Species of *Brachystomella* (Collembola: Brachystomellidae) from the Neotropical region

WANDA MARIA WEINER and JUDITH NAJT

1Institute of Systematics and Evolution of Animals, Polish Academy of Sciences, Śląskowska 17, PL-31 016 Kraków, Poland; e-mail: weiner@isez.pan.krakow.pl

2UPRES-A CNRS 8043, Laboratoire d’Entomologie, Muséum national d’Histoire naturelle, 45, rue Buffon, F-75005 Paris, France; e-mail: najt@mnhn.fr

Key words. Collembola, Brachystomellidae, *Brachystomella*, Neotropical region, new species, diagnosis, key

Abstract. In this paper six new species of the genus *Brachystomella* currently includes 52 species, out of which 25 occur in the Neotropical region. In the Catalogue of Neotropical Collembola by Mari Mutt & Bellinger (1990) there are 29 species of *Brachystomella*. However, this list was assembled from the literature without critical evaluation of the species. *B. allendei* Massoud & Rubio (in Hermosilla & Rubio, 1976) is *nomen nudum*. Specimens from this region determined as *B. parvula*, with the “parvula” type of furca, should be called *B. ca. parvula* (Schaeffer, 1896). *B. rosai* (Bonet, 1934) belongs to the genus *Setanodosa* Salmon. *B. trinitata* (Jackson, 1927) (probably = *B. septemoculata* Denis, 1931) was identified on the basis of immature specimens (Massoud, 1967). *B. subandinensis* Massoud, 1967 is a new synonym for *B. contorta* Denis, 1931. Two other species should also be mentioned, as they may belong to the genus *Brachystomella*. These are: *Pseudachorutes asper* Börner, 1906, described from Brasil and *Schoettella subcrassa* Schäffer, 1897, described from Argentina. However, at present it is not possible to resolve this problem, because the type material has been lost (Strümpel, personal comm.).

In the material from Argentina, Peru and Venezuela we found six new species, which are described below. We also examined the types and additional material of 22 species. We were not able to examine one species: *Brachystomella sexoculata* Massoud, 1967 because the type material was not preserved. We also synonymised *Brachystomella honda* Christiansen & Bellinger, 1988 with *Brachystomella bacoanaensis* Gruia, 1983. Diagnoses and comments on the original descriptions as well as remarks on 22 species are included.

INTRODUCTION

Najt & Weiner (1996) revised the list of species of the genus *Brachystomella*, which currently includes 52 species, out of which 25 occur in the Neotropical region. In the Catalogue of Neotropical Collembola by Mari Mutt & Bellinger (1990) there are 29 species of *Brachystomella*. However, this list was assembled from the literature without critical evaluation of the species. *B. allendei* Massoud & Rubio (in Hermosilla & Rubio, 1976) is *nomen nudum*. Specimens from this region determined as *B. parvula*, with the “parvula” type of furca, should be called *B. ca. parvula* (Schaeffer, 1896). *B. rosai* (Bonet, 1934) belongs to the genus *Setanodosa* Salmon. *B. trinitata* (Jackson, 1927) (probably = *B. septemoculata* Denis, 1931) was identified on the basis of immature specimens (Massoud, 1967). *B. subandinensis* Massoud, 1967 is a new synonym for *B. contorta* Denis, 1931. Two other species should also be mentioned, as they may belong to the genus *Brachystomella*. These are: *Pseudachorutes asper* Börner, 1906, described from Brasil and *Schoettella subcrassa* Schäffer, 1897, described from Argentina. However, at present it is not possible to resolve this problem, because the type material has been lost (Strümpel, personal comm.).

In the material from Argentina, Peru and Venezuela we found six new species, which are described below. We also examined the types and additional material of 22 species, commented on the original descriptions and provided some additional remarks. We were not able to examine one species: *Brachystomella sexoculata* Massoud, 1967 because the type material was not preserved. We also synonymised *Brachystomella honda* Christiansen & Bellinger, 1988 with *Brachystomella bacoanaensis* Gruia, 1983. This study confirms that most of the species of *Brachystomella* occur the Neotropical region (Najt & Weiner, 1996).

Abbreviations. ISEA – Institute of Systematics and Evolution of Animals, Polish Academy of Sciences, Kraków, Poland; MNHN – Laboratoire d’Entomologie, Muséum national d’Histoire naturelle, Paris, France.

SYSTEMATIC ACCOUNT

**Brachystomella agrosa** Wray, 1953

**Brachystomella maxima** Cassagnau & Rapoport, 1962

**Remarks.** According to Najt et al. (1990), males of this species possess secondary sexual characters on genital papilla. Sensory organ of antennal segment III with two guard setae between guard sensilla. Tibiotarsi I, II and III with 19, 19 and 18 setae respectively; seta M present, seta B7 absent on tibiotarsus III. Femora I, II and III with 12, 11 and 10 setae, trochanters I, II and III with 5, 5 and 4 setae, coxae I, II and III with 3, 6 and 7 setae, subcoxae “2” I, II and III with 0, 2 and 2 setae, subcoxae “1” I, II and III with 1, 2 and 2 setae respectively. Even anal valves each with two setae hr.

**Brachystomella bacoanaensis** Gruia, 1983

**Brachystomella honda** Christiansen & Bellinger, 1988 syn. nov.

**Diagnosis.** Habitus and buccal cone typical for the genus *Brachystomella*. Postantennal organ with 5–7 vesicles. 8+8 eyes present. Formula of sensory setae s per half tergum: 022/21111. Head without seta a0, setae c3, c5 present. Thoracic tergum I with 3+3 setae. Reduced furca with 3 setae on each dens. Mcuro present. Tibiotarsi I, II and III with 18, 18 and 17, setae respectively; seta A1 is capitate, seta M absent (except a single anomaly in one specimen). Subcoxae “2” I, II and III with 0, 2 and 2 setae, respectively. Even anal valves each with three setae hr.

**Redescription.** Antennae shorter than head (about 3/4 the length of head). Antennal segment I with 7 setae, antennal segment II with 12 setae. Antennae III and IV fused dorsally, ventral separation well marked. Sensory
organ of antennal segment III consisting of: two small globular internal sensilla, two subcyclindrical guard sensilla (dorsolateral sensillum shorter than ventrolateral one) and two guard setae between them; ventral microsensillum present. Antennal segment IV with rather long ordinary setae, with 6 subcyclindrical sensilla only slightly distinct (not as in the description of Gruia 1983); dorsoexternal microsensillum present, truncated subapical organite present; simple apical vesicle in deep cavity, ventral side with a few truncated setae.


Dorsal chaetotaxy with smooth acuminate mesochaetae, with long sensory setae s. Their formula per half tergum: 022/21111. Microsensilla present on thoracic tergum II. Head without seta a0, setae c3 and c5 present. Thoracic tergum I with 3+3 setae. Abdominal terga I–IV with seta t at row B. Thoracic sternum II with 1+1 setae.

Furca with four setae on each dens. Micro with hooked apex and lamella (not as in the description of B. baconaoensis). Ratio micro : dens = 1 : 1.5–1.75. Tenaculum with 3+3 teeth. Only preadult male known. Even anal valves each with three setae hr.

Tibiotarsi I, II and III with 18, 18 and 17 setae, respectively; A1 capitate; seta M absent (one specimen with 18 setae on tibiotarsi I, setae B7 absent on tibiotarsi II and III with 5, 5 and 4 setae, coxae I, II and III with 3, 6 and 7 setae, subcoxae “2” I, II and III with 0, 2 and 2 setae, subcoxae “1” I, II and III with 1, 2 and 2 setae, respectively. Claw with inner tooth at half length of its inner edge, with a pair of lateral teeth.

**Discussion.** Brachystomella baconaoensis Gruia, 1983 is most similar to B. neomexicana (Scott, 1960). They have the same number of setae on tibiotarsi (also the capitata setae), femora, trochanters, coxae, subcoxae “I” and “II”, the same number of setae hr on even valves (3). They differ in the number of setae on the dens (4 in B. baconaoensis and 5–6 in B. neomexicana) and in the shape of the apical vesicle on antennal segment IV (simple in B. baconaoensis and trilobated in B. neomexicana). We examined the type material of Brachystomella baconaoensis Gruia, 1983 and Brachystomella hondensis Christiansen & Bellinger, 1988 and concluded that B. hondensis is a new synonym of B. baconaoensis Gruia.

