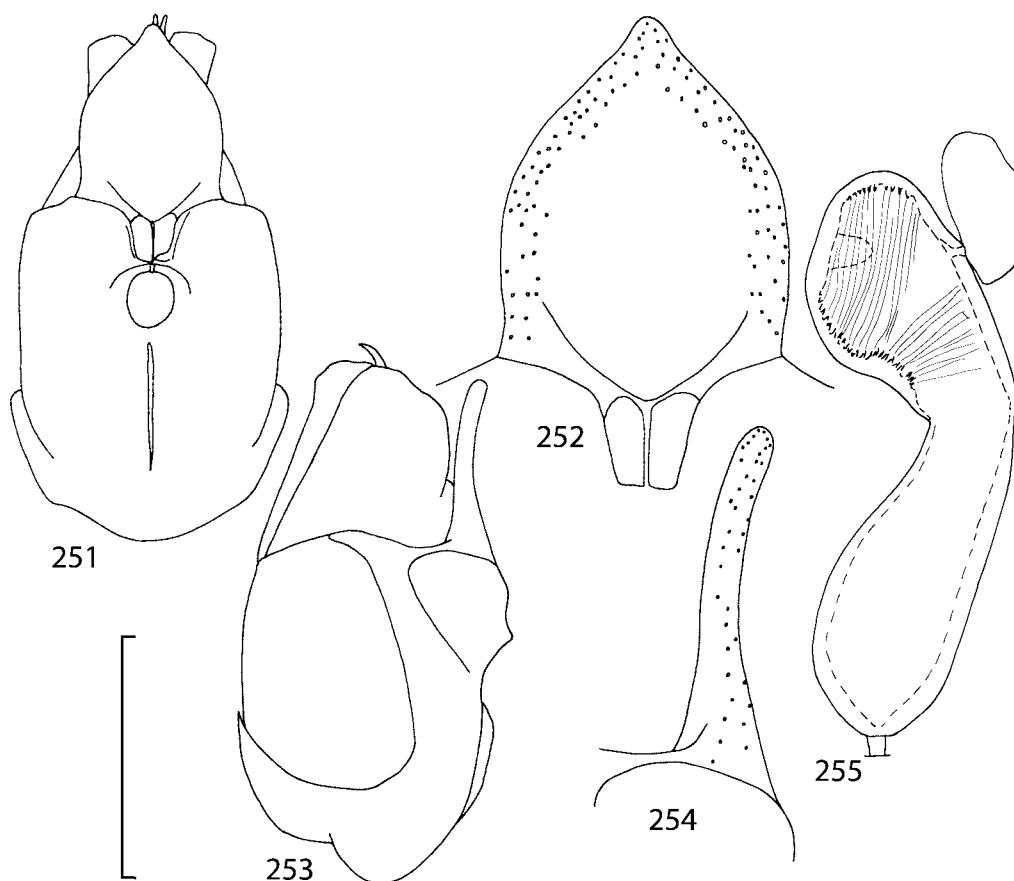


FIGURES 247-250. Abdominal segment 8 of *Seeversiella curtipennis* Gusarov, sp. n. (paratypes, Volcán Irazú, Costa Rica). 247 – male tergum 8; 248 – male sternum 8; 249 – female tergum 8; 250 – female sternum 8. Scale bar 0.4 mm.

Type material. Holotype, ♂, **COSTA RICA: Cartago:** P. N. Volcán Irazú, 9°58'30"N 83°51'30"W, 3300 m, berlese forest litter (R.Anderson), 18.vi.1997 (KSEM).

Paratypes: COSTA RICA: Cartago: 28 specimens, same data as the holotype; **San Jose:** 4 specimens, Estación Cuerici, 4.6 km E Villa Mills, 9°34'00"N 83°40'00"W, 2600 m, berlese forest litter (R.Anderson), 26.vi.1997 (all – KSEM).

Diagnosis. *Seeversiella curtipennis* can be distinguished from other species of *Seeversiella* by having brown body; temples 1.9-2.0 times as long as eyes; elytra shorter than pronotum; reduced wings (shorter than elytra); by lacking the medial emargination at the posterior margin of the male tergum 7 (Fig. 247); tergum 8 with three pairs of macrosetae; by the distinct shape of aedeagus (Figs. 251-254, 256-264) and spermatheca (Fig. 255).



FIGURES 251-255. Genitalia of *Seeversiella curtipennis* Gusarov, **sp. n.** (paratypes, Volcán Irazú, Costa Rica). 251 – median lobe, parameral view; 252 – apex of median lobe, parameral view; 253 – median lobe, lateral view; 254 – apex of median lobe, lateral view; 255 - spermatheca. Scale bar 0.2 mm (251, 253), 0.1 mm (252, 254-255).

Seeversiella curtipennis differs from *S. scabricollis*, *S. furcativevtris* and *S. brunnea* in having shorter elytra (shorter than pronotum); reduced wings (shorter than elytra); posterior margin of male tergum 8 without medial emargination (Fig. 247); broad apex of the median lobe (in parameral view) (Figs. 251-252; 194-196; 212-213; 239-240); long medial lamellae of the internal sac (Figs. 258-259; 201) protruding apically when the internal sac is retracted (Figs. 256-257); lateral diverticula without sclerotized denticles (Figs. 259; 200); and longer spermatheca (Figs. 255; 205).

Seeversiella curtipennis differs from *S. lativentris* in having weaker basal constriction of the apex of median lobe (in parameral view) (Figs. 251-252; 269-270).

Description. Length 2.6-3.1 mm. Body brown.

Head surface matte, with fine isodiametric microsculpture, fine and slightly asperate punctation, distance between punctures equals 1-2 times their diameter. Temples 1.9-2.0 times as long as eyes. Antennal article 2 as long as 3, article 4 slightly transverse, 5-10 transverse (ratio 1.5-2.0).

Pronotum slightly transverse, 1.2 times as wide as head, width 0.50-0.56 mm, length 0.46-0.50 mm, width to length ratio 1.1, surface matte, with fine isodiametric microsculpture; punctation fine and weak, distance between punctures equals 1-2 times their diameter. Elytra wider and shorter (measured from humeral angle) than pronotum (pronotal length to elytral length ratio 1.2), 1.7 times wider than long, glossy, with fine and weak isodiametric microsculpture, and fine and slightly asperate punctation, distance between punctures equals 1-2 times their diameter. Wings reduced to short vestiges, shorter than elytra.

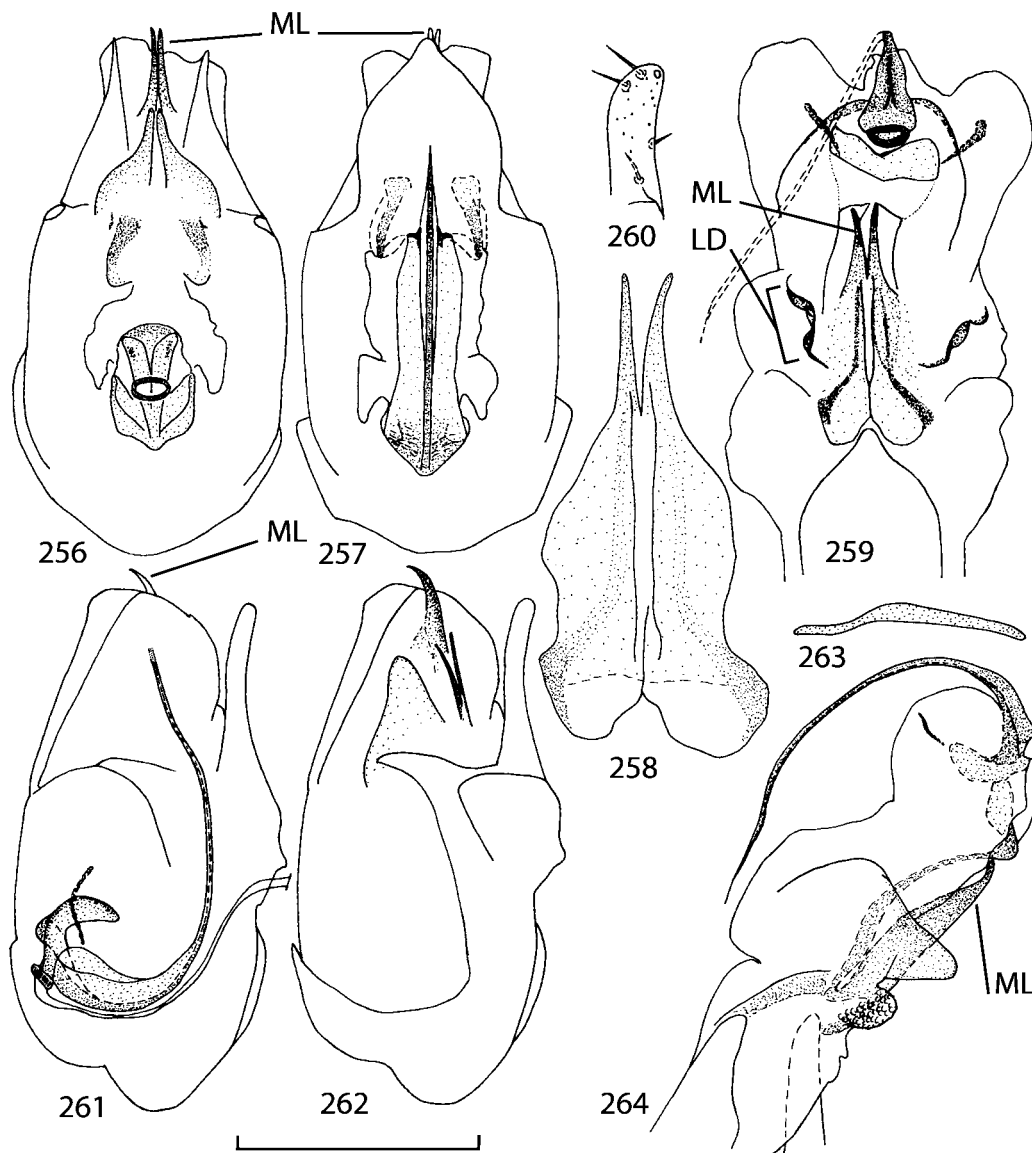
Abdominal terga glossy, with fine microsculpture consisting of transverse meshes, with fine punctation, distance between punctures equals 2-4 times their diameter on terga 3-5 and 4-7 times on tergum 7. Apical margin of tergum 7 without white palisade fringe. Tergum 8 with three pairs of macrosetae (Figs. 247, 249).

In large males posterior angles of tergum 3 projecting as spines up to $\frac{1}{2}$ as long as tergum 3 (measured medially); tergum 7 with medial carina along midline, the carina up to $\frac{2}{3}$ as long as tergum length; posterior margin of tergum 8 without emargination (Fig. 247).

Aedeagus as in Figs. 251-254, 256-264. Apex of paramere narrow, proximal seta approximately as long as the other three setae (Fig. 260).

Spermatheca as in Fig. 255.

Discussion. Volcán Irazú and Cerro Cuerici, the localities where *S. curtipennis* was found, are separated by the distance of 50 km and the gap as low as 1400 m. Considering the distribution of the other species of *Seeversiella* in Costa Rica, and the fact that in *S. curtipennis* the wings are reduced to vestiges that are shorter than elytra, it is clear that the two known populations of this species are isolated from each other. Despite this, both are identical in the structure of genitalia, including the internal sac. Apparently, the isolation of the two population is recent and has not allowed enough time for their divergence.



FIGURES 256-264. Aedeagus of *Seeversiella curtipennis* Gusarov, **sp. n.** (paratypes, Volcán Irazú, Costa Rica). 256 – details of internal sac retracted into median lobe, abparameral view; 257 – details of internal sac retracted into median lobe, parameral view; 258 – medial lamellae, parameral view; 259 – everted internal sac, parameral view; 260 – apex of left paramere; 261-262 – details of internal sac retracted into median lobe, lateral view; 263 – right distal sclerite of internal sac; 264 – everted internal sac, lateral view. Scale bar 0.2 mm (256-257, 259, 261-262, 264), 0.1 mm (258, 260, 263).

LD – lateral diverticulum of internal sac; ML – medial lamellae.

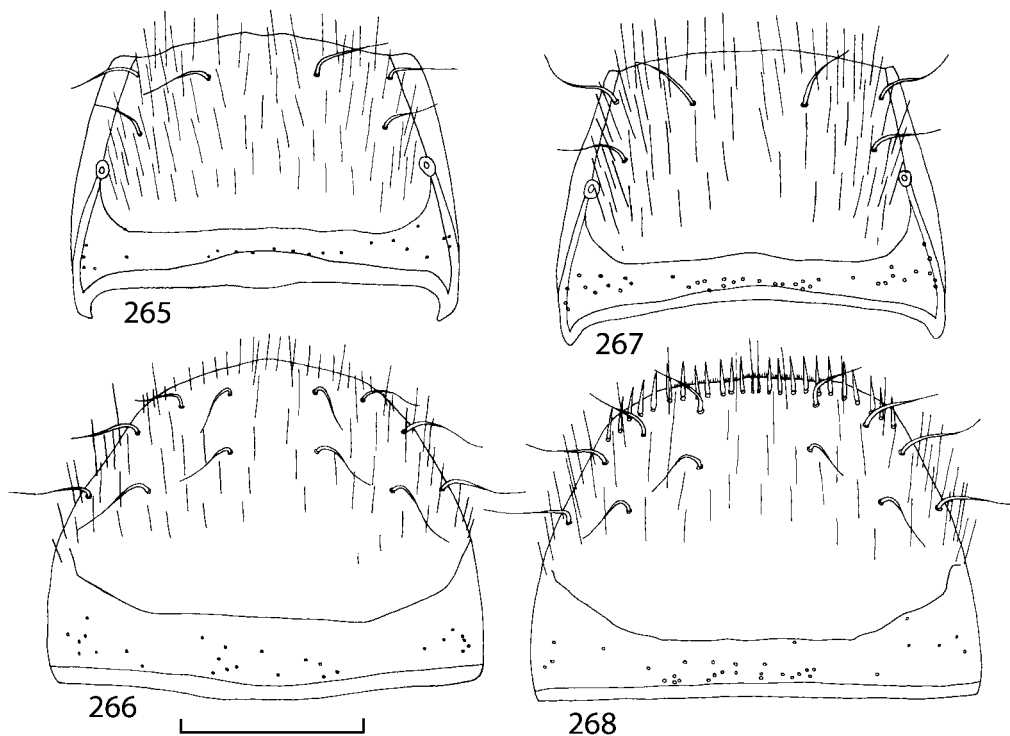
Distribution. Known from Volcán Irazú and Cerro Cuerici, Costa Rica (Fig. 388).

Natural History. *Seeversiella curtipennis* was collected in forest litter at altitude of 2600-3300 m.

19. *Seeversiella lativentris* Gusarov, sp. n. (Figs. 265-277)

Type material. Holotype, ♂, **COSTA RICA: San Jose:** 2 km S Villa Mills, 3000 m, ridgetop oak forest litter (R.Anderson), 10.ii.1996 (KSEM).

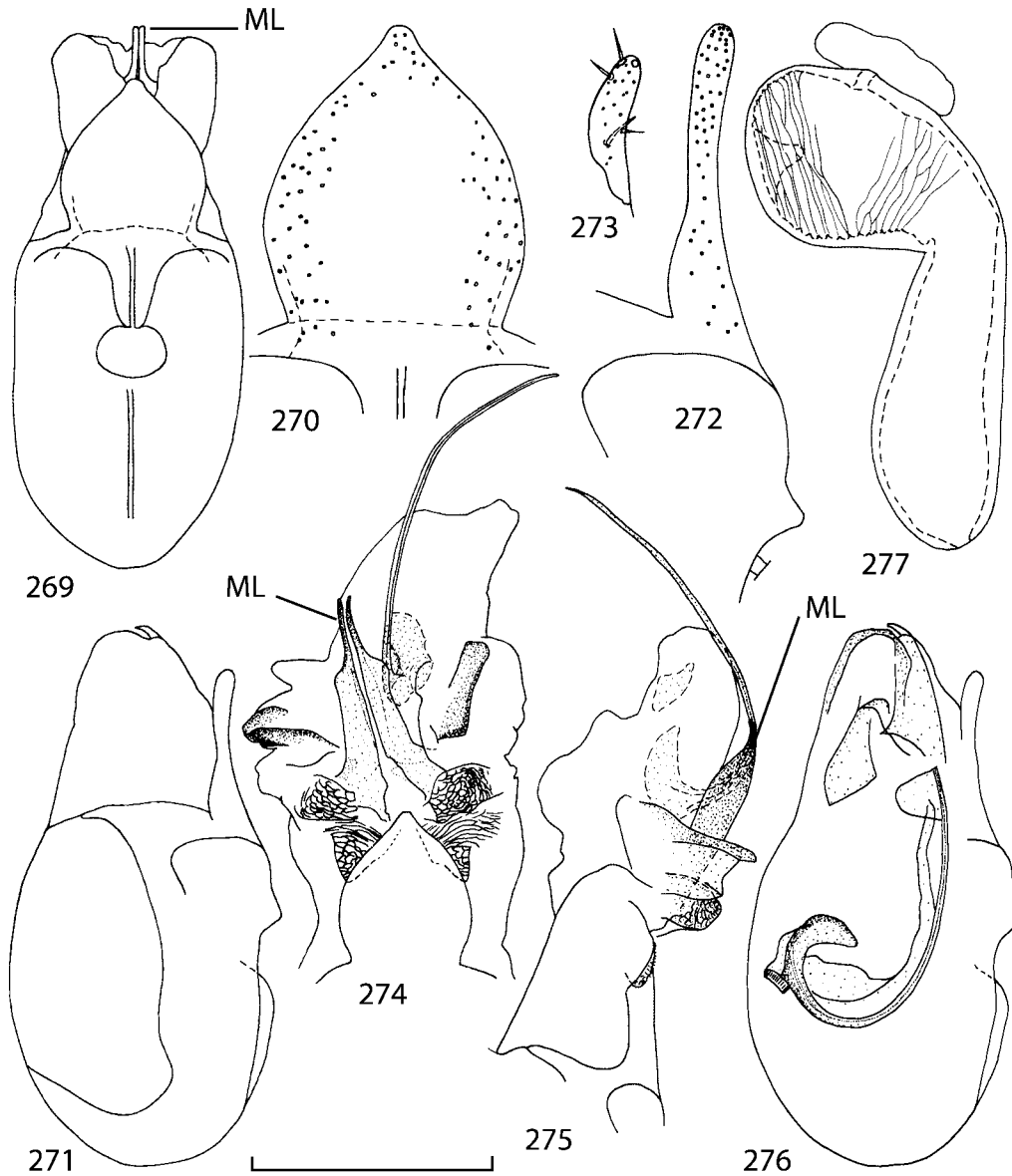
Paratypes: **COSTA RICA: San Jose:** 78 specimens, same data as the holotype (KSEM).