**Brachystomella barrerai** Palacios-Vargas & Najt, 1981

**Remarks.** Sensory organ of antennal segment III with two guard setae between guard sensilla. Tibiotarsi I, II and III with 18, 18 and 17 setae, respectively, of which 3, 4 and 4 capitate (not 3, 3, 4 as in the original description by Palacios-Vargas & Najt 1981); setae A1, A2, T3 capitate on tibiotarsi I, setae A1, A2, A7, T3 capitate on tibiotarsi II and III, seta M absent, seta B7 absent on tibiotarsi III. Femora I, II and III with 12, 11 and 10 setae, trochanters I, II and III with 5, 5 and 4 setae, coxae I, II and III with 3, 6 and 7 setae, subcoxae “2” I, II and III with 0, 2 and 2 setae, subcoxae “1” I, II and III with 1, 2 and 2 setae, respectively. Even anal valves each with three setae hr.

**Brachystomella chilensis** (Rapoport & Rubio, 1963)

**Type material.** Lectotype 2, paralectotypes: k (preadult) by Palacios-Vargas & Najt, 1981; setae M absent, seta B7 absent on tibiotarsi I, II and III with 18, 18 and 17 setae, respectively, of which 3, 4 and 4 capitate (not 3, 3, 4 as in the original description by Palacios-Vargas & Najt 1981); setae A1, A2, T3 capitate on tibiotarsi I, setae A1, A2, A7, T3 capitate on tibiotarsi II and III, seta M absent, seta B7 absent on tibiotarsi III. Femora I, II and III with 12, 11 and 10 setae, trochanters I, II and III with 5, 5 and 4 setae, coxae I, II and III with 3, 6 and 7 setae, subcoxae “2” I, II and III with 0, 2 and 2 setae, subcoxae “1” I, II and III with 1, 2 and 2 setae, respectively. Even anal valves each with three setae hr.

**Diagnosis.** Habitus and buccal cone typical for the genus Brachystomella. Postantennal organ with four vesicles, 5+5 eyes present, eyes D, F and H absent. One guard seta between guard sensilla in sensory organ of antennal segment III present. Very short ordinary setae, formula of sensory setae s per half tergum: 022/21111. Head with setae a0, c3, c5 present, s5d5 absent. Thoracic tergum I with 3+3 setae. Furca well developed with 6 setae on each dens. Micro straight with apex slightly hooked. Tibiotarsi I, II and III with 19, 19 and 18 setae, respectively, with seta M almost in row B. Subcoxae “2” I, II and III with 0, 2 and 2 setae, respectively. Even anal valves each with three setae hr.

**Redescription.** Antennae shorter than head (about 3/4 the length of head). Antennal segment I with 7 setae, antennal segment II with 12–13 setae. Antennae III and IV fused dorsally, ventral separation well marked. Sensory organ of antennal segment III consisting of: two small globular internal sensilla, two subcyclindrical guard sensilla (both the same size) and one guard seta between them; ventral microsensillum present. Antennal segment IV with rather short ordinary setae, with 5 only slightly distinct subcyclindrical sensilla; dorsoexternal microsensillum present, truncated subapical organite present; apical vesicle simple in a deep cavity, ventral side with a few truncated setae (Fig. 3).

Postantennal organ (Fig. 2) almost 1.6 times larger than ocellus B, bearing 4 vesicles. Eyes 5+5, eyes D, F and H absent. Buccal cone typical for the genus. Mandible absent, maxilla with 6 teeth (not 5 as in original description by Rapoport & Rubio, 1963) (Fig. 4). Labral chaetotaxy: 2/2334.

Dorsal chaetotaxy as in Fig. 1 with very short ordinary setae, with longer sensory setae s. Their formula per half tergum: 022/21111. Microsensillum present on thoracic tergum II. Head with setae a0, c3 and c5 present, seta s5d5 absent. Thoracic tergum I with 3+3 setae. Abdominal terga I–III with seta s = seta p4, abdominal tergum IV with seta s = p3. Thoracic sterna without setae. Ventral tube with 3+3 setae, abdominal sternum I without setae, abdominal sternum II with 1+1 setae.
Figs 1–6. Brachystomella chilensis (Rapoport & Rubio, 1963). 1 – dorsal chaetotaxy (scale 0.1 mm); 2 – postantennal organ and eyes (scale 0.1 mm); 3 – antennal segments III and IV, dorsolateral view (scale 0.1 mm); 4 – maxillum (scale 0.05 mm); 5 – dens and mucro (scale 0.1 mm); 6 – tibiotarsus III (scale 0.1 mm).

Furca well developed with 6 setae on each dens (Fig. 5). Mucro straight with apex slightly hooked. Ratio mucro : dens = 1 : 2.72. Tenaculum with 3+3 teeth. Males probably without secondary sexual characters (only juvenile males known). Even anal valves each with three setae.

Tibiotarsi I, II and III with 19, 19 and 18 setae, respectively, with acuminate distal seta; seta M in row B, seta
Brachystomella contorta

Brachystomella sabandinensis

Port's collection (juvenile k) in Museo Nacional de Historia Natural, Santiago, Chile; 1 paralectotype from Rapoport, collection (juvenile k) in Museo Nacional de Historia Natural, La Plata, Argentina.

Type locality. Chile, crest of “El Roble” 2200 m a.s.l., 18.viii.1961, lgt. I.Rubio.

Discussion. Brachystomella chilensis (Rapoport & Rubio), 1963, with B. montebella Najt & Pala­cios-Vargas, 1986 and B. pefauri sp. n. belong to the same group of species having the same number of eyes: 5+5, and the same number of setae on thoracic tergum I (2+2) (see discussion in B. pefauri sp. n.).

Brachystomella contorta Denis, 1931

Brachystomella subandinensis Massoud, 1967, syn. nov.

Brachystomella sabandinensis Winter, 1962, nomen nudum.

Figs 7–13

Diagnosis. Habitus and buccal cone typical for the genus Brachystomella. Postantennal organ with five vesicles. 8+8 eyes present. Very ordinary setae, formula of sensory setae s per half tergum: 022/21111. Head without setae a0 and s1, with setae c3 and c5 present. Thoracic tergum I with 2+2 setae. Furca well developed with 5 setae on each dens. Bent mucro present. Tibiotarsi I, II and III with 19, 19 and 18 setae, respectively, with acuminate distal seta; seta M almost in row B. Subcoxae “2” I, II and III with 0, 2 and 2 setae, respectively. Even anal valves each with two setae hr.

Redescription. Antennae shorter than head (about 3/4 the length of head). Antennal segment I with 7 setae, antennal segment II with 12 setae. Antennae III and IV fused dorsally, ventral separation well marked. Sensory organ of antennal segment III consisting of: two small globular internal sensilla, two subcylindrical guard sensilla (dorsolateral sensillum shorter than ventrolateral one) and two guard setae between them; ventral microsensillum present. Antennal segment IV with rather short ordinary setae, with 6 slightly distinct subcylindrical sensilla; dorsoexternal microsensillum present, truncated subapical organite present; apical vesicle simple in deep cavity, ventral side with a few truncated setae. (Fig. 9).

Postantennal organ (Fig. 8) almost 1.5 times larger than ocellus B, bearing five vesicles. Eyes 8+8. Buccal cone typical for the genus. Mandible absent, maxilla with 7 teeth (Fig. 10). Labral chaetotaxy: 2/2334.

Dorsal chaetotaxy as in Fig. 7 with very short ordinary setae, with longer sensory setae s. Their formula per half tergum: 022/21111. Microsensilla on thoracic tergum II present. Head without setae a0 and sd1, setae c3 and c5 present. Thoracic tergum I with 2+2 setae. Abdominal terga I–IV with seta s = seta p3. Thoracic sterna without setae. Ventral tube with 3+3 setae, abdominal sternum I without setae, abdominal sternum II with 1+1 setae.

Furca well developed with 5 setae on each dens, with bent mucro (Fig. 13). Ratio mucro : dens = 1 : 2.2. Tenaculum with 3+3 teeth. Males with secondary sexual characters on genital papilla (Fig. 12). Even anal valves each with two setae hr.

Tibiotarsi I, II and III with 19, 19 and 18 setae, respectively, with acuminate distal seta; seta M in row B. Subcoxae “2” I, II and III with 0, 1–2 and 2 setae, respectively. Even anal valves each with two setae hr.

Type material. Lectotype juvenile k presently designated, in Museo Nacional de Historia Natural, La Plata, Argentina.

Type locality. Chile, crest of “El Roble” 2200 m a.s.l., 18.viii.1961, lgt. I.Rubio.

Discussion. In the group of species of Brachystomella without seta a0 on head and with 5 setae on dens Brachystomella contorta is closest to Brachystomella septemoculata (see discussion of B. septemoculata). We examined the type material of Brachystomella subandinensis Massoud, 1967 and concluded that it is a new synonym of Brachystomella contorta.

Brachystomella cyanea (Rapoport, 1962)

Brachygastrura cyanea Rapoport, 1962

Figs 14–19

Diagnosis. Habitus and buccal cone typical for the genus Brachystomella. Postantennal organ with 7–10 vesicles. 8+8 eyes present. Mesocheatae and serrated macrocheatae present, formula of sensory setae s per half tergum: 022/21111. Head with setae a0, c1, c2 and c5. Thoracic tergum I with 2+2 setae. Reduced furca with 3 setae on each dens. Muro absent. Tibiotarsi I, II and III with 19, 19 and 18 setae, respectively, with seta M in row B. Subcoxae “2” I, II and III with 0, 2 and 2 setae, respectively. Even anal valves each with two setae hr.

Redescription. Antennae shorter than head (about 3/4 the length of head). Antennal segment I with 7 setae, antennal segment II with 12 setae. Antennae III and IV fused dorsally, ventral separation well marked. Sensory organ of antennal segment III consisting of: two small globular internal sensilla, two subcylindrical guard sensilla (dorsolateral sensillum shorter than ventrolateral one) and two guard setae between them; ventral microsensillum present. Antennal segment IV with rather short ordinary setae, with 6 slightly distinct subcylindrical sensilla; dorsoexternal microsensillum present, truncated subapical organite present; apical vesicle simple in deep cavity, ventral side with a few truncated setae. (Fig. 9).

Postantennal organ (Fig. 8) almost 1.5 times larger than ocellus B, bearing five vesicles. Eyes 8+8. Buccal cone typical for the genus. Mandible absent, maxilla with 7 teeth (Fig. 10). Labral chaetotaxy: 2/2334.

Dorsal chaetotaxy as in Fig. 7 with very short ordinary setae, with longer sensory setae s. Their formula per half tergum: 022/21111. Microsensilla on thoracic tergum II present. Head without setae a0 and sd1, setae c3 and c5 present. Thoracic tergum I with 2+2 setae. Abdominal
Figs 7–13. *Brachystomella contorta* Denis, 1931. 7 – dorsal chaetotaxy (scale 0.1 mm); 8 – postantennal organ and eyes (scale 0.05 mm); 9 – antennal segments III and IV, dorsal view (scale 0.05 mm); 10 – maxillum (scale 0.05 mm); 11 – tibiotarsus III (scale 0.05 mm); 12 – male genital plate (scale 0.05 mm); 13 – dens, mucro and tenaculum (scale 0.05 mm).

typical for the genus. Mandible absent, maxilla with 7 teeth (Fig. 15). Labral chaetotaxy: 2/2334.

Dorsal chaetotaxy as in Fig. 14 with serrated meso- and macrochaetae, with long sensory setae s. Their formula per half tergum: 022/21111. Microsensilla on thoracic
tergum II present. Head with setae a0, c1, c2 and c5. Thoracic tergum I with 2+2 setae. Abdominal terga I–IV with seta s = seta p3. Thoracic sterna without setae. Ventral tube with 3+3 setae, abdominal sternum I without setae, abdominal sternum II with 1+1.
Reduced furca with 3 setae, rarely with 4 setae on each dens (Fig. 19). Muco absent. Tenaculum with 2+2 teeth. Males with secondary sexual characters on genital papilla and abdominal tergum IV (Fig. 19). Even anal valves each with two setae hr.

Tibiotarsi I, II and III with 19, 19 and 18 setae, respectively, with acuminate distal seta; seta M between setae B4 and B5, seta B7 absent on tibiotarsi III. Femora I, II and III with 12, 11 and 10 setae, trochanters I, II and III with 5, 5 and 4 setae, coxae I, II and III with 3, 6 and 7 setae, subcoxae “2” I, II and III with 0, 2 and 2 setae, subcoxae “1” I, II and III with 1, 2 and 2 setae, respectively. Claw with inner tooth at half length of its inner edge, with pair of lateral teeth (Fig. 18). Empodial appendage absent.

**Type material.** Lectotype juvenile ♀ and 11 paralectotypes presently designated, in Museo de La Plata, Argentina. Type locality. Argentina, Gonzales Chaves, half-bog, 8.i.1962, lgt. E.H. Rapoport.

**Other material.** Argentina, La Plata, Los Hornos, 12.vii.1972, lgt. A. Alzuet, 3 specimens.

**Discussion.** Brachystomella cyanea Rapoport, 1962 differs from all the other species belonging in the genus Brachystomella in the following characters: serrated macrochaetae, reduced furca, muco absent, postantennal organ with 7–10 vesicles, 2+2 setae on thoracic tergum, tibiotarsi I, II and III with 19, 19 and 18 setae, respectively. The shape of the dens resembles that of the furca in B. minimucronata Palacios-Vargas & Najt, 1981, but the latter has serrated mesochaetae and capitate macrochaetae, a very small muco, postantennal organ with 3–5 vesicles, 3+3 setae on thoracic tergum I, tibiotarsi I, II and III with 18, 18 and 17 setae, respectively (3, 4 and 4 of which are capitate). In both species the apical vesicle is simple, and the tenaculum possesses 2+2 teeth.

**Brachystomella desutterae** sp. n.

Figs 20–25

**Diagnosis.** Habitus and buccal cone typical for the genus Brachystomella. Postantennal organ with 7 vesicles. 8+8 eyes present. Very short ordinary setae, formula of sensory setae s per half tergum: 022/21111. Head without setae a0 and s1I, setae c2 and c5 present. Thoracic tergum I with 2+2 setae. Furca well developed with 5 setae on each dens. Muco straight with apex slightly hooked. Tibiotarsi I, II and III with 19, 19 and 18 setae, respectively, with seta M. Subcoxae “2” I, II and III with 0, 1 and 1 setae, respectively. Even anal valves each with one seta hr.

**Description.** Holotype (female) length 0.78 mm, paratype (female) length 0.85 mm paratypes (juveniles) length 0.51–0.65 mm. Colour in alcohol spotted bluish-grey, ocular plate blue-black.

Antennae shorter than head (about 3/4 the length of head). Antennal segment I with 7 setae, antennal segment II with 12 setae. Antennae III and IV fused dorsally, ventral separation well marked. Sensory organ of antennal segment III consisting of: two small globular internal sensilla, two guard sensilla subcylindrical (both of the same size) and two guard setae between them; ventral microsensillum present. Antennal segment IV with ordinary setae and 6 subcylindrical sensilla; dorsoexternal microsensillum, subapical organite present; apical vesicle trilobated, ventral side with a few blunt setae (Fig. 22).

Postantennal organ (Fig. 23) about 1.75 times larger than ocellus B, bearing 5 vesicles. Eyes 8+8. Buccal cone typical for the genus. Mandible absent, maxillae each with 7 teeth (Fig. 21). Labral chaetotaxy: 2/2334.

Dorsal chaetotaxy as in Fig. 20 with very short ordinary setae, with longer sensory setae s. Their formula per half tergum: 022/21111. Microsensillum present on thoracic tergum II. Head without setae a0 and s1I, setae c2 and c5 present. Thoracic tergum I with 2+2 setae. Abdominal tergus I–IV with seta s = p3. Thoracic sterna without setae. Ventral tube with 3+3 setae, abdominal sternum I without setae, abdominal sternum II with 1+1 setae.

Furca well developed with 5 setae on each dens (Fig. 25). Muco straight with apex slightly hooked. Ratio muco : dens = 1 : 2.25. Tenaculum with 3+3 teeth. Males unknown. Even anal valves each with one seta hr.

Tibiotarsi I, II and III with 19, 19 and 18 setae, respectively, with acuminate distal setae, seta M present, seta B7 absent on tibiotarsi III. Femora I, II and III with 11, 11 and 10 setae, trochanters I, II and III with 5, 5 and 4 setae, coxae I, II and III with 3, 6 and 7 setae, subcoxae “2” I, II and III with 0, 1 and 1 setae, subcoxae “1” I, II and III with 1, 2 and 2 setae, respectively. Claw with inner tooth at half length of its inner edge, with pair of lateral teeth (Fig. 24). Empodial appendage absent.