FIGURES 265-268. Abdominal segment 8 of *Seeversiella lativentris* Gusarov, **sp. n.** (paratypes from Villa Mills, Costa Rica). 265 – male tergum 8; 266 – male sternum 8; 267 – female tergum 8; 268 – female sternum 8. Scale bar 0.2 mm.

Diagnosis. *Seeversiella lativentris* can be distinguished from other species of *Seeversiella* by having brown body with lighter pronotum and elytra; temples 1.5-1.8 times as long as eyes; elytra much shorter than pronotum; reduced wings (shorter than elytra); by lacking clear medial emargination at posterior margin of male tergum 7 (Fig. 265); tergum 8 with three pairs of macrosetae; by the distinct shape of aedeagus (Figs. 269-276) and spermatheca (Fig. 277).

Seeversiella lativentris differs from *S. curtipennis* in having stronger basal constriction of the apex of median lobe (in parameral view) (Figs. 269-270; 251-252).



FIGURES 269-277. Genitalia of *Seeversiella lativentris* Gusarov, **sp. n.** (paratypes from Villa Mills, Costa Rica). 269 – median lobe, parameral view; 270 – apex of median lobe, parameral view; 271 – median lobe, lateral view; 272 – apex of median lobe, lateral view; 273 – apex of left paramere; 274 – everted internal sac, parameral view; 275 – everted internal sac, lateral view; 276 – details of internal sac retracted into median lobe, lateral view; 277 – spermatheca. Scale bar 0.2 mm (269, 271, 274-276), 0.1 mm (270, 272-273, 277).

ML – medial lamellae.

Seeversiella lativentris differs from *S. luridicollis* and *S. micralymma* in having matte pronotum with strong isodiametric microsculpture; tergum 8 with three pairs of macrosetae; medial lamellae of internal sac long (Fig. 274), the apices of lamellae protruding from retracted sac (Fig. 269); different shape of the median lobe (Figs. 269-270; 282-283; 295-296) and L-shaped spermatheca with large umbilicus (Fig. 277).

Description. Length 2.0-2.6 mm. Head and abdomen brown to dark brown; pronotum reddish brown; elytra reddish brown or yellowish brown; antennae and legs brown.

Head surface matte, with fine and dense isodiametric microsculpture, and fine and poorly visible punctation. Temples 1.5-1.8 times as long as eyes. Antennal article 2 as long as 3, article 4 transverse (ratio 1.2), 5-10 strongly transverse (ratio 1.5-2.0).

Pronotum slightly transverse, 1.2 times as wide as head, width 0.41-0.47 mm, length 0.34-0.43 mm, width to length ratio 1.1, surface matte, with fine and dense isodiametric microsculpture, and fine and poorly visible punctation. Elytra wider and much shorter (measured from humeral angle) than pronotum (pronotal length to elytral length ratio 1.3), 1.7 times wider than long, matte, with fine and weak isodiametric microsculpture, and fine punctation, distance between punctures equals ½-1 time their diameter. Wings reduced to short vestiges, shorter than elytra.

Abdominal terga glossy, with fine microsculpture consisting of transverse meshes, with fine punctation, distance between punctures equals 1-4 times their diameter on terga 3-5 and 3-5 times on tergum 7. Apical margin of tergum 7 without white palisade fringe. Tergum 8 with three pairs of macrosetae (Figs. 265, 267).

In large males posterior angles of tergum 3 projecting as spines up to half as long as tergum 3 (measured medially); tergum 7 with medial carina along midline, the carina up to ½ as long as tergum length; posterior margin of tergum 8 without clear emargination (Fig. 265).

Aedeagus as in Figs. 269-276. Apex of paramere narrow, proximal seta approximately as long as the other three setae (Fig. 273).

Spermatheca as in Fig. 277.

Distribution. Known from Cerro de la Muerte, Costa Rica (Fig. 389).

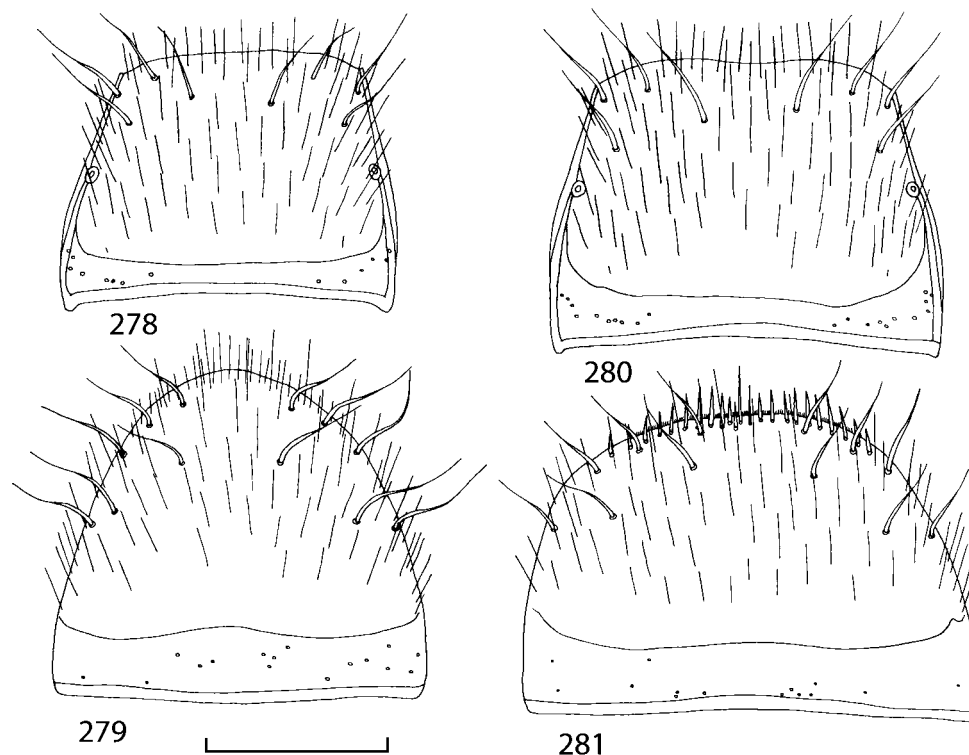
Natural History. *Seeversiella lativentris* was collected in forest litter at altitude of 3000 m.

20. *Seeversiella luridicollis* Gusarov, sp. n. (Figs. 278-290)

Type material. Holotype, ♂, **COSTA RICA: San Jose/Cartago:** Cerro Buenavista, km 89 Int. Amer. Hwy., 9°33'00"N 83°45'30"W, 3200 m, leaf litter (R.Anderson), 18.vi.1998 (KSEM).

Paratypes: **COSTA RICA: San Jose/Cartago:** 7♂♂, 7♀♀, same data as the holotype; **Cartago:** 13♂♂, 4♀♀, Cerro de la Muerte, Pan American Highway, km 89, 3300 m, elfin bamboo forest litter (R.Anderson), 10.ii.1996 (all - KSEM).

Diagnosis. *Seeversiella luridicollis* can be distinguished from other species of *Seeversiella* by having dark brown body with contrasting lighter pronotum and elytra; temples 1.4-2.1 times as long as eyes; elytra much shorter than pronotum; reduced wings (shorter than elytra); by lacking the medial emargination at the posterior margin of the male tergum 7 (Fig. 278); tergum 8 with four pairs of macrosetae; by the distinct shape of aedeagus (Figs. 282-289) and spermatheca (Fig. 290).



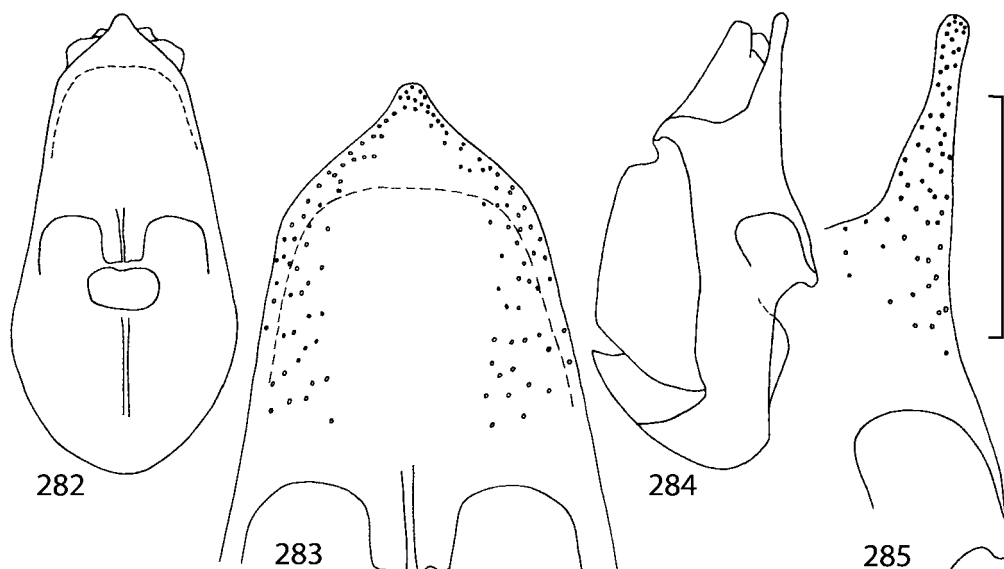
FIGURES 278-281. Abdominal segment 8 of *Seeversiella luridicollis* Gusarov, **sp. n.** (paratypes from Cerro Buenavista, Costa Rica). 278 – male tergum 8; 279 – male sternum 8; 280 – female tergum 8; 281 – female sternum 8. Scale bar 0.2 mm.

Seeversiella luridicollis differs from *S. curtipennis* and *S. lativentris* in having glossy pronotum with weak microsculpture; tergum 8 with four pairs of macrosetae; medial lamellae of internal sac short (Fig. 288), the apices of lamellae not protruding from retracted sac (Fig. 282); the apex of median lobe in parameral view broad, without basal constriction (Figs. 282-283); and S-shaped spermatheca (Fig. 290).

Seeversiella luridicollis differs from *S. micralymma* in having wider apex of median lobe (in parameral view) (Figs. 282-283; 295-296) and S-shaped spermatheca (Fig. 290).

Description. Length 2.0-2.5 mm. Head and abdomen dark brown; pronotum reddish brown to brownish orange; elytra brown to brownish yellow; antennae, mouthparts and legs brown.

Head surface glossy, with fine and weak isodiametric microsculpture, and fine and poorly visible punctation, distance between punctures equals 2-3 times their diameter. Temples 1.4-2.1 times as long as eyes. Antennal article 2 as long as 3, articles 4-5 elongate, 6-7 subquadrate, 8-10 slightly transverse (ratio 1.5-2.0).



FIGURES 282-285. Aedeagus of *Seeversiella luridicollis* Gusarov, **sp. n.** (holotype). 282 – median lobe, parameral view; 283 – apex of median lobe, parameral view; 284 – median lobe, lateral view; 285 – apex of median lobe, lateral view. Scale bar 0.2 mm (282, 284), 0.1 mm (283, 285).

Pronotum slightly transverse, 1.1 times as wide as head, width 0.46-0.51 mm, length 0.40-0.47 mm, width to length ratio 1.1, surface glossy, with fine isodiametric microsculpture, and fine and poorly visible punctation, distance between punctures equals 2-3 times their diameter. Elytra wider and much shorter (measured from humeral angle) than pronotum (pronotal length to elytral length ratio 1.4), 1.6 times wider than long, glossy, with fine and weak isodiametric microsculpture, and fine punctation, distance between punctures equals 1-2 times their diameter. Wings reduced to short vestiges, shorter than elytra.

Abdominal terga glossy, with fine microsculpture consisting of transverse meshes, with fine punctation, distance between punctures equals 1-3 times their diameter on terga 3-5 and 2-4 times on tergum 7. Apical margin of tergum 7 without white palisade fringe. Tergum 8 with four pairs of macrosetae (Figs. 278, 280).

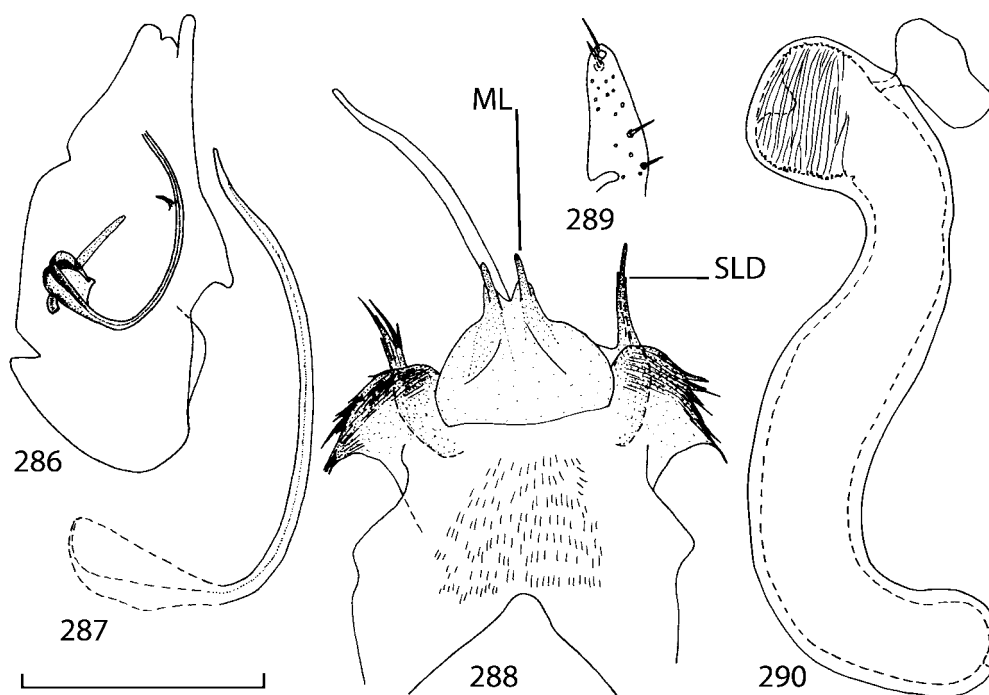
In males posterior angles of tergum 3 not projecting; tergum 7 without medial carina or tubercle; posterior margin of tergum 8 without emargination (Fig. 278).

Aedeagus as in Figs. 282-289. Apex of paramere narrow, proximal seta approximately as long as the other three setae (Fig. 289).

Spermatheca as in Fig. 290.

Distribution. Known from Cerro de la Muerte, Costa Rica (Fig. 389).

Natural History. *Seeversiella luridicollis* was collected in forest litter at altitude of 3200-3300 m.



FIGURES 286-290. Genitalia of *Seeversiella luridicollis* Gusarov, **sp. n.** (286, 289, holotype; 287-288, 290, paratypes from Cerro Buenavista, Costa Rica). 286 – details of internal sac retracted into median lobe, lateral view; 287 – copulatory piece, lateral view; 288 – everted internal sac, parameral view; 289 – apex of left paramere; 290 – spermatheca. Scale bar 0.2 mm (286), 0.1 mm (287-290).

ML – medial lamellae; SLD – sclerite of lateral diverticulum of internal sac.