**Type material.** Holotype ♀ in MNHN, paratypes 8 juveniles in MNHN, ♀ and 3 juveniles in ISEA.

**Type locality.** Peru, Brillo Nuevo, region of Rio Ampiyacu, confluence of rivers Zumun and Yahuasyacu, litter in secondary forest of 50 years (≈ 53 years after clear felling), 7.xi.1985, lgt. L. Desutter-Grandcolas.

**Other material.** Peru, Brillo Nuevo, region of Rio Ampiyacu, confluence of rivers Zumun and Yahuasyacu, litter in secondary forest of 50 years (≈ 53 years after clear felling), 7.xi.1985, lgt. L. Desutter-Grandcolas, 7 specimens.

**Etymology.** The new species is cordially dedicated to our colleague Laure Desutter-Grandcolas of Laboratoire d’Entomologie, Muséum national d’Histoire naturelle in Paris, who kindly collected this material for us.

**Discussion.** The new species is closest to B. contorta Denis, 1931. Both species share the same characters: absence of setae a0, on the head, 2+2 setae on the thoracic tergum I, the same number of setae on the dens (5), the same number of setae on tibiotarsi (19, 19, 18). They differ in the shape of the apical vesicle (simple in B. contorta and trilobated in the new species), in the number of setae on femora I (12 in B. contorta and 11 in the new species), in the number of setae on subcoxae “2” I and III (2, 2 in B. contorta and 1, 1 in the new species), in the number of setae hr on the even anal valves (two on each valve in B. contorta and one in the new species).

**Brachystomella gabrielae** Najt & Palacios-Vargas, 1986

**Remarks.** Sensory organ of antennal segment III with two guard setae between guard sensilla. Tibiotarsi I, II and III with 19, 19 and 18 setae, respectively, (not 19, 18 and 17 as in the original description by Najt & Palacios-Vargas, 1986); seta M present, seta B7 absent on tibio-

393
Figs 20–25. Brachystomella desutterae sp. n. 20 – dorsal chaetotaxy (scale 0.1 mm); 21 – maxillum (scale 0.05 mm); 22 – antennal segments III and IV, dorsal view (scale 0.05 mm); 23 – postantennal organ and eyes (scale 0.05 mm); 24 – tibiotarsus II (scale 0.05 mm); 25 – dens and mucro (scale 0.05 mm).

Brachystomella globulosa Cassagnau & Rapoport, 1962

Figs 26–32

Diagnosis. Habitus and buccal cone typical for the genus Brachystomella. Postantennal organ with 4 vesicles. 8+8 eyes present. Short ordinary setae, some mesochaetae, some serrated and slightly capitate setae on tarsus III. Femora I, II and III with 11, 10 and 10 setae, trochanters I, II and III with 5, 5, 4 setae, coxae I, II and III with 4, 6 and 7 setae, subcoxae “2” I, II and III with 0, 2 and 2 setae, subcoxae “1” I, II and III with 1, 2 and 2 setae, respectively. Even anal valves each with three setae hr.
abdominal segment VI, formula of sensory setae s per half tergum: 022/21111. Head with seta a0, c2 and c5 present, seta d4 absent. Thoracic tergum I with 3+3 setae. Short furca with 4 setae on each dens. Mucro with hooked apex. Tibiotarsi I, II and III with 18, 18 and 17 setae, respectively, of which 3, 4 and 4 capitate. Subcoxae “2” I, II and III with 0, 2 and 2 setae, respectively. Even anal valves each with two setae hr.

Redescription. Antennae shorter than head (about 3/4 the length of head). Antennal segment I with 7 setae, antennal segment II with 11–12 setae. Antennae III and IV fused dorsally, ventral separation well marked. Sensory organ of antennal segment III consisting of: two
small internal sensilla globular distally, two subcylindrical guard sensilla (dorsolateral sensillum somewhat shorter than ventrolateral one) and two guard setae between them; ventral microsensillum present. Antennal segment IV with rather long ordinary setae, with 6 only slightly distinct subcylindrical sensilla; dorsoexternal microsensillum present, truncated subapical organite present; apical vesicle slightly trilobated in deep cavity, ventral side with a few truncated setae. (Fig. 28).

Postantennal organ (Fig. 27) almost as large as ocellus B, bearing four vesicles. Eyes 8+8. Buccal cone typical for the genus. Mandible absent, maxilla with 7 teeth (Fig. 29). Labral chaetotaxy: 2:2324.

Dorsal chaetotaxy as in Fig. 26 with short ordinary setae, some mesochaetae, some slightly serrated and slightly capitate setae on abdominal segment VI, with long sensory setae s. Their formula per half tergum: 022/21111. Microsensilla present on thoracic tergum II. Head with setae a0, c2 and c5, seta d4 absent. Thoracic tergum I with 3+3 setae. Abdominal terga I-IV with seta s = p4. Thoracic sterna without setae. Ventral tube with 3+3 setae, abdominal sternum I without setae, abdominal sternum II with 1+1 setae.

Short furca with four setae on each dens (Fig. 32). Micro with hooked apex. Ratio micro : dens = 1 : 2.1. Tenaculum with 3+3 teeth. Male with secondary sexual characters on genital papilla (Fig. 31). Even anal valves each with two setae hr.

Tibiotarsi I, II and III with 18, 18 and 17 setae, respectively, of which 3, 4 and 4 capitate (not 3, 3 and 3 as in the original description by Cassagnau & Rapoport, 1962), seta A1 (the strongest one), A2 (accumulate on tibiotarsus I), A7 and T2 capitate, without seta M, seta B7 absent on tibiotarsus III. Femora I, II and III with 12, 11 and 10 setae, trochanters I, II and III with 5, 5 and 4 setae, coxae I, II and III with 3, 6 and 7 setae, subcoxae “2” I, II and III with 0, 2 and 2 setae, subcoxae “1” I, II and III with 1, 2 and 2 setae, respectively. Claw with inner tooth at 2/3 length of its inner edge, without lateral teeth (Fig. 30). Empodial appendage absent.

**Type material.** Lectotype ♂, paralectotypes juvenile ♀ and 2 juveniles presently designated, in MNHN.

**Type locality.** Argentina, province of Tucuman, south of Tapia, under bark, 20.iv.1959, lgt. Cl. Delamare Deboutville and E.H. Rapoport.

**Discussion.** Brachystomella globulosa Cassagnau & Rapoport, 1962 possesses short furca like B. villalobosi Cassagnau & Rapoport, 1962, B. barrerai Palacios-Vargas & Najt, 1981 and B. minimucronata Palacios-Vargas & Najt, 1981 (with very reduced mucro). All these species have some capitate setae on the body, 2–4 capitate setae on tibiotarsi. B. globulosa has the same number of capitate setae on tibiotarsi I, II and III (3, 4 and 4) like B. barrerai and B. minimucronata (2, 3 and 3 in B. villalobosi). It differs in the number of setae on each dens (4 in B. globulosa, and 3 in the other species) and in the number of setae hr on the even valves (two in B. globulosa and three in the all other species).

**Brachystomella grootaerti** Najt, Thibaud & Jacquemart, 1991

**Remarks.** Sensory organ of antennal segment III with two guard setae between guard sensilla. Tibiotarsi I, II and III with 19, 19 and 18 setae, respectively (not 18, 18 and 17 as in the original description by Najt et al., 1991); seta M present, seta B7 absent on tibiotarsus III. Femora I, II and III with 12, 11 and 10 setae, trochanters I, II and III with 5, 5 and 4 setae, coxae I, II and III with 3, 6 and 7 setae, subcoxae “2” I, II and III with 0, 2 and 2 setae, subcoxae “1” I, II and III with 1, 2 and 2 setae, respectively. Even anal valves each with two setae hr.

**Brachystomella mataraniensis** sp. n.

**Diagnosis.** Habitus and buccal cone typical for the genus Brachystomella. Postantennal organ with 4 vesicles. 8+8 eyes present. Very short ordinary setae, formula of sensory setae s per half tergum: 022/21111. Head with setae a0, c3 and c5. Thoracic tergum I with 3+3 setae. Furca well developed with 6 setae on each dens. Mucro straight with apex slightly hooked. Tibiotarsi I, II and III with 19, 19 and 18 setae, respectively, with seta M almost in row B. Subcoxae “2” I, II and III with 0, 2 and 2 setae, respectively. Even anal valves each with three setae hr.

**Description.** Holotype (female) length 0.98 mm, paratypes (females) length 0.86–1.0 mm, paratypes (juvenile males) length 0.60 mm and 0.65 mm. Colour in alcohol bluish-grey, ocular plate blue-black. Entire body coarsely granulated.

Antennae shorter than head (about 3/4 length of head). Antennal segment I with 7 setae (sometimes asymmetrical: 6 or 8 on one antenna), antennal segment II with 12 setae (also asymmetrical: 11 or 13 setae). Antennae III and IV fused dorsally, ventral separation well marked. Sensory organ of antennal segment III consisting of: two small globular internal sensilla, two rather short subcylindrical guard sensilla (both of the same size) and two guard setae between them; ventral microsensillum present. Antennal segment IV with rather short ordinary setae, with 6 distinct subcylindrical sensilla; dorsoexternal microsensillum present, truncated subapical organite present; apical vesicle simple, ventral side with a few blunt setae (Fig. 35).

Postantennal organ (Fig. 34) almost two times larger than ocellus B, bearing 4 vesicles. Eyes 8+8. Buccal cone typical for the genus. Mandible absent, maxilla with 7 teeth (Fig. 36). Labral chaetotaxy: 2:2324.

Dorsal chaetotaxy as in Fig. 33 with very short ordinary setae, with longer sensory setae s. Their formula per half tergum: 022/21111. Microsensilla present on thoracic tergum II. Head with setae a0, c3 and c5 present. Thoracic tergum I with 3+3 setae. Abdominal terga I–IV with seta s = p4. Thoracic sterna without setae. Ventral tube with 3+3 setae, abdominal sternum I with 0+0 setae, abdominal sternum II with 1+1 setae.

Furca well developed with 6 setae on each dens (Fig. 39). Mucro straight with apex slightly hooked. Ratio
Figs 33–39. *Brachystomella mataraniensis* sp. n. 33 – dorsal chaetotaxy (scale 0.1 mm); 34 – postantennal organ and eyes (scale 0.05 mm); 35 – antennal segments III and IV, dorsolateral view (scale 0.05 mm); 36 – maxillum (scale 0.05 mm); 37 – tibiotarsus III (scale 0.05 mm); 38 – male genital plate (scale 0.05 mm); 39 – dens and mucro (scale 0.05 mm).

mucro : dens = 1 : 2. Tenaculum with 3+3 teeth. Males with secondary sexual characters on genital papilla (Fig. 38). Even anal valves each with three setae hr.

Tibiotarsi I, II and III with 19, 19 and 18 setae, respectively, with acuminate distal seta; seta M in row B, seta B7 absent on tibiotarsus III. Femora I, II and III with 12, 11 and 10 setae, trochanters I, II and III with 5, 5 (asymmetry: 3 or 4), and 4 setae, coxae I, II and III with 3, 6 and 7 setae, subcoxae “2” I, II and III with 0, 2 and 2 setae, subcoxae “1” I, II and III with 1, 2 and 2 setae,
respectively. Claw with inner tooth at half length of its inner edge, with pair of lateral teeth (Fig. 37). Empodial appendage absent.

**Type material.** Holotype ♀ in MNHN, paratypes: 7 ♀ ♂, 1 juvenile ♀ in MNHN; 3 ♀ ♂ and 1 juvenile ♀ in ISEA.

**Type locality.** Peru, Matarani, El Camino, 23.ix. 1974, lgt. J. Péfaur.


**Etymology.** The name of the new species is derived from the type locality.

**Discussion.** Of the species of *Brachystomella*, with four vesicles in the postantennal organ, the new species is closest to *Brachystomella victoriensis* from Argentina (Izarra, 1972). The two species differ in the shape of the apical vesicle (trilobated in the new species and simple in *B. victoriensis*), in the number of setae on femora I, II and III (12, 11 and 10 in the new species and 13, 12 and 11 in *B. victoriensis*), and in the presence of two long setae curved at the tip on the tibiotarsi in *B. victoriensis*.

**Brachystomella mauriesi** Thiibaud & Massoud, 1983

**Remarks.** This species has the maxilla typical for the genus (not as in Thiibaud & Massoud, 1983: Fig. 1B); however, the distal tooth is very prominent. The entire type material is badly preserved and therefore we are unable to comment more extensively.

**Brachystomella minimucronata** Palacios-Vargas & Najt, 1981

**Remarks.** Sensory organ of antennal segment III with two guard setae between guard sensilla. Tibiotarsi I, II and III with 18, 18 and 17 setae, respectively, of which 3, 4 and 4 capitate (not 4, 4 and 4 as in the original description by Palacios-Vargas & Najt, 1981); A1, A2, T2 capitate on tibiotarsus I, setae A1, A2, T2 capitate on tibiotarsi II and III, seta M absent, seta B7 absent on tibiotarsus III. Femora I, II and III with 12, 11 and 10 setae, trochanters I, II and III with 5, 5 and 4 setae, coxae I, II and III with 3, 6 and 7 setae, subcoxae “2” I, II and III with 0, 2 and 2 setae, subcoxae “1” I, II and III with 1, 2 and 2 setae, respectively. Even anal valves each with three setae hr.

**Brachystomella montebella** Najt & Palacios-Vargas, 1986

**Remarks.** Sensory organ of antennal segment III with two guard setae between guard sensilla, ventral sensillum longer than dorsal one. Tibiotarsi I, II and III with 19, 19 and 18 setae, respectively (not 19, 18 and 17 as in the original description by Najt & Palacios-Vargas, 1986); seta M present, seta B7 absent on tibiotarsus III. Femora I, II and III with 12, 11 and 9 setae, trochanters I, II and III with 5, 5 and 4 setae, coxae I, II and III with 3, 6 and 7 setae, subcoxae “2” I, II and III with 0, 2 and 2 setae, subcoxae “1” I, II and III with 1, 2 and 2 setae, respectively. Even anal valves each with one seta hr.

**Brachystomella nana** Rubio & Najt, 1979

**Remarks.** Sensory organ of antennal segment III with two guard setae between guard sensilla. Tibiotarsi I, II and III with 19, 19 and 18 setae, respectively (not 15, 15 and 14 as in the original description by Rubio & Najt, 1979); seta M present, seta B7 absent on tibiotarsus III. Femora I, II and III with 12?, 11 and 10 setae, trochanters I, II and III with 5, 5 and 4 setae, coxae I, II and III with 2, 3 and 3 setae, subcoxae “2” I, II and III with 0, 1 and 1 setae, subcoxae “1” I, II and III with 1, 2 and 2 setae, respectively. Even anal valves each with three setae hr.

**Brachystomella neomexicana** (Scott, 1960)

*Neanurodes neomexicana* Scott, 1960

**Brachystomella arida** Christiansen & Bellinger, 1980

**Remarks.** Sensory organ of antennal segment III with two guard setae between guard sensilla. Tibiotarsi I, II and III with 18, 18 and 17 setae, respectively; seta A1 slightly capitate, seta M absent, seta B7 absent on tibiotarsus III. Femora I, II and III with 12, 11 and 10 setae, trochanters I, II and III with 5, 5 and 4 setae, coxae I, II and III with 3, 6 and 7 setae, subcoxae “2” I, II and III with 0, 2 and 2 setae, subcoxae “1” I, II and III with 1, 2 and 2 setae, respectively. Even anal valves each with three setae hr.

**Brachystomella pefauri** sp. n.

Figs 40–51

**Diagnosis.** Habitus and buccal cone typical for the genus *Brachystomella*. Postantennal organ with 7 vesicles. 8+8 eyes present. Very short ordinary setae, formula of sensory setae s per half tergum: 022/21111. Head with setae a0, c3 and c5. Thoracic tergum I with 2+2 setae. Furca well developed with 5 setae on each dens. Micro straight with apex slightly hooked. Tibiotarsi I, II and III with 19, 19 and 18 setae, respectively, with seta M present. Subcoxae “2” I, II and III with 0, 2 and 2 setae, respectively. Even anal valves each without setae hr.

**Description.** Holotype (female) length 1.19 mm, paratypes (females) length 0.83–1.49 mm. Colour in alcohol bluish-grey, ocular plate blue-black. Antennae shorter than head (about 3/4 length of head). Antennal segment I with 7 setae, antennal segment II with 12 setae. Antennae III and IV fused dorsally, ventral separation well marked. Sensory organ of antennal segment III consisting of: two small globular internal sensilla, two subcylindrical guard sensilla (both of the same size) and two guard setae between them; ventral microsensillum present. Antennal segment IV with ordinary setae and 6 subcylindrical sensilla; dorsoexternal microsensillum, subapical organite present; apical vesicle slightly trilobated, ventral side with a few truncated setae (Fig. 41).