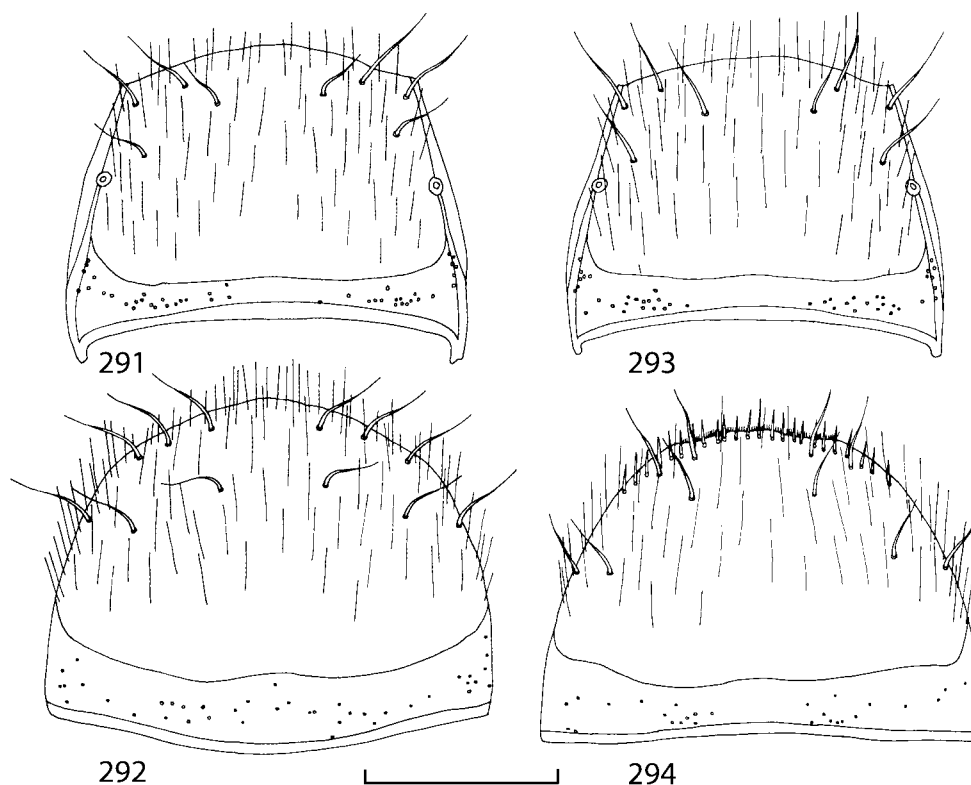
21. *Seeversiella micralymma* Gusarov, **sp. n.** (Figs. 12, 14, 16, 18, 291-306)

Type material. Holotype, ♂, **COSTA RICA: San Jose/Cartago:** Cerro Buenavista, km 89 Int. Amer. Hwy., 9°33'00"N 83°45'30"W, 3200 m, leaf litter (R.Anderson), 18.vi.1998 (KSEM).

Paratypes: **COSTA RICA: San Jose/Cartago:** 22♂♂, 28♀♀, same data as the holotype; ♂, 2♀♀, ditto but 3300 m, 8.vi.1997; **Cartago:** 6♂♂, 10♀♀, Cerro Buenavista, 9°33'02"N [the latitude on the label (9°43'02"N) is incorrect] 83°45'14"W, 3300 m, sub-parano litter (R.Anderson), 15.ii.1998; 16♂♂, 19♀♀, Cerro de la Muerte, Pan American

Highway, km 89, 3300 m, elfin bamboo forest litter (R.Anderson), 10.ii.1996 (all - KSEM).

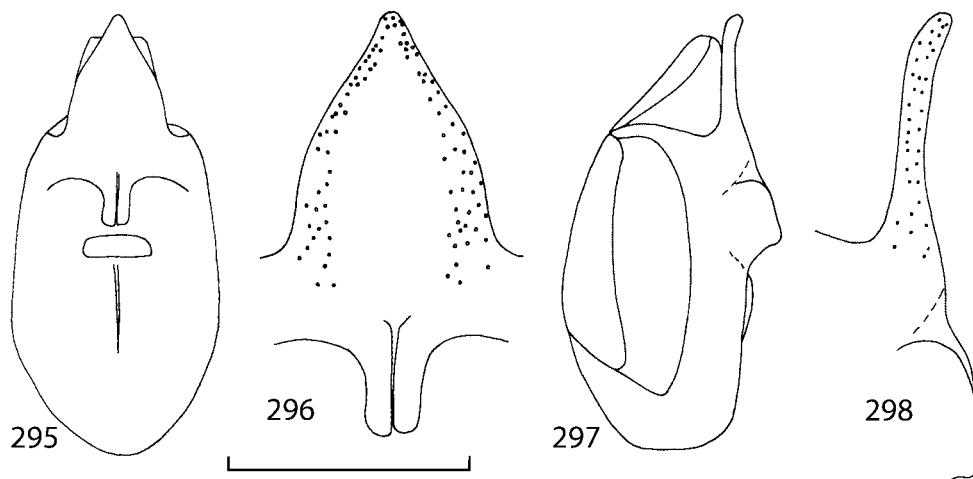
Diagnosis. *Seeversiella micralymma* can be distinguished from other species of *Seeversiella* by having dark brown body with lighter pronotum and elytra; temples 1.1-1.9 times as long as eyes; elytra much shorter than pronotum; reduced wings (shorter than elytra); by lacking the medial emargination at the posterior margin of the male tergum 7 (Fig. 291); tergum 8 with four pairs of macrosetae; by the distinct shape of aedeagus (Figs. 295-305) and spermatheca (Fig. 306).



FIGURES 291-294. Abdominal segment 8 of *Seeversiella micralymma* Gusarov, **sp. n.** (paratypes from Cerro de la Muerte (291-292) and Cerro Buenavista (293-294), Costa Rica). 291 – male tergum 8; 292 – male sternum 8; 293 – female tergum 8; 294 – female sternum 8. Scale bar 0.2 mm.

Seeversiella micralymma differs from *S. curtipennis* and *S. lativentris* in having glossy pronotum with weak microsculpture; tergum 8 with four pairs of macrosetae; medial lamellae of internal sac short (Fig. 305), the apices of lamellae not protruding from retracted sac (Fig. 295); the apex of median lobe in parameral view narrow (Figs. 295-296); and J-shaped spermatheca without umbilicus (Fig. 306).

Seeversiella micralymma differs from *S. luridicollis* in having narrower apex of median lobe (in parameral view) (Figs. 295-296; 282-283) and J-shaped spermatheca without umbilicus (Fig. 306).



FIGURES 295-298. Aedeagus of *Seeversiella micralymma* Gusarov, **sp. n.** (paratype from Cerro de la Muerte, Costa Rica). 295 – median lobe, parameral view; 296 – apex of median lobe, parameral view; 297 – median lobe, lateral view; 298 – apex of median lobe, lateral view. Scale bar 0.2 mm (295, 297), 0.1 mm (296, 298).

Description. Length 2.1-2.5 mm. Body dark brown, pronotum and elytra brown to yellowish brown, antennae, mouthparts and legs dark brown.

Head surface glossy, with fine and weak isodiametric microsculpture, with fine punctation, distance between punctures equals 2-3 times their diameter. Temples 1.1-1.9 times as long as eyes. Antennal article 2 as long as 3, article 4 elongate, 5 subquadrate, 6-10 slightly transverse.

Pronotum slightly transverse, 1.1 times as wide as head, width 0.39-0.41 mm, length 0.34-0.40 mm, width to length ratio 1.1, surface glossy, microsculpture and punctation as on head disc. Elytra wider and much shorter (measured from humeral angle) than pronotum (pronotal length to elytral length ratio 1.4), 1.8 times wider than long, glossy, with fine and weak isodiametric microsculpture, with fine and slightly asperate punctation, distance between punctures equals 3-4 times their diameter. Wings reduced to short vestiges, shorter than elytra.

Abdominal terga glossy, with fine microsculpture consisting of transverse meshes, with fine punctation, distance between punctures equals 2-4 times their diameter on terga 3-5 and 3-5 times on tergum 7. Apical margin of tergum 7 without white palisade fringe. Tergum 8 with four pairs of macrosetae (Figs. 291, 293).

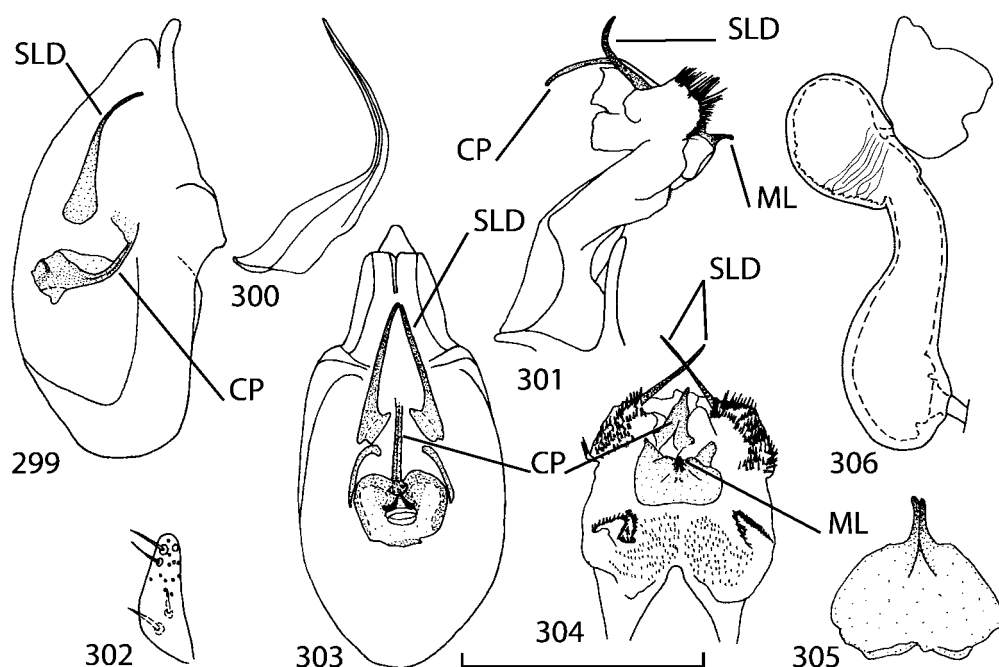
In males posterior angles of tergum 3 not projecting as spines; lateral portions of posterior margin convex, extending posteriorly beyond the level of the medial portion of the margin (Figs. 16, 18); tergum 7 in front of posterior margin with medial carina up to half as long as tergum; posterior margin of tergum 8 without emargination (Fig. 291).

Aedeagus as in Figs. 295-305. Apex of paramere narrow, proximal seta approximately as long as the other three setae (Fig. 302).

Spermatheca as in Fig. 306.

Distribution. Known from Cerro de la Muerte, Costa Rica (Fig. 389).

Natural History. *Seeversiella micralymma* was collected in leaf litter at altitude of 3200-3300 m.



FIGURES 299-306. Genitalia of *Seeversiella micralymma* Gusarov, **sp. n.** (paratypes from Cerro de la Muerte (299, 301-305) and Cerro Buenavista (300, 306), Costa Rica). 299 – details of internal sac retracted into median lobe, lateral view; 300 – copulatory piece, lateral view; 301 – everted internal sac, lateral view; 302 – apex of left paramere; 303 – details of internal sac retracted into median lobe, abparameral view; 304 – everted internal sac, parameral view; 305 – medial lamellae, parameral view; 306 – spermatheca. Scale bar 0.2 mm (299, 301, 303-304), 0.1 mm (300, 302, 305-306).

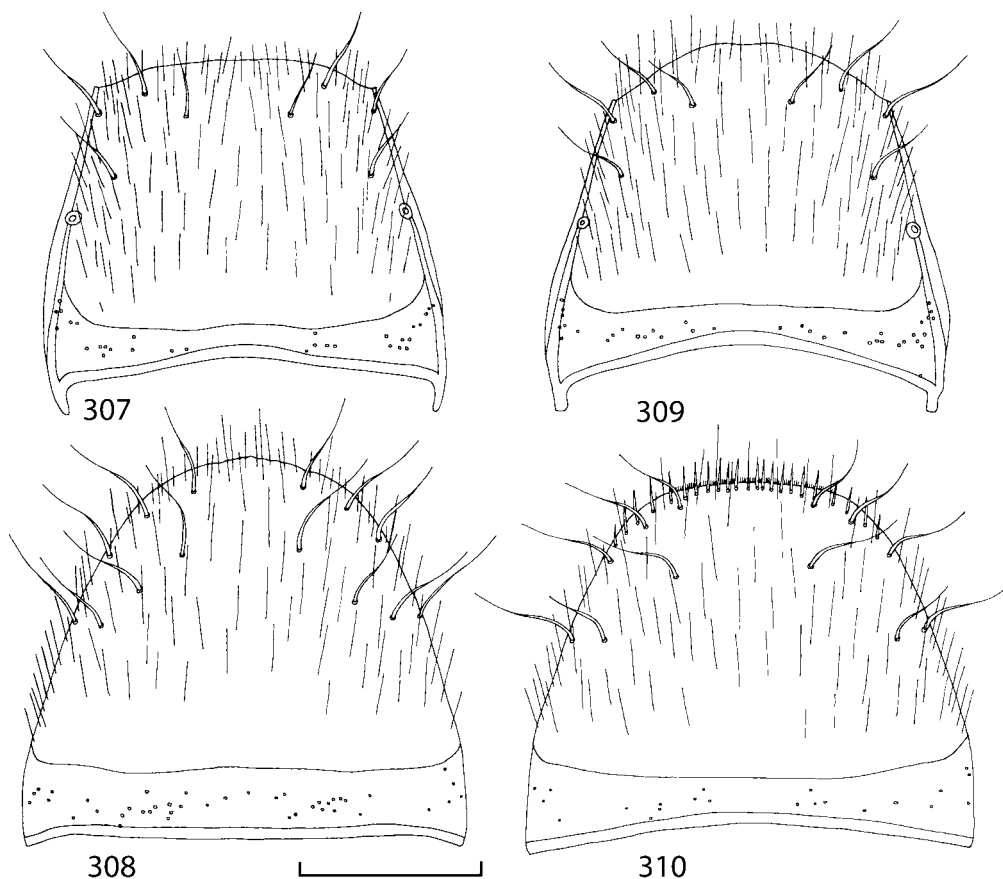
CP – copulatory piece; ML – medial lamellae; SLD – sclerite of lateral diverticulum of internal sac.

22. *Seeversiella impressicollis* Gusarov, sp. n. (Figs. 307-320)

Type material. Holotype, ♂, **COSTA RICA: Cartago:** Cerro Chirripó, Valle de los Conellos, 9°28'37"N 83°29'23"W, 3600 m, paramo shrub litter (R.Anderson), 26.vi.1999 (KSEM).

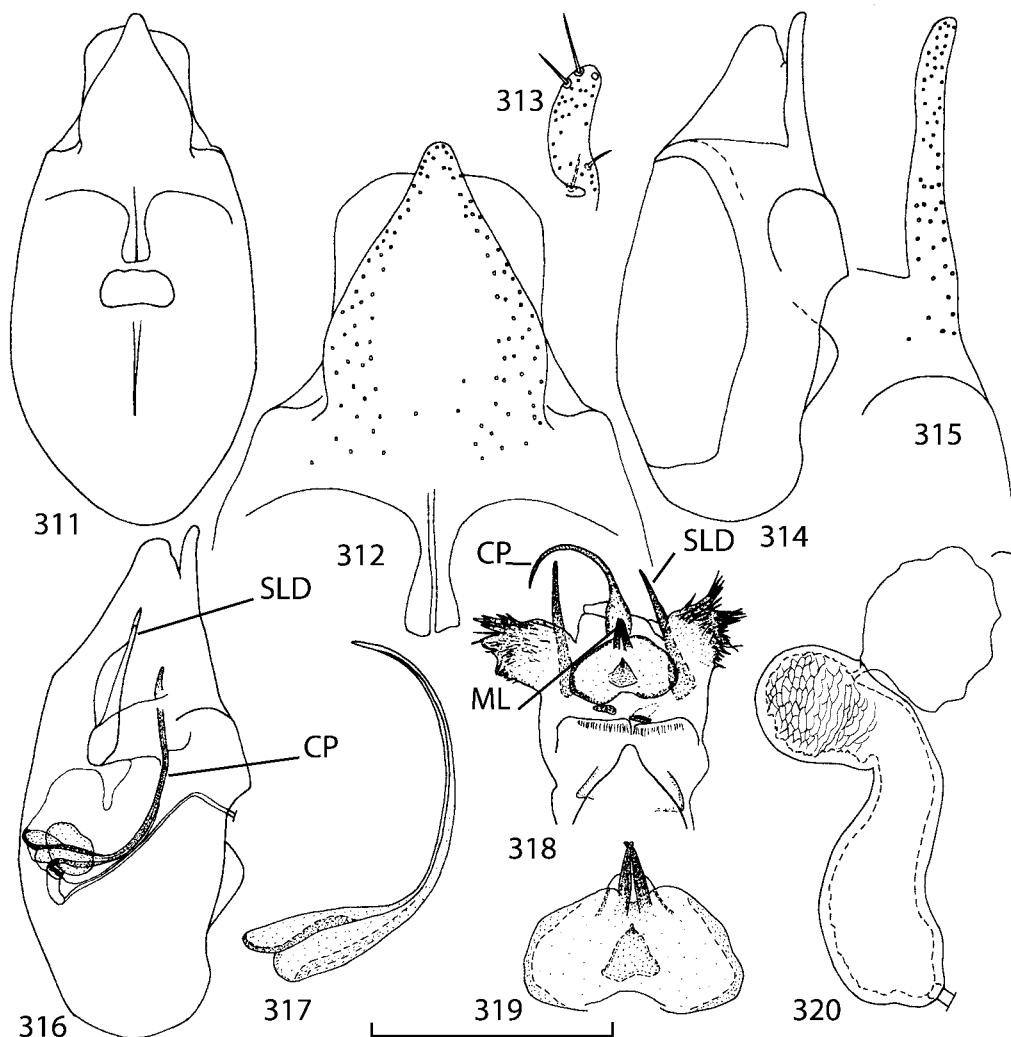
Paratypes: **COSTA RICA: Cartago:** 14 specimens, same data as the holotype (KSEM).

Diagnosis. *Seeversiella impressicollis* can be distinguished from other species of *Seeversiella* by having brown or dark brown body with lighter pronotum and elytra; temples 1.8-2.2 times as long as eyes; elytra much shorter than pronotum; reduced wings (shorter than elytra); by lacking the medial emargination at the posterior margin of male tergum 7 (Fig. 307); tergum 8 with four pairs of macrosetae; by the distinct shape of aedeagus (Figs. 311-319) and spermatheca (Fig. 320).



FIGURES 307-310. Abdominal segment 8 of *Seeversiella impressicollis* Gusarov, sp. n. (paratypes from Cerro Chirripó, Costa Rica). 307 – male tergum 8; 308 – male sternum 8; 309 – female tergum 8; 310 – female sternum 8. Scale bar 0.2 mm.

Seeversiella impressicollis differs from *S. sulcicollis* in having smaller body; in males pronotum with broad medial impression, posterior margin of tergum 3 not projecting, tergum 7 without medial carina and posterior margin of tergum 8 without medial denticles (Fig. 307); apex of median lobe in parameral view without carinae (Figs. 311-312); copulatory piece of internal sac shorter (Figs. 317; 326, 328); sclerites of lateral diverticula of internal sac more slender (Figs. 318; 326).



FIGURES 311-320. Genitalia of *Seeversiella impressicollis* Gusarov, **sp. n.** (paratypes from Cerro Chirripó, Costa Rica). 311 – median lobe, parameral view; 312 – apex of median lobe, parameral view; 313 – apex of left paramere; 314 – median lobe, lateral view; 315 – apex of median lobe, lateral view; 316 – details of internal sac retracted into median lobe, lateral view; 317 – copulatory piece, lateral view; 318 – everted internal sac, parameral view; 319 – medial lamellae, parameral view; 320 – spermatheca. Scale bar 0.2 mm (311, 314, 316, 318), 0.1 mm (312-313, 315, 317, 319-320).

CP – copulatory piece; ML – medial lamellae; SLD – sclerite of lateral diverticulum of internal sac.

Seeversiella impressicollis differs from *S. microphthalmalma* in having pronotum with more asperate punctation; in males pronotum with broad medial impression, posterior angles of tergum 3 not projecting as spines; lateral diverticula of internal sac with long spiniform sclerites (Figs. 316, 318; 343); spermatheca with smaller distal portion (Figs. 320; 341).

Description. Length 2.2-2.7 mm. Body brown or dark brown with lighter pronotum and elytra; legs brownish yellow.

Head surface glossy, with fine and weak isodiametric microsculpture, with fine and poorly visible punctation, distance between punctures equals 2 times their diameter. Temples 1.8-2.2 times as long as eyes. Antennal article 2 longer than 3, article 4 subquadrate, 5-10 transverse (ratio 1.5-1.8).

Pronotum slightly transverse, 1.2 times as wide as head, width 0.47-0.53 mm, length 0.43-0.49 mm, width to length ratio 1.1, surface glossy, with fine isodiametric microsculpture, with fine and slightly asperate punctation, distance between punctures equals 1-2 times their diameter. Elytra wider and much shorter (measured from humeral angle) than pronotum (pronotal length to elytral length ratio 1.5), 1.8 times wider than long, glossy, with fine and weak isodiametric microsculpture, with fine and asperate punctation, distance between punctures equals 1-2 times their diameter. Wings reduced to short vestiges, shorter than elytra.

Abdominal terga glossy, with fine microsculpture consisting of transverse meshes, with fine punctation, distance between punctures equals 1-4 times their diameter on terga 3-5 and 3-5 times on tergum 7. Apical margin of tergum 7 without white palisade fringe. Tergum 8 with four pairs of macrosetae (Figs. 307, 309).

In males pronotum with wide medial impression; posterior angles of tergum 3 not projecting; tergum 7 without medial carina or tubercle; posterior margin of tergum 8 without emargination (Fig. 307).

Aedeagus as in Figs. 311-319. Apex of paramere narrow, proximal seta approximately as long as the other three setae (Fig. 313).

Spermatheca as in Fig. 320.

Distribution. Known from Cerro Chirripó, Costa Rica (Fig. 389).

Natural History. *Seeversiella impressicollis* was collected in paramo shrub litter at altitude of 3600 m.

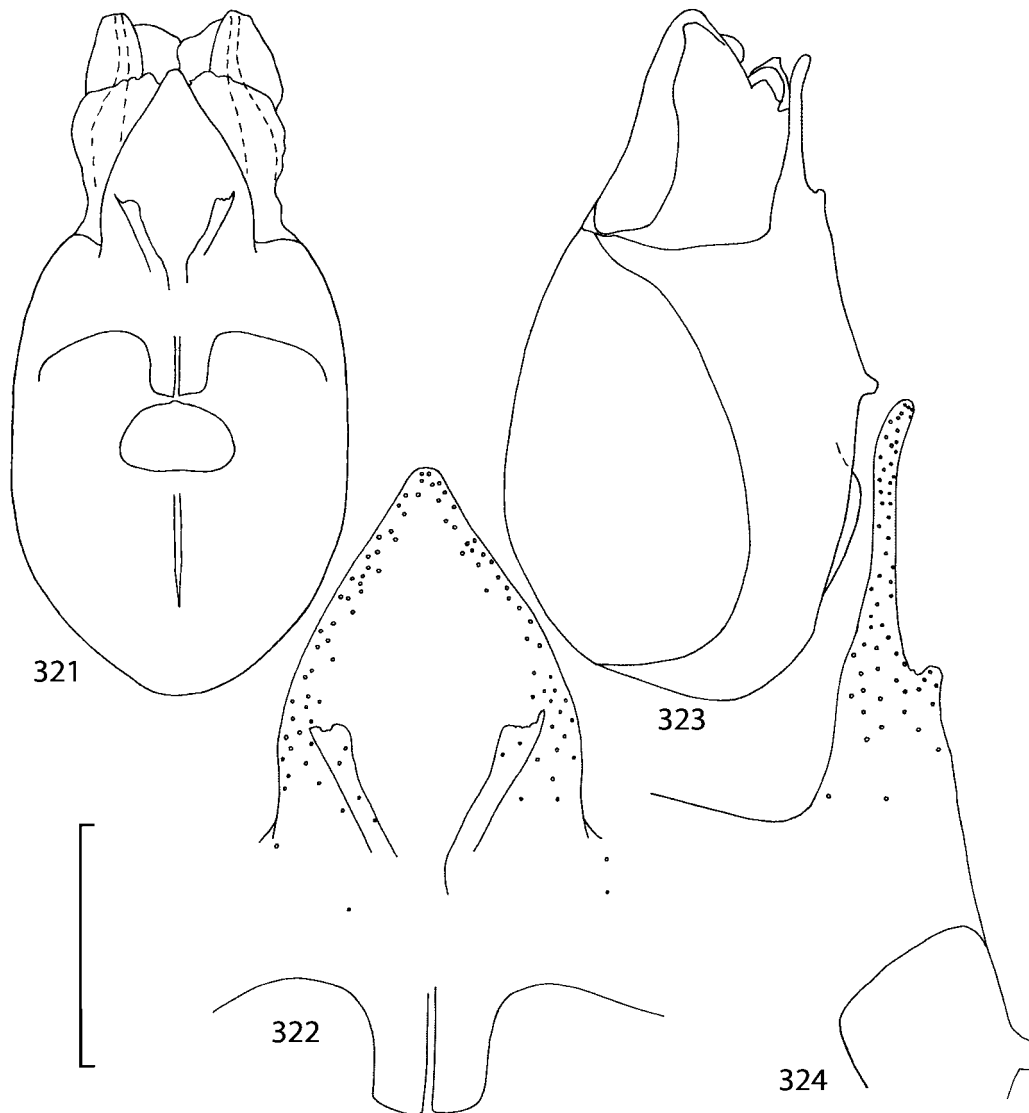
23. *Seeversiella sulcicollis* Gusarov, sp. n. (Figs. 321-330)

Type material. Holotype, ♂, **COSTA RICA: San Jose/Cartago:** Cerro Buenavista, km 89, Int. Amer. Hwy., 9°33'00"N 83°45'30"W, 3300 m, forest litter (R. Anderson), 8.vi.1997 (KSEM).

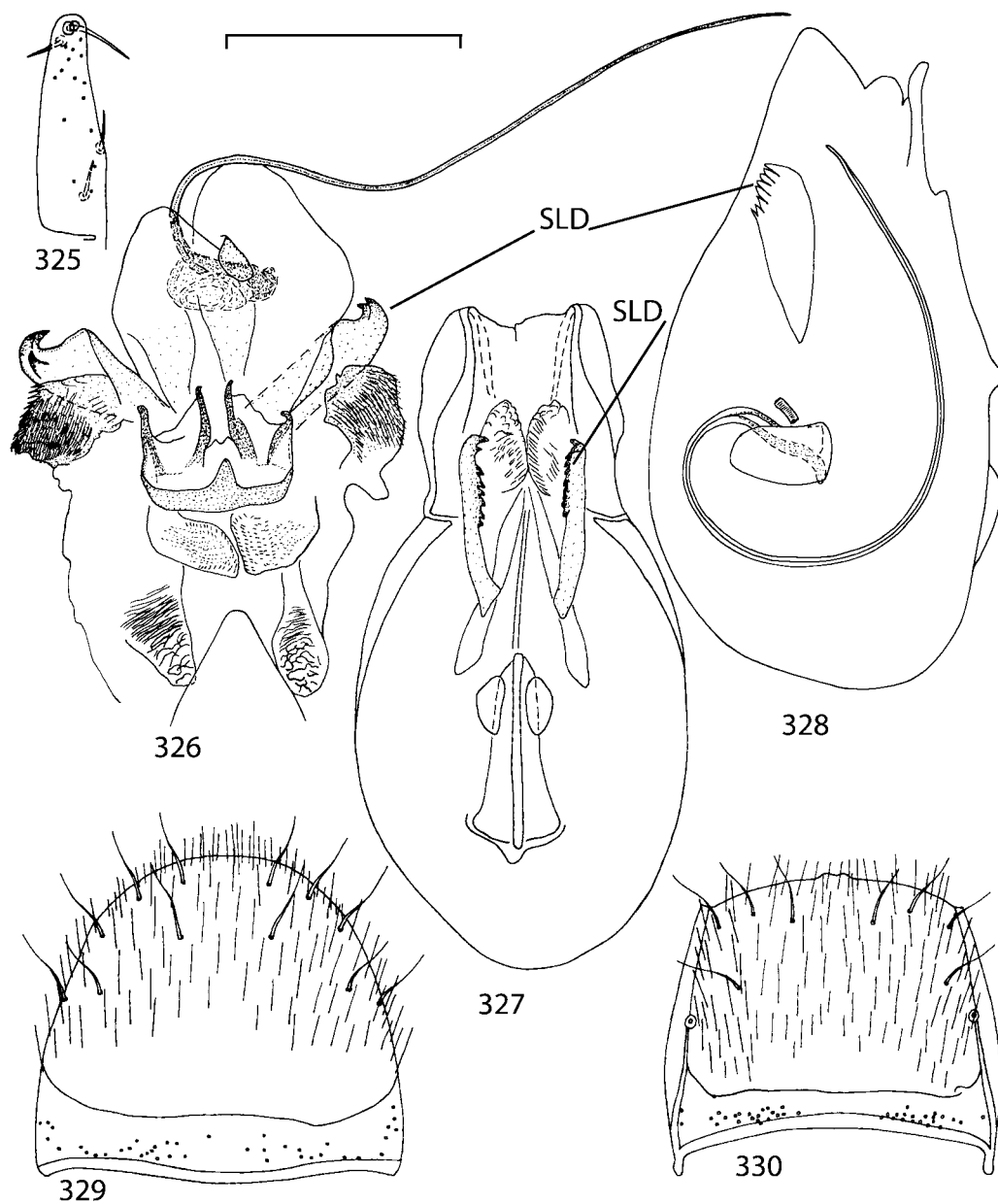
Paratypes: **COSTA RICA: Cartago:** ♂, same data as the holotype (KSEM).

Diagnosis. *Seeversiella sulcicollis* can be distinguished from other species of *Seever-*

siella by having reddish brown body; temples 1.8-2.3 times as long as eyes; elytra much shorter than pronotum; reduced wings (shorter than elytra); by having small medial emargination delimited by two short and blunt projections at the posterior margin of the male tergum 8 (Fig. 330); tergum 8 with four pairs of macrosetae; and the distinct shape of aedeagus (Figs. 321-328).



FIGURES 321-324. Aedeagus of *Seeverysiella sulcicollis* Gusarov, **sp. n.** (holotype). 321 – median lobe, parameral view; 322 – apex of median lobe, parameral view; 323 – median lobe, lateral view; 324 – apex of median lobe, lateral view. Scale bar 0.2 mm (321, 323), 0.1 mm (322, 324).



FIGURES 325-330. Abdominal segment 8 and aedeagus of *Seeversiella sulcicollis* Gusarov, **sp. n.** (325, 327-330, holotype; 326, paratype from Cerro Buenavista, Costa Rica). 325 – apex of left paramere; 326 – everted internal sac, parameral view; 327 – details of internal sac retracted into median lobe, abparameral view; 328 – details of internal sac retracted into median lobe, lateral view; 329 – male sternum 8; 330 – male tergum 8. Scale bar 0.1 mm (325), 0.2 mm (326-328), 0.4 mm (329-330).

SLD – sclerite of lateral diverticulum of internal sac.

Seeversiella sulcicollis differs from *S. impressicollis* in having larger body; in males pronotum with medial furrow, lateral portions of posterior margin of tergum 3 extending as short and obtuse projections (as in Fig. 19), tergum 7 with short medial carina; posterior margin of tergum 8 with two medial denticles (Fig. 330); apex of median lobe with two divergent carinae (in parameral view) (Figs. 321-322); copulatory piece of internal sac longer (Figs. 326, 328; 317); sclerites of lateral diverticula of internal sac more robust (Figs. 326; 318).

Seeversiella sulcicollis differs from *S. microphthalmma* in having more asperate pronotal punctation; in males pronotum with medial furrow, posterior angles of tergum 3 not projecting as spines, posterior margin of tergum 8 with two medial denticles (Fig. 330); and the apex of median lobe with two divergent carinae (in parameral view) (Figs. 321-322).

Description. Length 3.0 mm. Body reddish brown.

Head surface glossy, with fine and weak isodiametric microsculpture, with fine and asperate punctation, distance between punctures equals 1-2 times their diameter. Temples 1.8-2.3 times as long as eyes. Antennal article 2 as long as 3, articles 4-6 subquadrate, 7-10 slightly transverse.

Pronotum slightly transverse, 1.3 times as wide as head, width 0.66-0.67 mm, length 0.59-0.60 mm, width to length ratio 1.1, surface glossy, with fine isodiametric microsculpture, with fine and asperate punctation, distance between punctures equals 1-1.5 times their diameter. Elytra wider and much shorter (measured from humeral angle) than pronotum (pronotal length to elytral length ratio 1.4), 1.8 times wider than long, glossy, with fine and weak isodiametric microsculpture, with fine and asperate punctation, distance between punctures equals 1-2 times their diameter, punctures stronger than on pronotum. Wings reduced to short vestiges, shorter than elytra.

Abdominal terga glossy, terga 3-5 with microsculpture consisting of transverse meshes, and with fine punctation, distance between punctures equals 1-4 times their diameter; tergum 7 with microsculpture consisting of isodiametric or slightly transverse meshes and with fine and sparse punctation, distance between punctures equals 3-6 times their diameter. Apical margin of tergum 7 without white palisade fringe. Tergum 8 with four pairs of macrosetae (Fig. 330).

In males pronotum with medial furrow; lateral portions of posterior margin of tergum 3 extending as short and blunt projections up to 1/8 as long as tergum (measured medially) (as in Fig. 19); tergum 7 in front of posterior margin with medial carina, up to 1/4 as long as the tergum; posterior margin of tergum 8 with small medial emargination delimited by two short and blunt projections (Fig. 330).

Aedeagus as in Figs. 321-328. Apex of paramere narrow, proximal seta approximately as long as the other three setae (Fig. 325).

Female unknown.