Postantennal organ (Fig. 42) about 3 times larger than ocellus, bearing 7 vesicles. Eyes 8+8. Buccal cone typical for the genus. Mandible absent, maxillae each with 8 teeth (Fig. 43). Labral chaetotaxy: 2/2334.

Dorsal chaetotaxy as in Fig. 40 with very short ordinary setae, with longer sensory setae s. Their formula per half tergum: 022/21111. Microsensilla on thoracic tergum II present. Head with setae a0, c3 and c5. Thoracic tergum I with 2+2 setae. Abdominal terga I–IV with seta s = p3. Thoracic sterna without setae. Ventral tube with 3+3
Figs 40–51. *Brachystomella pefauri* sp. n. 40 – dorsal chaetotaxy (scale 0.1 mm); 41 – antennal segments III and IV, dorsal and ventral views (scale 0.05 mm); 42 – postantennal organ and eyes (scale 0.05 mm); 43 – maxillum (scale 0.05 mm); 44 – tibiotarsus III (scale 0.05 mm); 45 – dens and mucro (scale 0.05 mm).

setae, abdominal sternum I without setae, abdominal sternum II with 1+1 setae.

Furca well developed with 5 setae on each dens (Fig. 45). Mucro straight with apex slightly hooked. Ratio mucro : dens = 1 : 2.25. Tenaculum with 3+3 teeth. Males unknown. The even anal valves each without setae hr.

Tibiotarsi I, II and III with 19, 19 and 18 setae, respectively, with acuminate distal setae, seta M present. Femora I, II and III with 12, 11 and 10 setae, trochanters I, II and III with 5, 5 and 4 setae, coxae I, II and III with 3, 6 and 7 setae, subcoxae “2” I, II and III with 0, 2 and 2 setae, subcoxae “1” I, II and III with 1, 2 and 2 setae,
respectively. Claw with inner tooth at half length of its inner edge, with a pair of lateral teeth (Fig. 44). Empodial appendage absent.

**Type material.** Holotype ♀ in MNHN, paratypes 4 ♀♀ and 1 juvenile in MNHN; 1 ♀ in ISEA.

**Type locality.** Venezuela, Mérida, La Parroquia, 1,100 m a.s.l., soil in a private garden, 11.v.1980, lgt. J. Péfaur.

**Etymology.** The new species is cordially dedicated to J. Péfaur, Professor at the University of “Los Andes” in Mérida (Venezuela), who kindly collected the material for us.

**Discussion.** The new species is most similar to two species: B. saladaensis sp. n. and B. taxcoana Palacios & Najt, 1981 (see discussion in B. saladaensis sp. n.).

**Brachystomella platensis** Najt & Massoud, 1974

**Remarks.** Sensory organ of antennal segment III with two guard setae between guard sensilla. Tibiotarsi I, II and III with 19, 19 and 18 setae, respectively, of which 3, 4 and 4 capitate (not 3, 3 and 3 as in the original description by Najt & Massoud, 1974), seta M present, seta B7 absent on tibiotarsi III. Setae A1, A2 and A7 slightly capitata on tibiotarsus I, setae A1, A2, A7 and T2 slightly capitata on tibiotarsi II and III. Femora I, II and III with 12, 11 and 10 setae, trochanters I, II and III with 5, 5 and 4 setae, coxae I, II and III with 3, 6 and 7 setae, subcoxae “2” I, II and III with 0, 2 and 2 setae, subcoxae “1” I, II and III with 1, 2 and 2 setae, respectively. Even anal valves each with two setae hr.

**Brachystomella purma** sp. n.

Figs 46–51

**Diagnosis.** Habitus and buccal cone typical for the genus Brachystomella. Postantennal organ with four vesicles. 8+8 eyes present. Very short ordinary setae, formula of sensory setae s per half tergum: 022/21111. Head with setae a0, c3 and c5, setae d5 and sd1 absent. Thoracic sternum without setae. Furca well developed with 5 setae on each dens. Mucro straight. Tibiotarsi I, II and III with 19, 19 and 18 setae, respectively, with acuminate distal setae, with seta M present between setae B4 and B5, seta B7 absent on tibiotarsi III. Femora I, II and III with 12, 11 and 10 setae, respectively, trochanters I, II and III with 5, 5 and 4 setae, coxae I, II and III with 3, 6 and 7 setae, subcoxae “2” I, II and III with 0, 1 and 1 setae, subcoxae “1” I, II and III with 1, 2 and 2 setae, respectively. Even anal valves each with one seta hr.

**Type material.** Holotype ♀ in MNHN, paratypes ♀♀ and 1 juvenile in MNHN, ♀ in ISEA.

**Type locality.** Peru, Estiron, Rio Ampiyacu, soil in secondary forest (“purma”) of 9 years, xii.1983, lgt. Ch. Amedegnato & S. Poullain.

**Other material.** Peru, Estiron, Rio Ampiyacu, litter of secondary forest of over 30 years, i.1984, lgt. Ch. Amedegnato & S. Poullain, 5 specimens.

**Etymology.** The name of the new species is derived from the name for secondary forest. “purma”.

**Discussion.** The new species is closest to B. agrosa Wray, 1953 described from Puerto Rico. They possess the same number of vesicles in postantennal organ (4), the same number of setae on thoracic tergum I (2+2), the same number of setae on the dens (5), the same sensillar formula (022/21111), the same number of setae on tibiotarsi I, II and III (19, 19 and 18) and seta a0 on the head. The two species differ in the shape of the apical vesicle on antennal segment IV (simple in B. agrosa and trilobated in the new species), in the number of setae hr (two setae in B. agrosa and one seta in the new species), and in size (1–1.5 mm for B. agrosa and 0.47–0.65 mm for the new species).

**Brachystomella ronderosi** Najt, 1973

**Remarks.** Sensory organ of antennal segment III with two guard setae between guard sensilla, dorsolateral sensillum somewhat shorter than ventrolateral one. Tibiotarsi I, II and III with 19, 19 and 18 setae, respectively; setae A1, A2, A4, A5, A7, B4 and B5 slightly capitata; seta M present, seta B7 absent on tibiotarsi III. Femora I, II and III with 13, 12 and 11 setae, trochanters I, II and III with 6, 6 and 6 setae, coxae I, II and III with 3, 6 and 7 setae, subcoxae “2” I, II and III with 0, 2 and 2 setae, subcoxae “1” I, II and III with 1, 3 and 3 setae, respectively. Chaetotaxy of abdominal tergum V with a1 and p1 (not as in
Figs 46–51. Brachystomella purma sp. n. 46 – dorsal chaetotaxy (scale 0.1 mm); 47 – antennal segments III and IV, dorsal and ventral views (scale 0.05 mm); 48 – postantennal organ and eyes (scale 0.05 mm); 49 – maxillum (scale 0.05 mm); 50 – tibiotarsus III (scale 0.05 mm); 51 – dens and mucro (scale 0.05 mm).

Fig. 13 in Weiner & Najt, 1997). Even anal valves each with three setae hr.

Brachystomella saladaensis sp. n.

Figs 52–58

Diagnosis. Habitus and buccal cone typical for the genus Brachystomella. Postantennal organ with 6 vesicles. 8+8 eyes present. Very short ordinary setae, formula of sensory setae s per half tergum: 022/21111. Head with setae a0, c3 and c5, sd1 absent. Thoracic tergum I
Figs 52–58. Brachystomella saladaensis sp. n. 52 – dorsal chaetotaxy (scale 0.1 mm); 53 – antennal segments III and IV, dorsal and ventral views (scale 0.05 mm); 54 – maxillum (scale 0.05 mm); 55 – postantennal organ and eyes (scale 0.05 mm); 56 – tibiotarsus I (scale 0.05 mm); 57 – dens and mucro (scale 0.05 mm); 58 – male genital plate (scale 0.05 mm).

with 2+2 setae. Furca well developed with 5 setae on each dens. Mucro straight with apex slightly hooked. Tibiotarsi I, II and III with 19, 19 and 18 setae, respectively, with seta M. Subcoxae “2” I, II and III with 0, 2 and 2 setae, respectively. Even anal valves each with two setae hr.

**Description.** Holotype (female) length 1.07 mm, paratypes (females) length 0.81–1.16 mm, paratypes (males) length 0.67–0.86 mm. Colour in alcohol bluish-grey, ocular plate blue-black. Entire body moderately granulated.