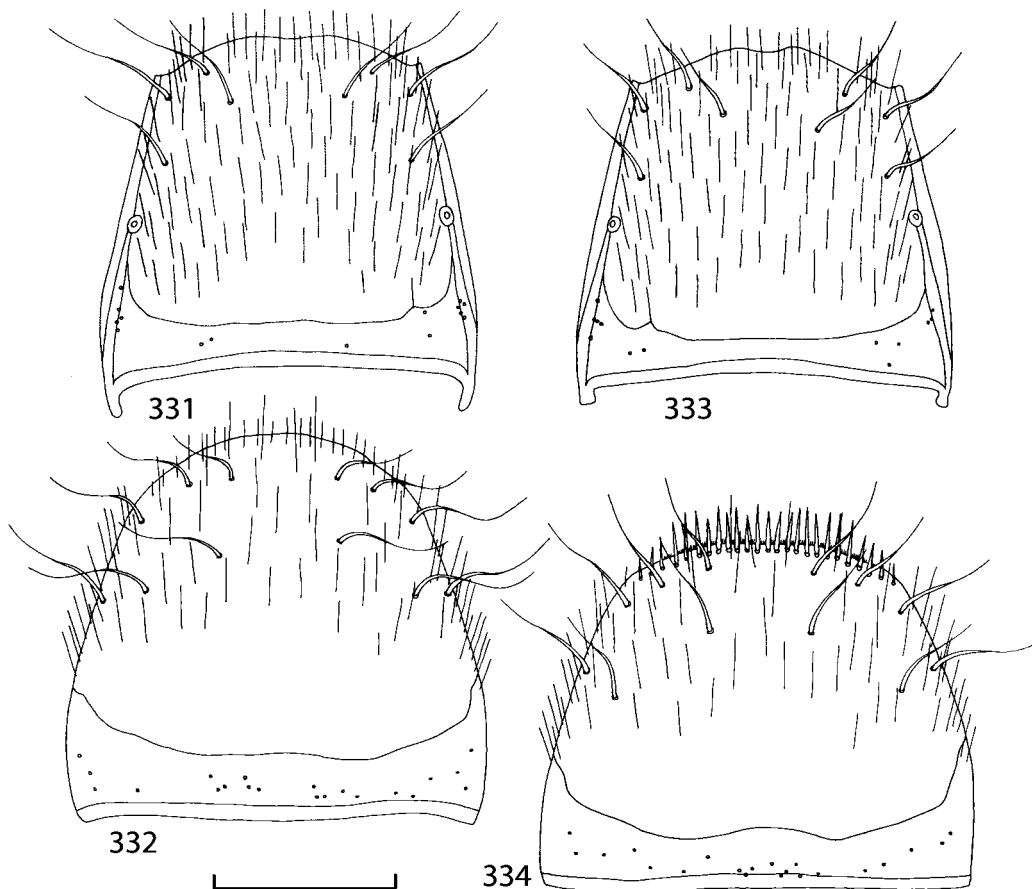
Distribution. Known from Cerro de la Muerte, Costa Rica (Fig. 389).

Natural History. *Seeversiella sulcicollis* was collected in forest litter at altitude of 3300 m.

24. *Seeversiella microphthalma* Gusarov, sp. n. (Figs. 331-343)

Type material. Holotype, ♂, **COSTA RICA: San Jose:** 2 km S Villa Mills, 3000 m, ridgetop oak forest litter (R.Anderson), 10.ii.1996 (KSEM).

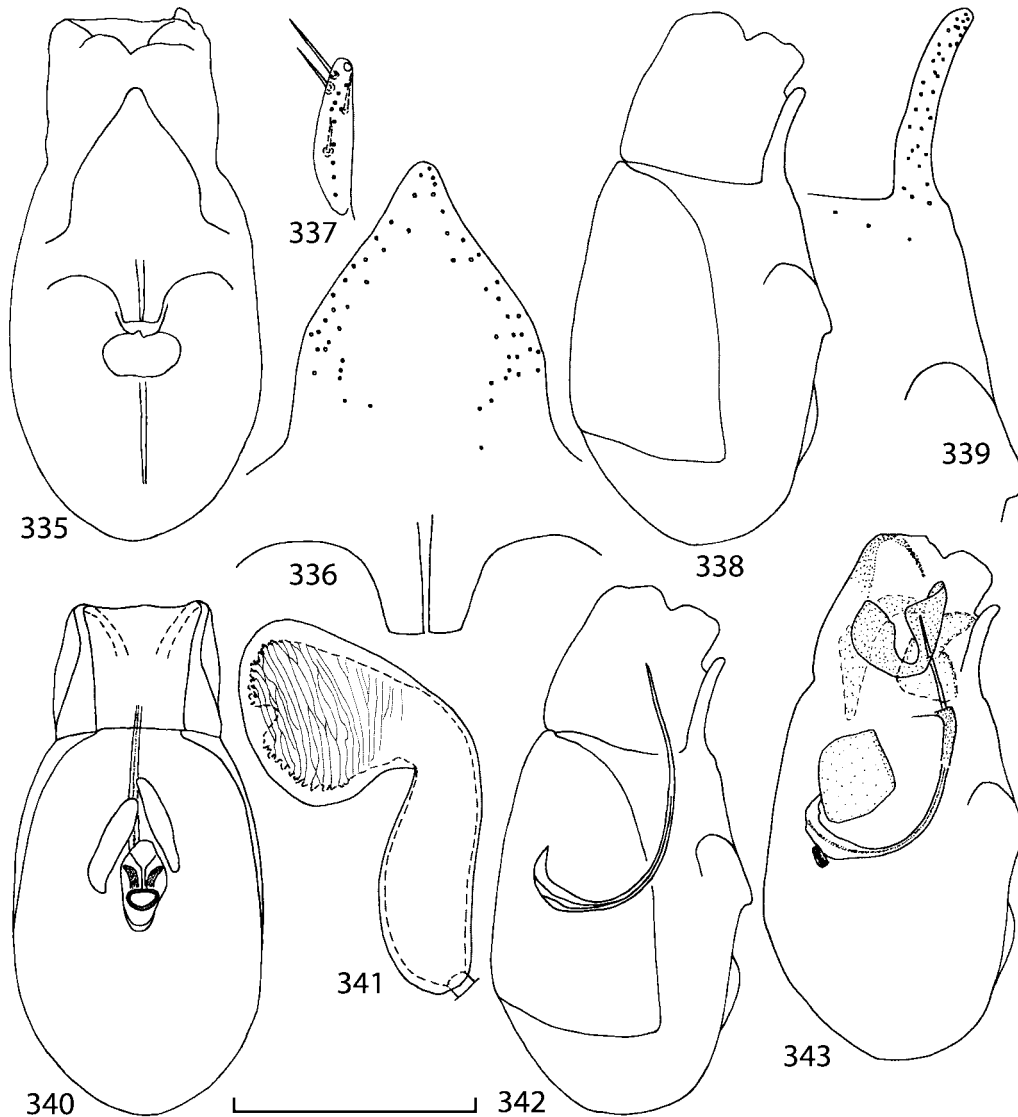
Paratypes: **COSTA RICA: San Jose:** 8♀ ♀, same data as the holotype (KSEM).



FIGURES 331-334. Abdominal segment 8 of *Seeversiella microphthalma* Gusarov, **sp. n.** (331-332, holotype; 333-334, paratype from Villa Mills, Costa Rica). 331 – male tergum 8; 332 – male sternum 8; 333 – female tergum 8; 334 – female sternum 8. Scale bar 0.2 mm.

Diagnosis. *Seeversiella microphthalma* can be distinguished from other species of *Seeversiella* by having uniformly brown body; small eyes (temples 4.0-4.3 times as long

as eyes); elytra much shorter than pronotum; reduced wings (shorter than elytra); by lacking clear medial emargination at the posterior margin of male tergum 8 (Fig. 331); tergum 8 with four pairs of macrosetae; by the distinct shape of aedeagus (Figs. 335-340, 342-343) and spermatheca (Fig. 341).



FIGURES 335-343. Genitalia of *Seeversiella microphthalma* Gusarov, **sp. n.** (335-340, 342-343, holotype; 341, paratype from Villa Mills, Costa Rica). 335 – median lobe, parameral view; 336 – apex of median lobe, parameral view; 337 – apex of left paramere; 338 – median lobe, lateral view; 339 – apex of median lobe, lateral view; 340 – details of internal sac retracted into median lobe, abparameral view; 341 – spermatheca; 342-343 – details of internal sac retracted into median lobe, lateral view. Scale bar 0.2 mm (335, 338, 340, 342-343), 0.1 mm (336-337, 339, 341).

Seeversiella microphthalma differs from *S. impressicollis* in having less asperate pronotal punctation; in males pronotum without medial impression, posterior angles of male tergum 3 projecting as spines; lateral diverticula of internal sac without long spini-form sclerites (Figs. 343; 316, 318); L-shaped spermatheca with larger distal portion (Fig. 341).

Seeversiella microphthalma differs from *S. sulcicollis* in having larger body, less asperate pronotal punctation; in males pronotum without medial furrow, posterior angles of male tergum 3 projecting as spines; lateral diverticula of internal sac without strong denticulate sclerites (Figs. 343; 326-328).

Seeversiella microphthalma differs from *S. geostiboides* in having pubescence in the lateral portions of pronotum directed towards the midline and obliquely posteriorly; in wider apex of median lobe (in parameral view) (Figs. 335-336; 348-349); and different shape of the distal portion of spermatheca (Figs. 341; 355).

Seeversiella microphthalma differs from *S. flavida* and *S. adusta* in having abdominal tergum 8 with four pairs of macrosetae.

Seeversiella microphthalma differs from *S. paramoana* in having concave but not emarginate apex of median lobe (in lateral view) (Figs. 338-339; 379-380).

Description. Length 2.5-2.8 mm. Body brown.

Head surface glossy, with fine and weak isodiametric microsculpture, with fine and asperate punctation, distance between punctures equals 1-2 times their diameter. Temples 4.0-4.3 times as long as eyes. Antennal article 2 as long as 3, article 4 subquadrate, 5-10 transverse.

Pronotum slightly transverse, 1.2 times as wide as head, width 0.46-0.50 mm, length 0.43-0.47 mm, width to length ratio 1.1, surface glossy, with fine isodiametric microsculpture, with fine and asperate punctation, distance between punctures equals 1-2 times their diameter. Elytra wider and much shorter (measured from humeral angle) than pronotum (pronotal length to elytral length ratio 1.4), 1.8 times wider than long, glossy, with poorly visible microsculpture, with fine and asperate punctation, distance between punctures equals 1-1.5 times their diameter, punctures stronger than on pronotum. Wings reduced to short vestiges, shorter than elytra.

Abdominal terga glossy, terga 3-5 with microsculpture consisting of transverse meshes, and with fine punctation, distance between punctures equals 2-4 times their diameter; tergum 7 with microsculpture consisting of transverse meshes and with fine and sparse punctation, distance between punctures equals 3-5 times their diameter. Apical margin of tergum 7 without white palisade fringe. Tergum 8 with four pairs of macrosetae (Figs. 331, 333).

In the only known male the posterior angles of tergum 3 projecting as sharp spines half as long as tergum (measured medially); tergum 7 in front of posterior margin with medial carina half as long as the tergum; posterior margin of tergum 8 without clear medial emargination (Fig. 331).

Aedeagus as in Figs. 335-340, 342-343. Apex of paramere narrow, proximal seta approximately as long as the other three setae (Fig. 337).

Spermatheca as in Fig. 341.

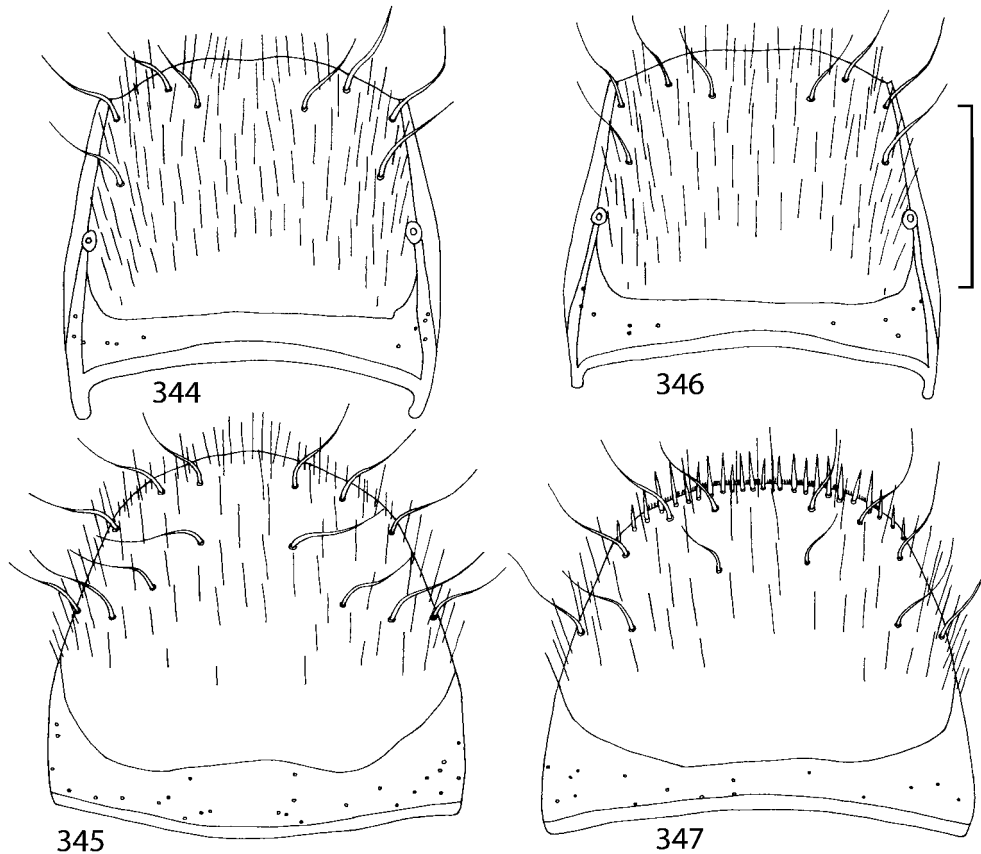
Distribution. Known from Cerro de la Muerte, Costa Rica (Fig. 389).

Natural History. *Seeversiella microphthalmia* was collected in forest litter at altitude of 3000 m.

25. *Seeversiella geostiboides* Gusarov, sp. n. (Figs. 344-355)

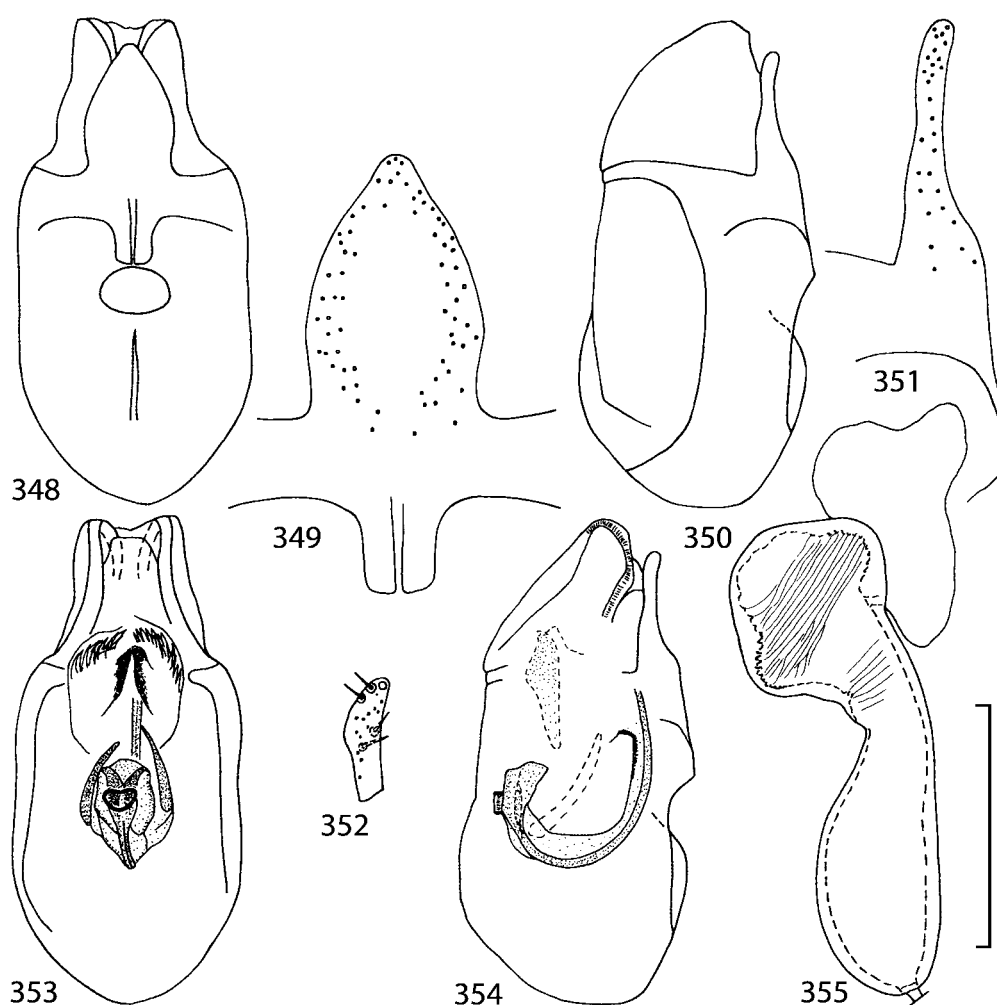
Type material. Holotype, ♂, **COSTA RICA: Cartago:** 2.0 km E Villa Mills, 9°34'00"N 83°41'50"W, 2750 m, oak forest litter (R.Anderson), 15.ii.1998 (KSEM).

Paratypes: **COSTA RICA: Cartago:** ♀, same data as the holotype (KSEM).



FIGURES 344-347. Abdominal segment 8 of *Seeversiella geostiboides* Gusarov, sp. n. (344-345, holotype; 346-347, paratype from Villa Mills, Costa Rica). 344 – male tergum 8; 345 – male sternum 8; 346 – female tergum 8; 347 – female sternum 8. Scale bar 0.2 mm.

Diagnosis. *Seeversiella geostiboides* can be distinguished from other species of *Seeversiella* by having uniformly brown body; small eyes (temples 3.5-4.0 times as long as eyes); pronotal pubescence in lateral portions of the disc directed posteriorly; elytra much shorter than pronotum; reduced wings (shorter than elytra); by lacking clear medial emargination at the posterior margin of male tergum 8 (Fig. 344); tergum 8 with four pairs of macrosetae; by the distinct shape of aedeagus (Figs. 348-354) and spermatheca (Fig. 355).



FIGURES 348-355. Genitalia of *Seeversiella geostiboides* Gusarov, **sp. n.** (348-354, holotype; 355, paratype from Villa Mills, Costa Rica). 348 – median lobe, parameral view; 349 – apex of median lobe, parameral view; 350 – median lobe, lateral view; 351 – apex of median lobe, lateral view; 352 – apex of left paramere; 353 – details of internal sac retracted into median lobe, abparameral view; 354 – details of internal sac retracted into median lobe, lateral view; 355 – spermatheca. Scale bar 0.2 mm (348, 350, 353-354), 0.1 mm (349, 351-352, 355).

Seeversiella geostiboides can be distinguished from *S. impressicollis* by not asperate pronotal punctation; in males pronotum without broad medial impression, lateral portions of posterior margin of tergum 3 extending as short and blunt projections (as in Fig. 19), and tergum 7 with medial carina; the apex of median lobe in parameral view more rounded (Figs. 348-349; 311-312); and spermatheca with larger distal portion (Figs. 355; 320).

Seeversiella geostiboides can be distinguished from *S. sulcicollis* by not asperate pronotal punctation; in males pronotum without medial furrow and posterior margin of tergum 8 without denticles; the apex of median lobe without divergent carinae (in parameral view) (Figs. 348-349).

Seeversiella geostiboides differs from *S. microphthalma* and *S. paramoana* in having pubescence in the lateral portions of pronotum directed posteriorly; in narrower apex of median lobe (in parameral view) (Figs. 348-349; 335-336; 377-378); and different shape of the distal portion of spermatheca (Figs. 355; 341; 381).

Seeversiella geostiboides differs from *S. flavida* and *S. adusta* in having pubescence in the lateral portions of pronotum directed posteriorly; tergum 8 with four pairs of macrosetae; and different shape of the distal portion of spermatheca (Figs. 355; 358; 371).

Description. Length 2.6 mm. Body uniformly brown.

Head surface glossy, with fine and weak isodiametric microsculpture, with fine and poorly visible punctation, distance between punctures equals 2 times their diameter. Temples 3.5-4.0 times as long as eyes. Antennal article 2 as long as 3, article 4 slightly transverse, 5-10 transverse (ratio 1.6-2.0).

Pronotum slightly transverse, 1.3 times as wide as head, width 0.47-0.50 mm, length 0.43-0.46 mm, width to length ratio 1.1, surface glossy, with fine isodiametric microsculpture, with fine punctation, distance between punctures equals 1-2 times their diameter. Pronotal pubescence in lateral portions of the disc directed posteriorly. Elytra wider and much shorter (measured from humeral angle) than pronotum (pronotal length to elytral length ratio 1.4), 1.8 times wider than long, glossy, with poorly visible microsculpture, with fine and asperate punctation, distance between punctures equals 1-2 times their diameter, punctures stronger than on pronotum. Wings reduced to short vestiges, shorter than elytra.

Abdominal terga glossy, terga 3-5 with microsculpture consisting of transverse meshes, and with fine punctation, distance between punctures equals 2-3 times their diameter; tergum 7 with microsculpture consisting of isodiametric or transverse meshes and with fine and sparse punctation, distance between punctures equals 3-7 times. Apical margin of tergum 7 without white palisade fringe. Tergum 8 with four pairs of macrosetae (Figs. 344, 346).

In the only known male the posterior angles of tergum 3 not projecting as spines, lateral portions of posterior margin slightly extending as short and blunt projections (as in Fig. 19); tergum 7 in front of posterior margin with medial carina 2/3 as long as the tergum; posterior margin of tergum 8 without clear medial emargination (Fig. 344).

Aedeagus as in Figs. 348-354. Apex of paramere narrow, proximal seta approximately as long as the other three setae (Fig. 352).

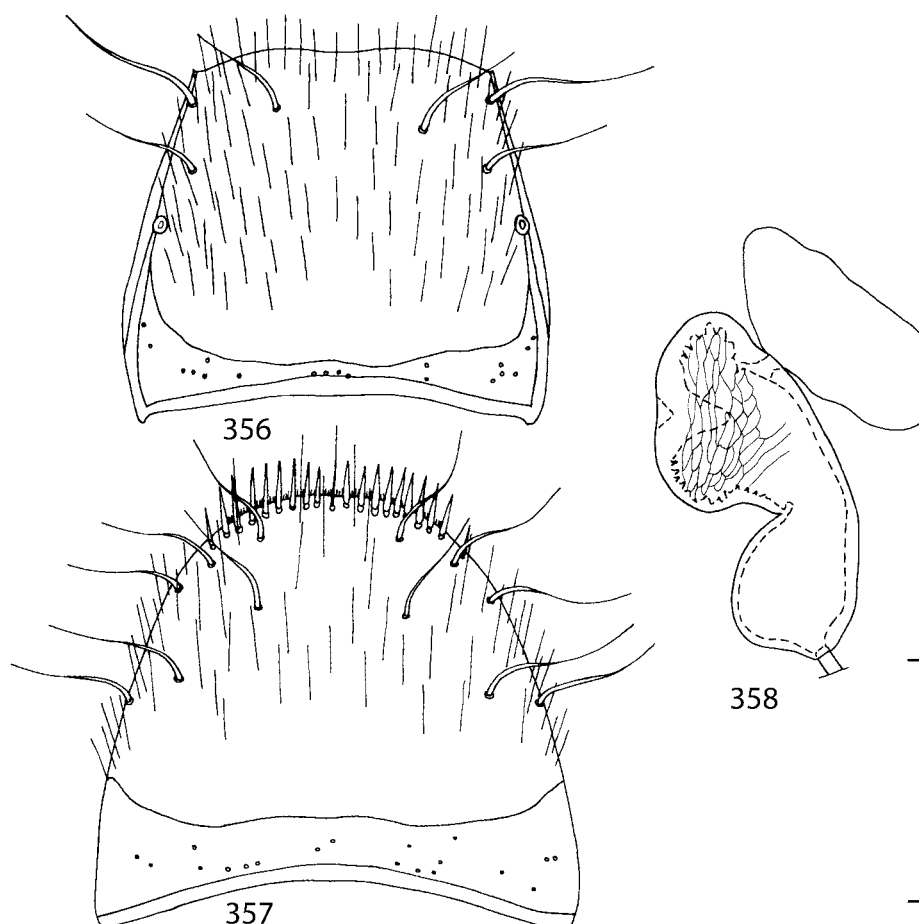
Spermatheca as in Fig. 355.

Distribution. Known from Cerro de la Muerte, Costa Rica (Fig. 389).

Natural History. *Seeversiella geostiboides* was collected in forest litter at altitude of 2750 m.

26. *Seeversiella adusta* Gusarov, sp. n. (Figs. 356-358)

Type material. Holotype, ♀, **COSTA RICA: San Jose/Cartago:** Cerro Buenavista, km 89, Int. Amer. Hwy., 9°33'00"N 83°45'30"W, 3300 m, forest litter (R.Anderson), 8.vi.1997 (KSEM).



FIGURES 356-358. Abdominal segment 8 and spermatheca of *Seeversiella adusta* Gusarov, sp. n. (holotype). 356 – female tergum 8; 357 – female sternum 8; 358 - spermatheca. Scale bar 0.2 mm (356-357), 0.1 mm (358).

Diagnosis. *Seeversiella adusta* can be distinguished from other species of *Seeversiella* by having uniformly brown body; small eyes (temples 3.3 times as long as eyes); elytra much shorter than pronotum; reduced wings (shorter than elytra); tergum 8 with three pairs of macrosetae; and by the distinct shape of spermatheca (Fig. 358).

Seeversiella adusta differs from *S. flavida* in having shorter proximal portion of spermatheca (Figs. 358; 371).

Description. Length 2.0 mm, pronotal width 0.43 mm. Body uniformly brown, legs brownish yellow.

In all external character states *S. adusta* is very similar to *S. flavida*, but differs in having shorter proximal portion of spermatheca (Fig. 358).

Male unknown.

Distribution. Known from Cerro de la Muerte, Costa Rica (Fig. 389).

Natural History. *Seeversiella adusta* was collected in forest litter at altitude of 3300 m.

27. *Seeversiella flavida* Gusarov, sp. n. (Figs. 19, 359-371)

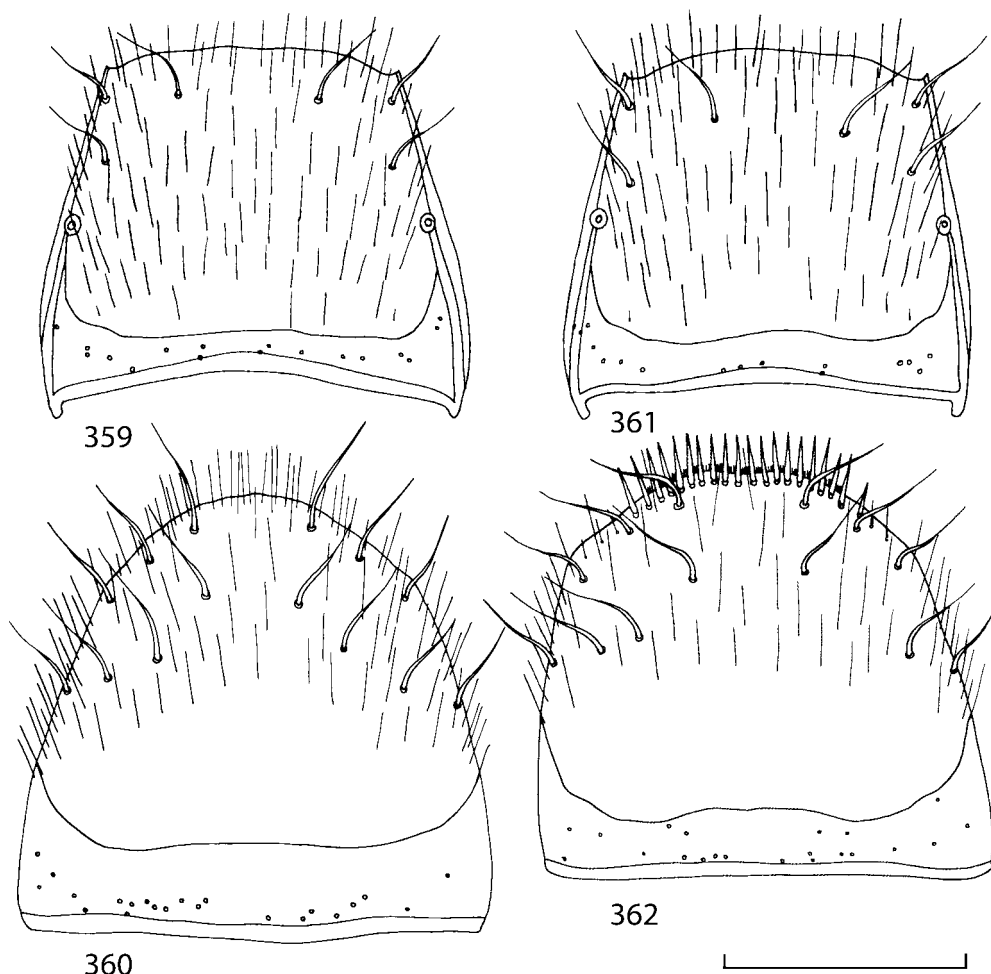
Type material. Holotype, ♂, COSTA RICA: San Jose/Cartago: Cerro Buenavista, km 89, Int. Amer. Hwy., 9°33'00"N 83°45'30"W, 3200 m, leaf litter (R.Anderson), 18.vi.1997 (KSEM).

Paratypes: COSTA RICA: Cartago: 8 specimens, same data as the holotype; 6 specimens, Cerro Buenavista, 9°33'02"N [the latitude on the label (9°43'02"N) is incorrect] 83°45'14"W, 3300 m, subparano litter (R.Anderson), 15.ii.1998; 23 specimens, Cerro de la Muerte, Pan American Highway, km 89, 3300 m, elfin bamboo forest litter (R.Anderson), 10.ii.1996 (all - KSEM).

Diagnosis. *Seeversiella flavida* can be distinguished from other species of *Seeversiella* by having uniformly brownish yellow body; small eyes (temples 4.0-5.0 times as long as eyes); elytra much shorter than pronotum; reduced wings (shorter than elytra); by lacking medial emargination at the posterior margin of the male tergum 8 (Fig. 359); tergum 8 with three pairs of macrosetae; by the distinct shape of aedeagus (Figs. 363-370) and spermatheca (Fig. 371).

Seeversiella flavida differs from *S. impressicollis*, *S. sulcicollis* and *S. microphthalma* in having smaller body size; pronotal punctation not asperate; tergum 8 with three pairs of macrosetae; and by different shape of aedeagus (Figs. 363-370) and spermatheca (Fig. 371).

Seeversiella flavida differs from *S. geostiboides* in having pubescence in the lateral portions of pronotum directed towards the midline and obliquely posteriorly; tergum 8 with three pairs of macrosetae; wider apex of median lobe (in parameral view) (Figs. 363-364; 348-349); and different shape of the distal portion of spermatheca (Figs. 371; 355).



FIGURES 359-362. Abdominal segment 8 of *Seeversiella flavida* Gusarov, **sp. n.** (359-360, holotype; 361-362, paratype from Cerro Buenavista, Costa Rica). 359 – male tergum 8; 360 – male sternum 8; 361 – female tergum 8; 362 – female sternum 8. Scale bar 0.2 mm.

Seeversiella flavida differs from *S. paramoana* in having tergum 8 with three pairs of macrosetae; and obtuse apex of median lobe (in parameral view) (Figs. 363-364).

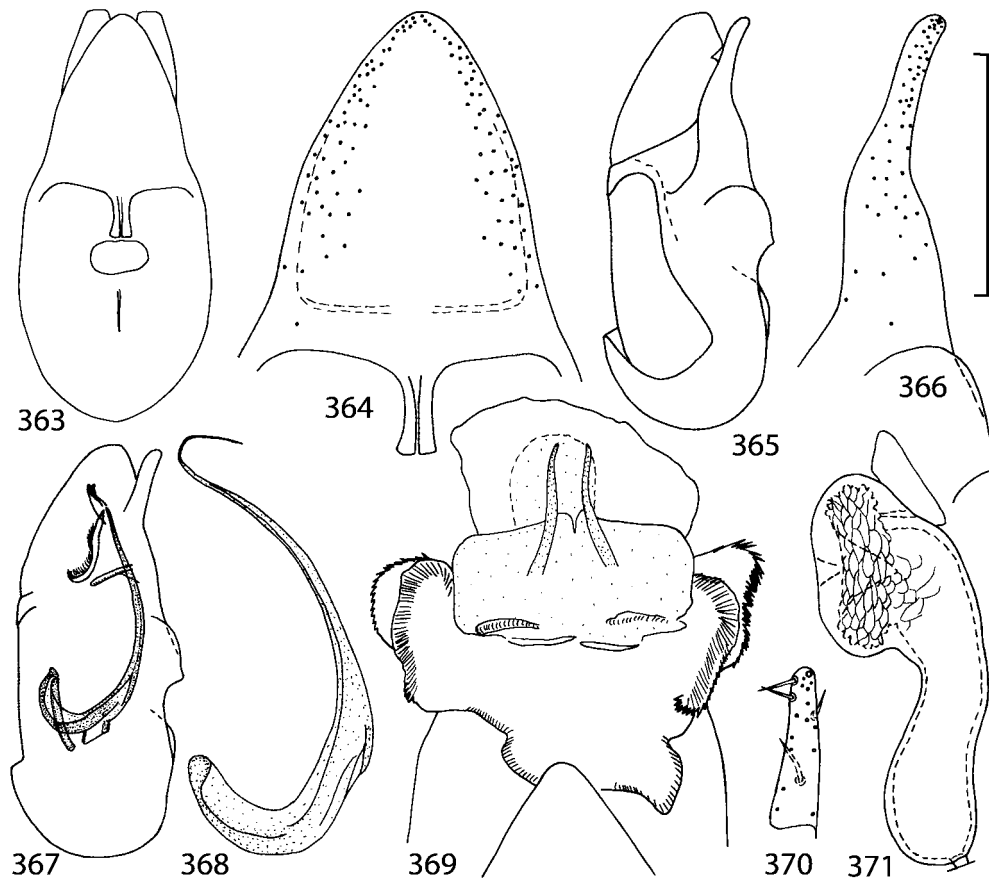
Seeversiella flavida differs from *S. adusta* in having longer proximal portion of spermatheca (Figs. 371; 358).

Seeversiella flavida differs from *S. minima* in having tergum 8 with three pairs of macrosetae; proximal seta of the apex of paramere is approximately as long as the other three setae (Fig. 370); apex of median lobe in parameral view narrower (Figs. 363-364; 179-180); spermatheca with thin proximal portion and with umbilicus (Figs. 371; 184).