Antennae shorter than head (about 3/4 length of head). Antennal segment I with 7 setae, antennal segment II with
12 setae. Antennae III and IV fused dorsally, ventral separation well marked. Sensory organ of antennal segment III consisting of: two small globular internal sensilla, two subcylindrical guard sensilla (dorsolateral sensillum somewhat shorter than ventrolateral one) and two guard setae between them; ventral microsensillum present. Antennal segment IV with ordinary setae and 6 distinct subcylindrical sensilla; dorsoexternal microsensillum, subapical organite present; apical vesicle trilobated, ventral side with a few blunt setae (Fig. 53).

Postantennal organ (Fig. 55) 2.5 times larger than ocellus, bearing 6 vesicles. Eyes 8+8. Buccal cone typical for the genus. Mandible absent, maxilla with 7 teeth (Fig. 54). Labral chaetotaxy: 2/2334.

Dorsal chaetotaxy as in Fig. 52 with very short ordinary setae, with longer sensory setae s. Their formula per half tergum: 022/21111. Microsensilla present on thoracic tergum II. Head with setae a0, c3 and c5, setae sd1 absent. Thoracic tergum I with 2+2 setae. Abdominal terga I–IV with setae s = p3. Thoracic sternum without setae. Ventral tube with 3+3 setae, abdominal sternum I without setae, abdominal sternum II with 1+1 setae.

Furca well developed with 5 setae on each dens (Fig. 57). Mucro straight with apex slightly hooked. Ratio mucro : dens = 1 : 2.6. Tenaculum with 3+3 teeth. Males with secondary sexual characters on genital papilla (Fig. 58). Even anal valves each with two setae hr.

Tibiotarsi I, II and III with 19, 19 and 18 setae, respectively, acuminate distal setae, with seta M present, seta B7 absent on tibiotarsus III. Femora I, II and III with 12, 11 and 10 setae, trochanters I, II and III with 5, 5 and 4 setae, coxae I, II and III with 3, 6 and 7 setae, subcoxae “2” I, II and III with 0, 2 and 2 setae, subcoxae “1” I, II and III with 1, 2 and 2 setae, respectively. Claw with inner tooth at 1/3 length of its inner edge, with pair of lateral teeth (Fig. 56). Empodial appendage absent.

**Type material.** Holotype ♂ in MNHN, paratypes 1♂ and 6 ♀ in MNHN; 1 juvenile ♂ and 3 ♀ in ISEA.

**Type locality.** Argentina, Chascomus, province of Buenos Aires, litter on the shore of lake Salada Grande, 12.viii.1968, lgt. J. Snack & L. Bulla.

**Etymology.** The name of new species is derived from the type locality.

**Discussion.** The new species shares some characters with *B. taxcoana* Palacios-Vargas & Najt, 1981. Both *B. taxcoana* and *B. saladaensis* in ISEA.

Diagnosis. Habitus and buccal cone typical for the genus *Brachystomella*. Postantennal organ with five vesicles, 7+7 eyes present. Very short ordinary setae, formula of sensory setae s per half tergum: 022/21111. Head without setae a0, sd1 and sd4, setae c3 and c5, one medial seta dx present. Thoracic tergum with 2+2 setae. Furca well developed with 5 setae on each dens. Mucro straight with apex slightly hooked. Tibiotarsi I, II and III with 19, 19 and 18 setae, respectively, with seta M almost in row B. Subcoxae “2” I, II and III with 0, 2 and 2 setae, respectively. Even anal valves each with two setae hr.

Redescription. Antennae shorter than head (about 3/4 length of head). Antennal segment I with 7 setae, antennal segment II with 12 setae. Antennae III and IV fused dorsally, ventral separation well marked. Sensory organ of antennal segment III consisting of: two small globular internal sensilla, two subcylindrical guard sensilla (dorsolateral sensillum shorter than ventrolateral one) and two guard setae between them; ventral microsensillum present. Antennal segment IV with rather short ordinary setae, with 5 distinct subcylindrical sensilla; dorsoexternal microsensillum present, truncated subapical organite present; apical vesicle simple, ventral side with a few blunt setae (Fig. 62).

Postantennal organ (Fig. 60) almost three times larger than ocellus, bearing 5 vesicles. Eyes 7+7, ocellus H absent. Buccal cone typical for the genus. Mandible absent, maxilla with 8 teeth (Fig. 61). Labral chaetotaxy: 2/2334.

Dorsal chaetotaxy as in Fig. 59 with very short ordinary setae, with longer sensory setae s. Their formula per half tergum: 022/21111. Microsensilla present on thoracic tergum II. Head without setae a0, sd1 and sd4, setae c3 and c5, one medial seta dx present. Thoracic tergum I with 2+2 setae. Abdominal terga I–IV with setae s = p3. Thoracic sternum without setae. Ventral tube with 3+3 setae, abdominal sternum I without setae, abdominal sternum II with 1+1 setae.

Furca well developed with 5 setae on each dens (Fig. 64). Mucro straight with apex slightly hooked. Ratio mucro : dens = 1 : 2.2. Tenaculum with 3+3 teeth. Males unknown. Even anal valves each with two setae hr.

Tibiotarsi I, II and III with 19, 19 and 18 setae, respectively, with acuminate distal setae; seta M between setae B4 and B5, seta B7 absent on tibiotarsus III. Femora I, II and III with 12, 11 and 10 setae, trochanters I, II and III with 5, 5 and 4 setae, coxae I, II and III with 3, 6 and 7 setae, subcoxae “2” I, II and III with 0, 2 and 2 setae, subcoxae “1” I, II and III with 1, 2 and 2 setae, respectively. Claw with inner tooth at 1/3 length of its inner edge, with pair of lateral teeth (Fig. 63). Empodial appendage absent.

**Type material.** Not present in the collection of Laboratoire d’Entomologie, MNHN in Paris.

**Other locality.** Costa Rica, La Palma, xi.1931. lgt. J.Fig. Tristan (Denis: 1931).

**Type locality.** Costa Rica, Tuis, xi.1912, lgt. J.Fig. Tristan, 3 specimens, Mexico, Veracruz, Teocelo, forest litter, 8.vi.1985, lgt. J. Boudinot, 6 specimens.

**Discussion.** Of the species of *Brachystomella*, without seta a0 on the head and with 5 setae on the dens, *Brachys-
tomella septemoculata is closest to Brachystomella contorta, described also from Costa Rica. The two species differ in the number of eyes (7+7 in B. septemoculata and 8+8 in B. contorta) and in the shape of the mucro (straight with apex slightly hooked in B. septemoculata and bent in B. contorta).

**Brachystomella stachi** Mills, 1934

**Remarks.** Sensory organ of antennal segment III with two guard setae between guard sensilla, dorsolateral sensillum shorter than ventrolateral one. Tibiotarsi I, II and III with 18, 18 and 17 setae, respectively; seta M absent, seta B7 absent on tibiotarsus III. Femora I, II and III with 11, 11 and 10 setae, trochanters I, II and III with 5, 5 and
Brachystomella tuberculata  

Remarks. Sensory organ of antennal segment III with two guard setae between guard sensilla, dorsolateral sensillum shorter than ventrolateral one. Tibiotarsi I, II and III with 19, 19 and 18 setae, respectively; seta M present, seta B7 absent on tibiotarsus III. Femora I, II and III with 12, 11 and 10 setae, trochanters I, II and III with 5, 5 and 4 setae, coxae I, II and III with 3, 6 and 7 setae, subcoxae “1” I, II and III with 0, 2 and 2 setae, subcoxae “2” I, II and III with 1, 2 and 2 setae, respectively. Even anal valves each with three setae hr.

Brachystomella tuberculata (Wahlgren, 1906)

Chondrachorutes tuberculatus Wahlgren, 1906

Figs 65–70

Diagnosis. Habitus and buccal cone typical for the genus Brachystomella. Postantennal organ with four vesicles. 8+8 eyes present. Strong ordinary setae, formula of sensory setae s per half tergum: 022/21111. Head without seta a0, setae c1 and c5 present. Thoracic tegum I with 4+4 setae. Furca well developed with 6 setae on each dens. Mucro straight with apex slightly hooked. Tibiotarsi I, II and III with 19, 19 and 18 setae, respectively, with short seta M. All setae in rows A, T; setae B2-B7 and M slightly bent and slightly capitata. Seta B1 straight and acuminate. Subcoxae “2” I, II and III with 1, 3–4 and 3–4 setae, respectively. Even anal valves each with two setae hr.