Description. Length 2.2-2.5 mm. Body uniformly brownish-yellow to light brown.

Head surface glossy, with fine and weak isodiametric microsculpture, with fine and

poorly visible punctation. Temples 4.0-5.0 times as long as eyes. Antennal article 2 longer than 3, article 4 slightly transverse, 5-10 strongly transverse (ratio 1.6-2.0).



FIGURES 363-371. Genitalia of *Seeversiella flavida* Gusarov, *sp. n.* (363-367, 370, holotype; 368-369, 371, paratypes from Cerro Buenavista, Costa Rica). 363 – median lobe, parameral view; 364 – apex of median lobe, parameral view; 365 – median lobe, lateral view; 366 – apex of median lobe, lateral view; 367 – details of internal sac retracted into median lobe, lateral view; 368 – copulatory piece, lateral view; 369 – everted internal sac, parameral view; 370 – apex of left paramere; 371 – spermatheca. Scale bar 0.2 mm (363, 365, 367), 0.1 mm (364, 366, 368-371).

Pronotum slightly transverse, 1.2 times as wide as head, width 0.39-0.43 mm, length 0.36-0.39 mm, width to length ratio 1.1, surface glossy, with fine isodiametric microsculpture, with fine punctation, distance between punctures equals 2-3 times their diameter. Elytra wider and much shorter (measured from humeral angle) than pronotum (pronotal length to elytral length ratio 1.4), 1.7 times wider than long, glossy, with poorly visible microsculpture, with fine and asperate punctation, distance between punctures equals 1-1.5 times their diameter, punctures stronger than on pronotum. Wings reduced to short vestiges, shorter than elytra.

Abdominal terga glossy, with microsculpture consisting of strongly transverse meshes or transverse waves and with fine punctation, on terga 3-5 distance between punctures equals 1-3 times their diameter; on tergum 7 distance between punctures equals 3-7 times their diameter. Apical margin of tergum 7 without white palisade fringe. Tergum 8 with three pairs of macrosetae (Figs. 359, 361).

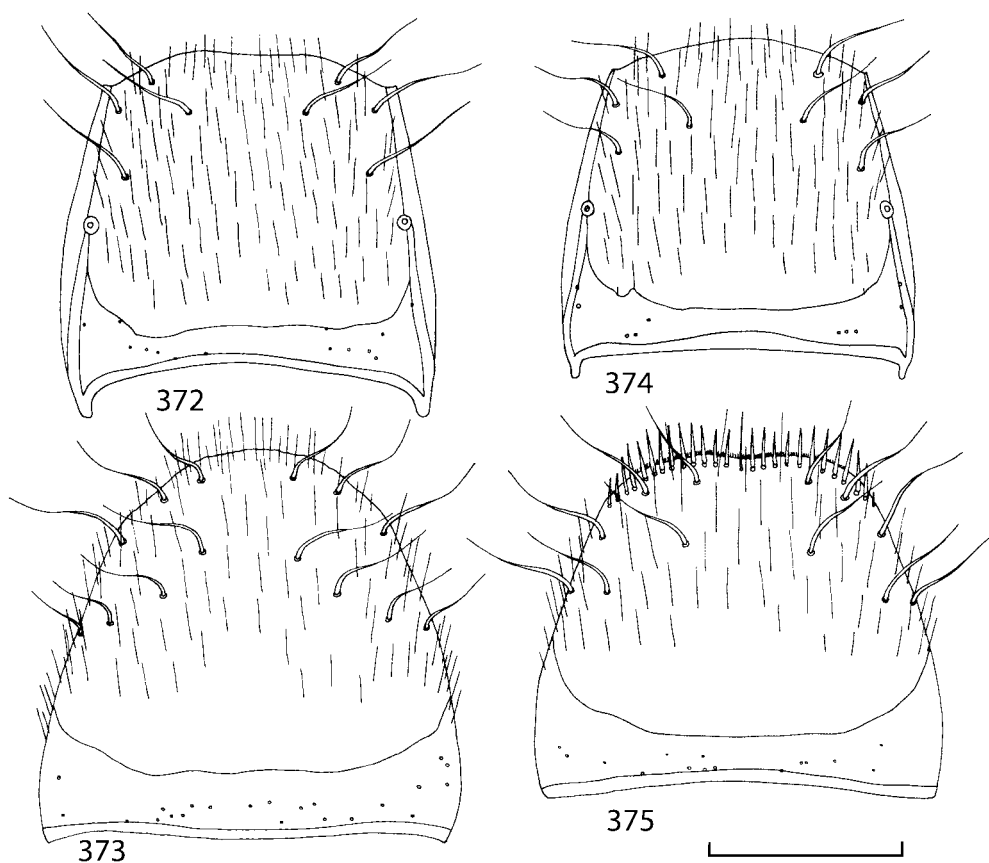
In males lateral portions of posterior margin of tergum 3 extending as short and obtuse projections (Fig. 19), up to 1/3 as long as tergum (measured medially); tergum 7 in front of posterior margin with medial carina up to half as long as tergum; posterior margin of tergum 8 without clear medial emargination (Fig. 359).

Aedeagus as in Figs. 363-370.

Spermatheca as in Fig. 371.

Distribution. Known from Cerro de la Muerte, Costa Rica (Fig. 389).

Natural History. *Seeversiella flavida* was collected in leaf litter at altitude of 3200-3300 m.

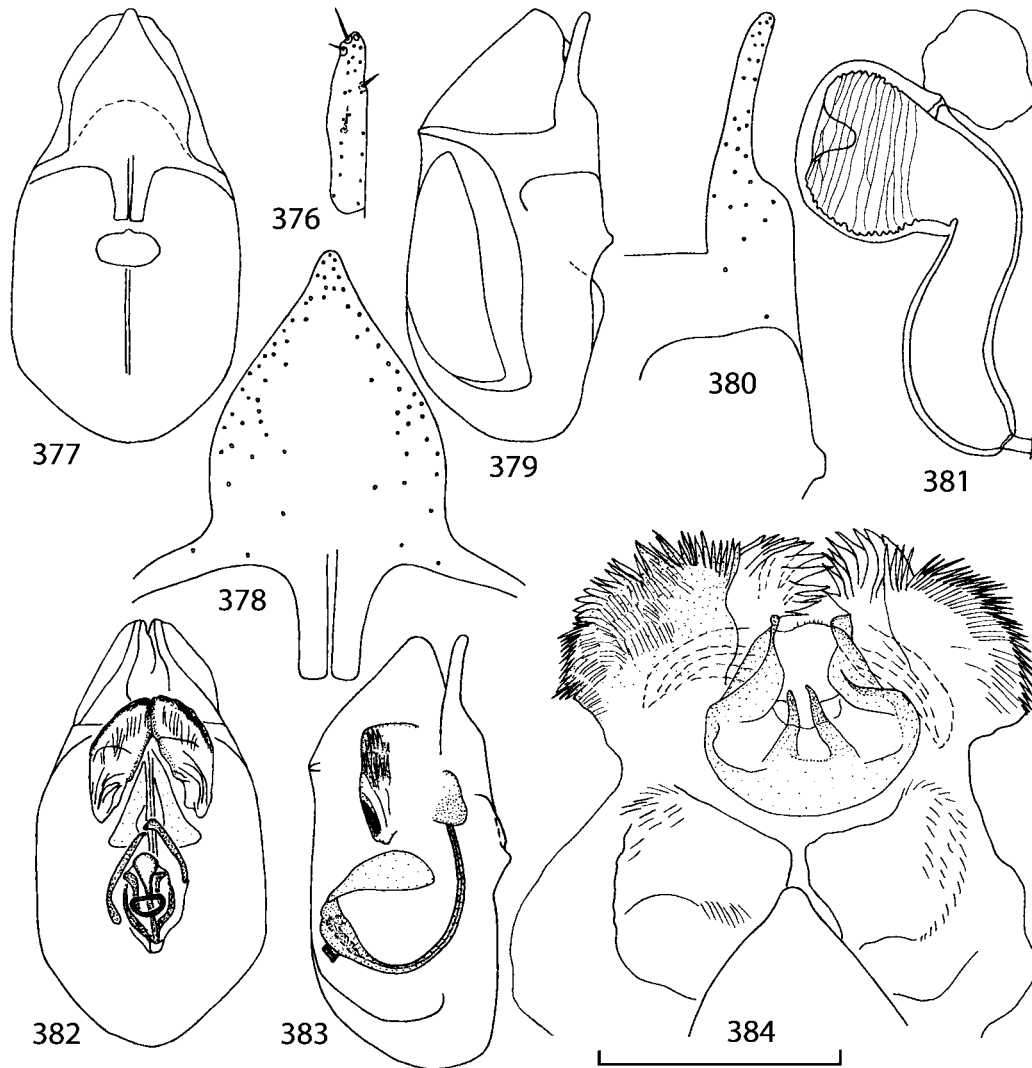


FIGURES 372-375. Abdominal segment 8 of *Seeversiella paramoana* Gusarov, **sp. n.** (372-373, holotype; 374-375, paratype from Cerro Chirripó, Costa Rica). 372 – male tergum 8; 373 – male sternum 8; 374 – female tergum 8; 375 – female sternum 8. Scale bar 0.2 mm.

28. *Seeversiella paramoana* Gusarov, sp. n. (Figs. 372-384)

Type material. Holotype, ♂, **COSTA RICA: Cartago:** Cerro Chirripó, Valle de los Conellos, 9°28'37"N 83°29'23"W, 3600 m, paramo shrub litter (R.Anderson), 26.vi.1999 (KSEM).

Paratypes: **COSTA RICA: Cartago:** ♂, 6♀, same data as the holotype (KSEM).



FIGURES 376-384. Genitalia of *Seeversiella paramoana* Gusarov, sp. n. (376-380, 382-383, holotype; 381, 384, paratypes from Cerro Chirripó, Costa Rica). 376 – apex of left paramere; 377 – median lobe, parameral view; 378 – apex of median lobe, parameral view; 379 – median lobe, lateral view; 380 – apex of median lobe, lateral view; 381 – spermatheca; 382 – details of internal sac retracted into median lobe, abparameral view; 383 – details of internal sac retracted into median lobe, lateral view; 384 – everted internal sac, parameral view. Scale bar 0.1 mm (376, 378, 380-381, 384), 0.2 mm (377, 379, 382-383).

Diagnosis. *Seeversiella paramoana* can be distinguished from other species of *Seeversiella* by having brownish yellow body; small eyes (temple length to eye length ratio 4.0-5.0); glossy pronotum with weak isodiametric microsculpture; elytra much shorter than pronotum; wings reduced, shorter than elytra; the distinct shape of aedeagus (Figs. 376-380, 382-384) and spermatheca (Fig. 381).

Seeversiella paramoana differs from *S. flavida* in having tergum 8 with four pairs of macrosetae; and pointed apex of median lobe (in parameral view) (Figs. 377-378).

Seeversiella paramoana differs from *S. adusta* in having tergum 8 with four pairs of macrosetae; and longer proximal portion of spermatheca (Figs. 381; 358).

Description. Length 2.2-2.4 mm, pronotal width 0.40-0.47 mm. Body brownish yellow to light brown.

In all external character states *S. paramoana* is very similar to *S. flavida*, but differs in the characters listed in the diagnosis.

Aedeagus as in Figs. 376-380, 382-384.

Spermatheca as in Fig. 381.

Distribution. Known from Cerro Chirripó, Costa Rica (Fig. 389).

Natural History. *Seeversiella paramoana* was collected in paramo shrub litter at altitude of 3600 m.

Discussion

The known species of *Seeversiella* are distributed from Southern Canada, throughout United States, Mexico, Guatemala, Honduras, El Salvador and Costa Rica to Panama, West of the Canal (Figs. 385-389). South of Mexico all known species of *Seeversiella* occur above 1400 m, and most species are not found below 2000 m. No extensive collections from Nicaragua were examined, but *Seeversiella* is very likely to occur in northern Nicaragua, above 1400 m. Southern and eastern Nicaragua are too low for *Seeversiella* and probably act as a strong barrier separating the species north of Lago de Nicaragua from the species in Costa Rica and Panama. My examination of extensive collections of aleocharines made in Panama at altitudes of 1200-1600 m, east of the Canal (the Darién), produced no specimens of *Seeversiella*. Examined collections from Venezuela (1100-2700 m), Ecuador (1500-3300 m) and Bolivia (1500-3200 m) also contained no specimens of *Seeversiella*. Considering these negative data it seems reasonable to conclude that *Seeversiella* does not occur in South America. All examined South American aleocharines displaying similar male secondary sexual characters, particularly the posterior angles of abdominal tergum 3 projecting as spines, belonged to the tribes Oxypodini Thomson, 1859 or Hoplandriini Casey, 1910, not Athetini Casey, 1910.

Among the known species of *Seeversiella*, *S. globicollis* is notable in having a very wide distribution (Fig. 385), ranging from Quebec, Ontario, British Columbia and Alberta in the north to Honduras in the south. Except in the north of its range, *S. globicollis* is

restricted to forested areas above 2000 m and therefore different mountain populations are isolated from each other by valley barriers. Despite this isolation, all examined specimens were identical in the shape of the genitalia, including the structures of the internal sac. The lack of geographic variability among the populations distributed throughout the United States as well as the apparent absence of *S. globicollis* in the Southern Appalachians and in the mountains of California suggests that this species dispersed in the United States only after the last glaciation.

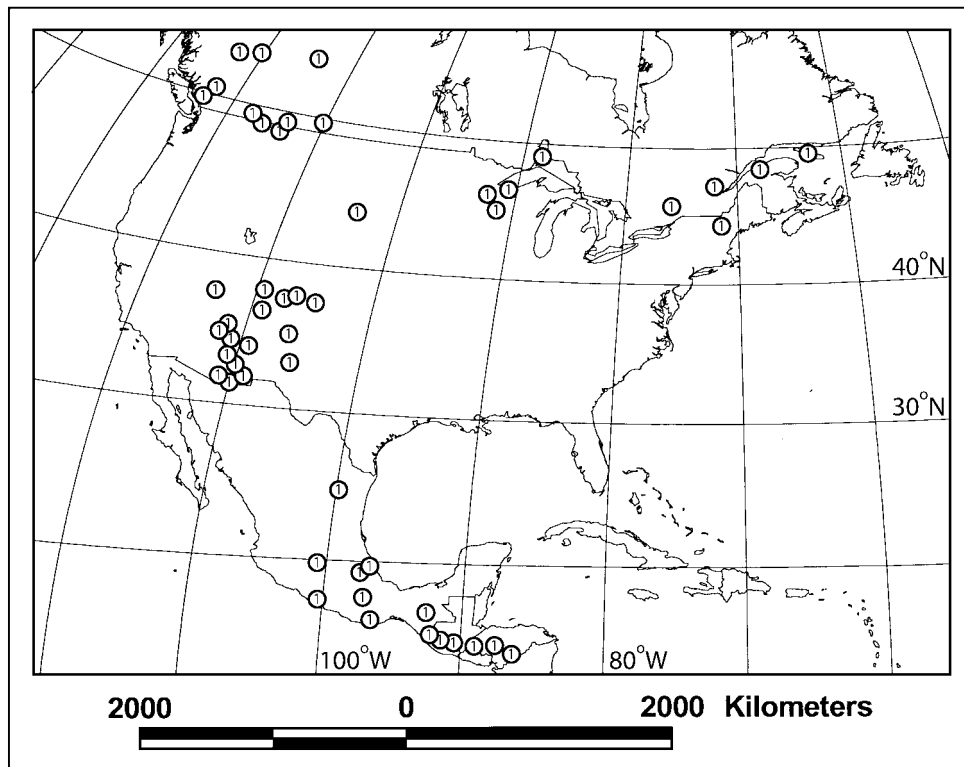


FIGURE 385. Geographical distribution of *Seeversiella globicollis* (Bernhauer).

Three species with strong hook-shaped or dentiform distal sclerites of the internal sac are closely related to *S. globicollis*: one with reduced wings, *S. texana*, from the Guadalupe Mountains in Texas (Fig. 386); and two with fully developed wings, *S. sonomotoides*, from the Huachuca Mountains, Arizona (Fig. 386) and *S. nigriceps* from Puebla, Mexico (Fig. 387). In the Huachuca Mountains *S. sonomotoides*, which has been collected only twice, is sympatric with *S. globicollis*, which is common in many aleocharine collections from the mountains of Arizona. This fact suggests that *S. sonomotoides* could be restricted to more cryptic microhabitats. Additional species of this group may occur in similarly

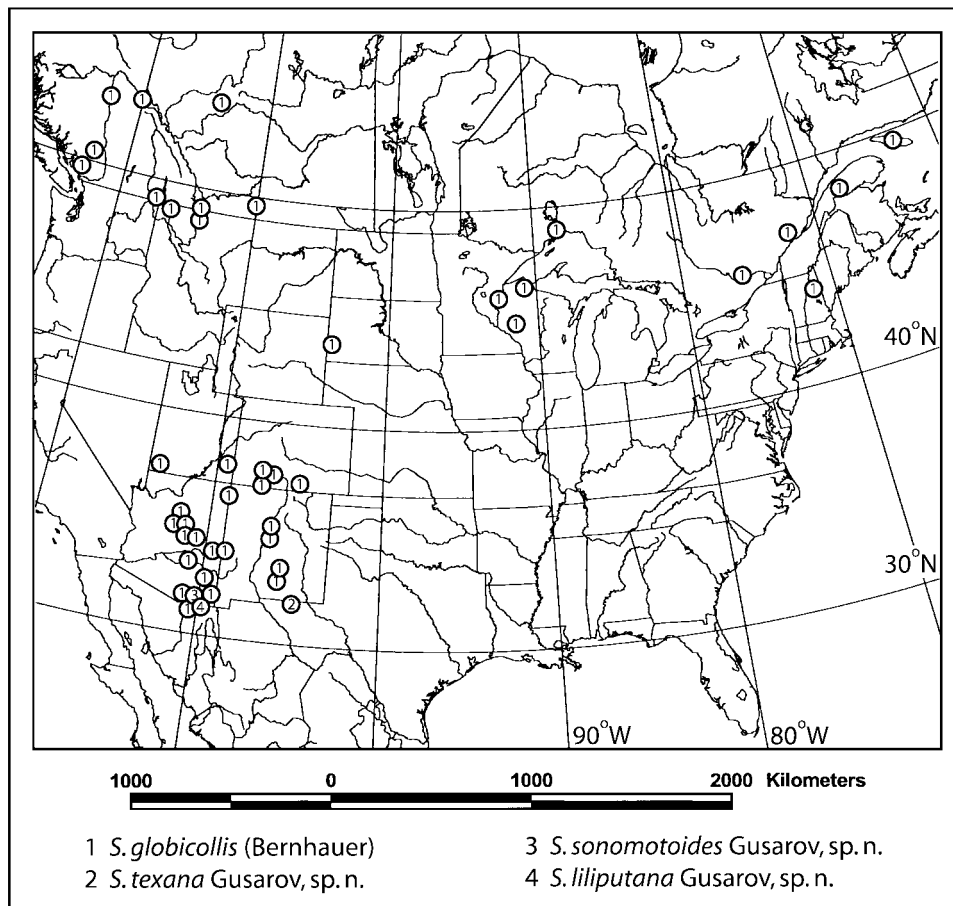


FIGURE 386. Geographical distribution of *Seeversiella* in America north of Mexico.

The geographical distribution data of *Seeversiella* from Mexico to Honduras are too fragmentary to allow a meaningful discussion (Fig. 387). Six of the twelve species found in that region are known from a single locality only. *Seeversiella* is particularly poorly recorded in Mexico north of the 20th parallel.

In comparison to other regions of Central America, the distribution of *Seeversiella* in Costa Rica and western Panama (Figs. 388-389) is well documented and discussed below in more detail. Of the fifteen species of *Seeversiella* known from this region, four species have long elytra (Fig. 17) and fully developed or only partially reduced wings that are longer than elytra. Eleven species have very short elytra (much shorter than the pronotum; Figs. 18-19) and reduced wings that are shorter than elytra. The four species with long elytra (*S. scabricollis*, *S. furciventris*, *S. brunnea* and *S. brevipennis*) form a monophyl-

etic group (Scabricollis group) and share these synapomorphies: the apex of the median lobe is short and narrow (Figs. 194-196), and the apex of the paramere is broad (Fig. 202). All four species occur at altitudes above 1400 m. Two species, *S. scabricollis* and *S. furcativevtris* are widespread and parapatric (Fig. 388): the first is more common above 2000 m (occasionally collected at 1450-2000 m), the second is more common below 2000 m (occasionally collected at 2100 m). *Seeversiella scabricollis* and *S. furcativevtris* were found in the same sample in only one locality. Both species are represented by specimens with fully developed and partially reduced wings. The two other species of the Scabricollis group are known from a single locality each: *S. brunnea* from the area near Tapantí, Costa Rica, and *S. brevipennis* from Cerro Punto, Panama (Fig. 388).

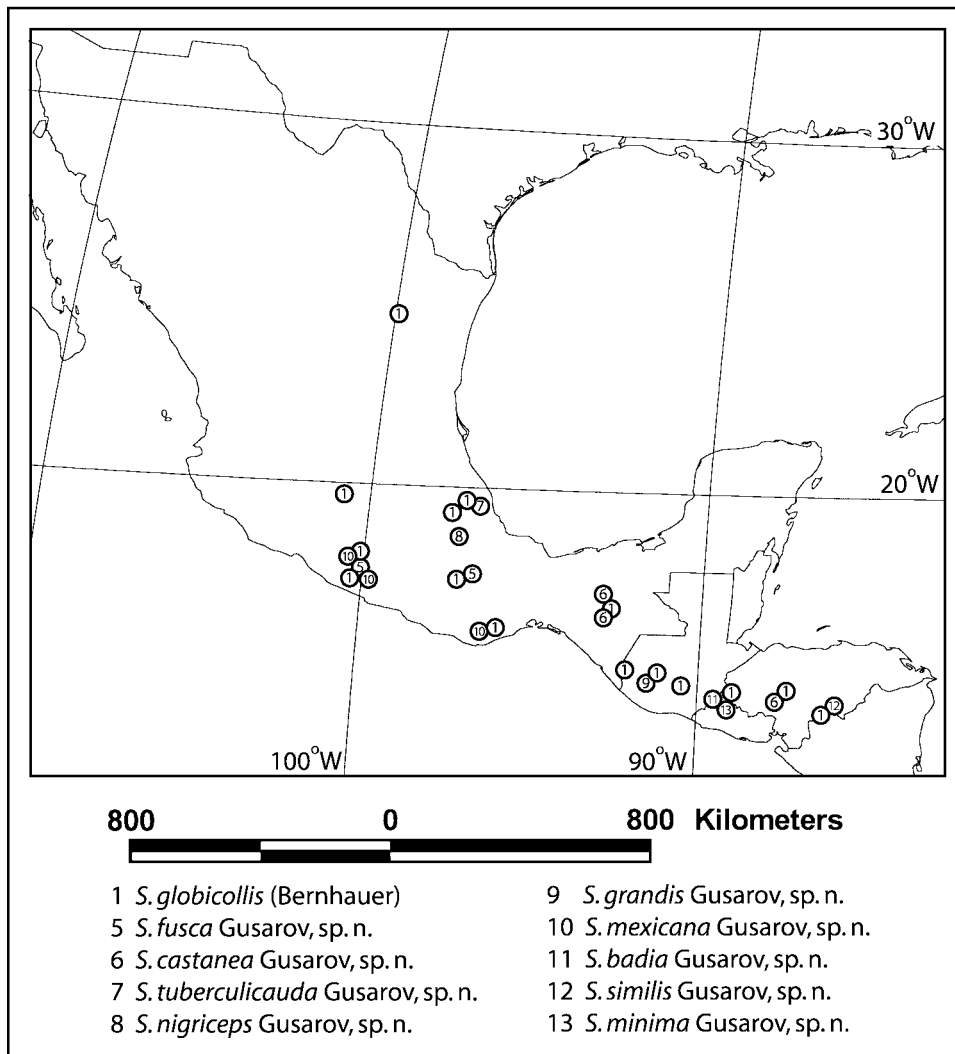


FIGURE 387. Geographical distribution of *Seeversiella* from Mexico to Honduras.

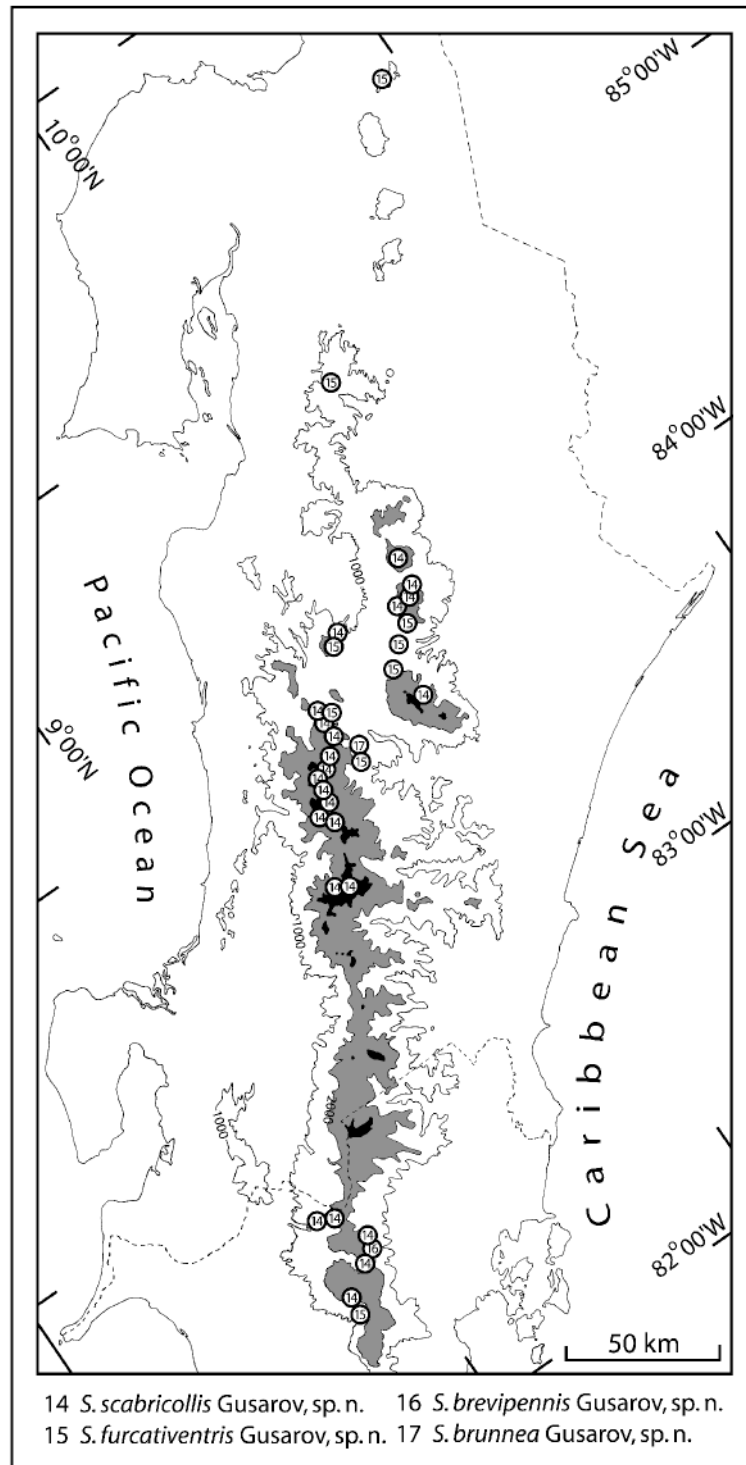


FIGURE 388. Geographical distribution of Scabricollis group in Costa Rica and Panama. Isohypsies 1000 m, 2000 m and 3000 m are shown. Areas above 2000 m are grey and those above 3000 m are solid black.

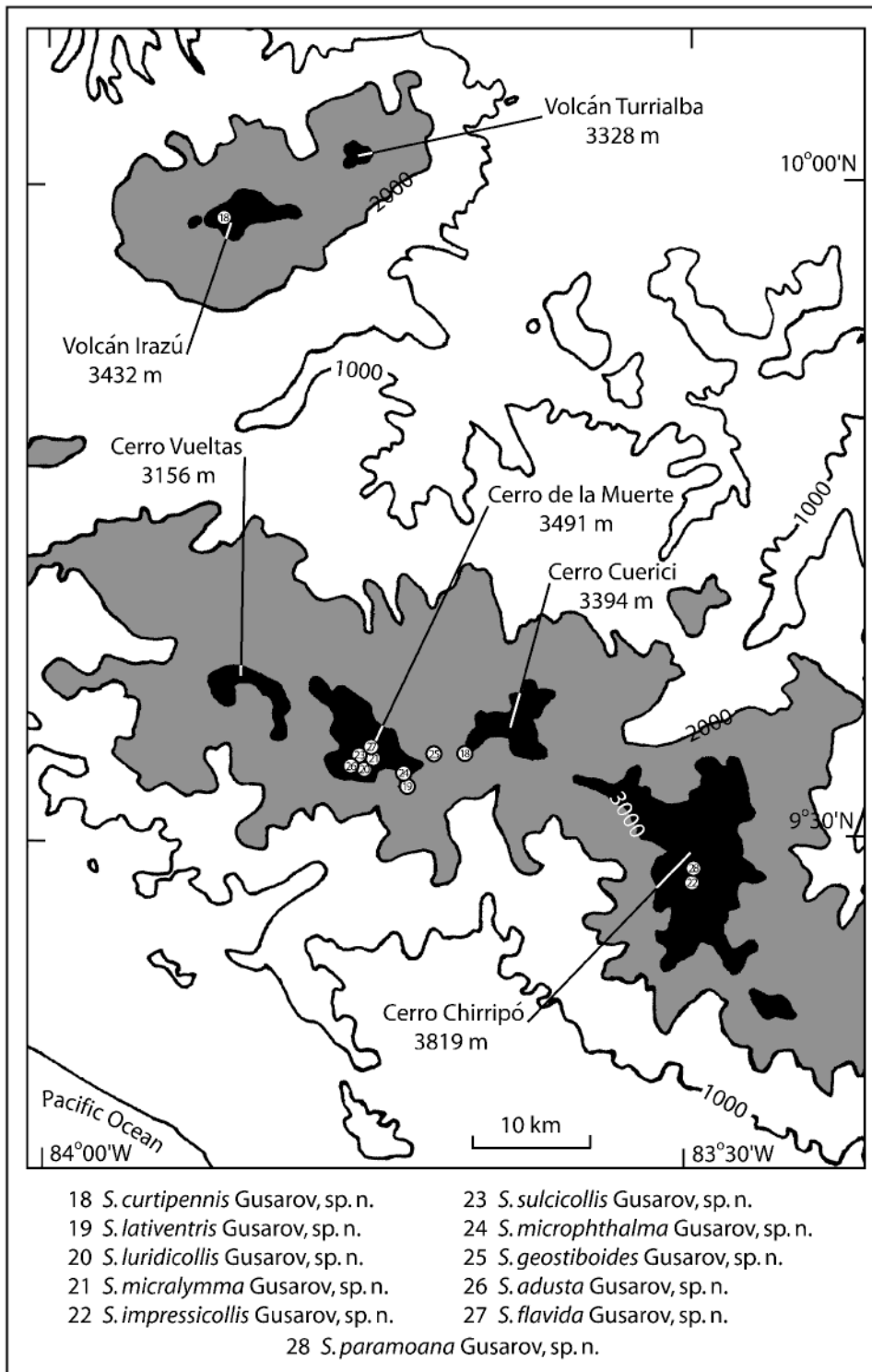


FIGURE 389. Geographical distribution of eleven species of *Seeversiella* (with very short elytra) in the high mountains of Costa Rica. Isohypsies 1000 m, 2000 m and 3000 m are shown. Areas above 2000 m are grey and those above 3000 m are solid black.

The distributions of the eleven species with very short elytra are shown in Fig. 389. All but two species were collected at altitude of 3000 m or higher. Ten species are known from one locality only, while *S. curtipennis* occurs at Volcán Irazú and at Cerro Cuerici, localities 50 km apart and separated by a gap as low as 1400 m. Since both populations of *S. curtipennis* are identical in genitalic structure, the isolation of these two populations is likely recent and has not allowed enough time for their divergence.

Five species of *Seeversiella* (*S. luridicollis*, *S. micralymma*, *S. sulcicollis*, *S. adusta* and *S. flavida*) were found in the same locality at Cerro de la Muerte, and three additional species (*S. lativentris*, *S. microphthalma* and *S. geostiboides*) occur in that massif. In comparison, only two species have been found in the Cerro Chirripó massif, which has a higher summit and where the area above 3000 m is several times larger than in the Cerro de la Muerte massif (Fig. 389). This difference in recorded diversity is probably due to the fact that Cerro de la Muerte is easily accessible by the Pan-American Highway and has been more thoroughly sampled than Cerro Cuerici and Cerro Chirripó. One can expect numerous additional species of *Seeversiella* in the latter two massifs.

When compared to the four species with long elytra (Scabricollis group) (Fig. 17), the eleven species with very short elytra display two trends in their morphoecological adaptations. Some species (*S. curtipennis*, *S. lativentris*, *S. luridicollis*, *S. micralymma*) retain large eyes (temple length to eye length ratio 1.1-2.1), and dark pigmentation, but have a broad and ovate abdomen that is much wider than the elytra (Fig. 18). Apparently these species have lost the ability to fly but did not become adapted to cryptic microhabitats. Interestingly, in their body proportions they look very similar to some unrelated intertidal staphylinids living on rocks (e.g., *Micralymma marinum* (Ström, 1783) (subfamily Omaliinae MacLeay, 1825), *Liparocephalus* Mäklin, 1853 (tribe Liparocephalini Fenyés, 1918)), which also lost their ability to fly. Other species (*S. microphthalma*, *S. geostiboides*, *S. adusta*, *S. flavida*, *S. paramoana*) retained a parallel-sided abdomen, but acquired poorer pigmentation and smaller eyes (temple length to eye length ratio 3.5-5.0) (Fig. 19). These species probably have a more cryptic life style and in their body proportions look like some unrelated specialized staphylinids inhabiting forest litter (e.g. many species of *Geostiba* Thomson, 1858, tribe Athetini).

Future collecting in the high mountains of Costa Rica and Panama will likely produce many additional undescribed species of *Seeversiella*.

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