Antennae shorter than head (about 2/3 length of head). Antennal segment I with 7 setae, antennal segment II with 12 setae. Antennae III and IV fused dorsally, ventral separation well marked. Sensory organ of antennal segment III consisting of: two small globular, slightly bent internal sensilla, two subcylindrical guard sensilla (dorsolateral sensillum somewhat shorter than ventrolateral one) and two guard setae between them; ventral microsensillum present. Antennal segment IV with long ordinary setae and 6 indistinct sensilla; dorsoexternal microsensillum, subapical organite present; apical vesicle fairly simple, ventral side with a few blunt setae (Fig. 67).

Postantennal organ (Fig. 68) 2.5 times larger than ocellus, bearing four vesicles. Eyes 8+8. Buccal cone typical for the genus. Mandible absent, maxilla with 6 teeth (Fig. 66). Labral chaetotaxy: 2:2334.

Dorsal chaetotaxy as in Fig. 65 with very strong ordinary setae, with longer sensory setae s. Their formula per half tergum: 022/21111. Microsensilla on thoracic tegum II present. Head with setae a0, c1 and c5 present. Thoracic tegum I with 4+4 setae. Abdominal tegum I-IV with setae s = p4. Thoracic sterna without setae. Ventral tube with 3+3 setae, abdominal sternum I without setae, abdominal sternum II with 3+3 setae.

Furca well developed with 6 setae on each dens (Fig. 70). Mucro straight with apex slightly hooked. Ratio mucro : dens = 1 : 1.7. Tenaculum with 3+3 teeth. Males unknown. Even anal valves each with two setae hr.

Tibiotarsi I, II and III with 19, 19 and 18 setae, respectively, with seta M present, seta B7 absent on tibiotarsus III. All setae in row A, T and setae B2-B7 and M bent and slightly capitata. Seta B1 straight and acuminate. Femora I, II and III with 12, 12 and 10 setae, trochanters I, II and III with 6, 6 and 5 setae, coxae I, II and III with 3, 6 and 7 setae, subcoxae “2” I, II and III with 0, 2 and 2 setae, subcoxae “1” I, II and III with 1, 3–4 and 3–4 setae, respectively. Claw with inner tooth at 1/3 length of its inner edge, with pair of lateral, strong teeth (Fig. 69). Empodial appendage absent.

Type material. Lectotype ?, paralectotype in alcohol presently designated, in Natur historiska Riksmuseet (Stockholm, Sweden).


Brachystomella victoriensis Izarra, 1972

Figs 71–76

Diagnosis. Habitus and buccal cone typical for the genus Brachystomella. Postantennal organ with four vesicles. 8+8 eyes present. Short ordinary setae, very long setae s, their formula per half tergum: 022/21111. Head with setae a0, c3 and c5. Thoracic tegum with 3+3 setae. Furca well developed with 7 setae on each dens. Mucro straight with apex slightly hooked. Tibiotarsi I, II and III with 19, 19 and 18 setae, respectively, with short seta M and long setae B4 and B5, curved at tips. Subcoxae “2” I, II and III with 0, 2 and 2 setae, respectively. Even anal valves each with three setae hr.

Redescription. Antennae as long as head. Antennal segment I with 7 setae, antennal segment II with 12 setae. Antennae III and IV fused dorsally, ventral separation
Figs 65–70, *Brachystomella tuberculata* (Wahlgrén, 1906). 65 – dorsal chaetotaxy, ordinary setae and sensory setae (scale 0.1 mm); 66 – maxillum (scale 0.1 mm); 67 – antennal segments III and IV, dorsolateral view (scale 0.1 mm); 68 – postantennal organ and eyes (scale 0.1 mm); 69 – tibiotarsus I (scale 0.1 mm); 70 – dens, mucro and tenaculum (scale 0.1 mm).

well marked. Sensory organ of antennal segment III consisting of: two small globular internal sensilla, two subcylindrical guard sensilla (dorsolateral sensillum somewhat shorter than ventrolateral one) and two guard setae between them; ventral microsensillum present. Antennal segment IV with rather long ordinary setae, with 6 only slightly distinct, long subcylindrical sensilla; dorsoexternal microsensillum present, truncated subapical organite present; apical vesicle trilobated in deep cavity, ventral side with a few truncated setae (Fig. 72).

Postantennal organ (Fig. 74) almost 1.4 times larger than ocellus B, bearing 4 vesicles. Eyes 8+8. Buccal cone typical for the genus. Mandible absent, maxilla with 6 teeth (Fig. 73). Labral chaetotaxy: 2/2334.

Dorsal chaetotaxy as in Fig. 71 with very short ordinary setae, with sensory setae s longer than the latter. Their
formula per half tergum: 022/21111. Microsensilla present on thoracic tergum II. Head with setae a0, setae c3 and c5, sometimes asymmetrical seta sd present. Thoracic tergum I with 3+3 setae. Abdominal terga I–IV with seta s = p4. Thoracic sternum without setae. Ventral tube with 3+3 setae, abdominal sternum I without setae, abdominal sternum II with 1+1 setae.

*Furca* well developed with 6 setae on each dens (Fig. 76). Mucro straight with apex slightly hooked. Ratio mucro : dens = 1 : 2.72. Tenaculum with 3+3 teeth. Males
with secondary sexual characters: genital plate with 4+4 stout setae near aperture. Even anal valves each with three setae hr.

Tibiotarsi I, II and III with 19, 19 and 18 setae, respectively, with acuminate distal setae; short seta M between long setae B4 and B5, curved at the tip; seta B7 absent on tibiotarsus III. Femora I, II and III with 13, 12 and 11 setae, trochanters I, II and III with 6, 6, and 6 setae, coxae I, II and III with 3, 6, and 7 setae, subcoxae “2” I, II and III with 0, 2 and 2 setae, subcoxae “1” I, II and III with 1, 2 and 2 setae, respectively. Claw with inner tooth at 1/3 length of its inner edge, and a pair of lateral teeth (Fig. 75). Empodial appendage absent.

**Type material.** Holotype ♀ (juvenile), paratypes 2 ♀♂ in Museo de La Plata, Argentina.

**Discussion.** *Brachystomella victoriensis* shares some characters with *B. mataraniensis* sp. n. They possess seta a0 on the head and the same number of setae on thoracic tergum I (3+3), the dens (6), and tibiotarsi (19, 19, 18), as well as the same number of setae hr on each even valve (5). The apical vesicle on antennal segment IV is simple in *B. mataraniensis* and trilobated in *B. victoriensis*. They differ also in the number of setae on femora I, II and III (12, 11 and 10 in *B. mataraniensis* sp. n. and 13, 12 and 11 in *B. victoriensis*) and on trochanters (5, 5 and 4 in *Brachystomella mataraniensis* sp. n. and 6, 6 and 6 in *B. victoriensis*).

**Brachystomella villalobosi** Cassagnau & Rapoport, 1962

Figs 77–83

**Diagnosis.** Habitus and buccal cone typical for the genus *Brachystomella*. Postantenal organ with 4 (3) vesicles. 8+8 eyes present. Very short ordinary setae, some capitate setae on the last abdominal terga, formula of sensory setae s per half tergum: 022/21111. Head with seta a0, setae c2 and c5 present. Thoracic tergum I with 3+3 setae. Abdominal terga I–III with seta s = p4, abdominal tergum IV with seta s = p3. Thoracic sterna without setae. Ventral tube with 3+3 setae, abdominal sternum II with 1+1 setae.

Reduced furca with 3 setae on each dens (Fig. 82). Mucro with apex slightly hooked. Ratio mucro : dens = 1 : 2.75. Tenaculum with 3+3 teeth. Males with secondary sexual characters on genital papilla (Fig. 83). The even anal valves each with three setae hr.

Tibiotarsi I, II and III with 18, 18 and 17 setae, respectively, of which 2, 3 and 3 capitate setae; seta M absent, seta B7 absent on tibiotarsus III. Setae A1 and A7 capitate on tibiotarsus I and setae A1, A2 and A7 capitate on tibiotarsi II and III. Femora I, II and III with 12, 11 and 10 setae, trochanters I, II and III with 5, 5, 4 setae, coxae I, II and III with 3, 6–7 and 7 setae, subcoxae “2” I, II and III with 0, 2 and 2 setae, subcoxae “1” I, II and III with 1, 2 and 1–2 setae, respectively. Claw with inner tooth at half length of its inner edge, with pair of lateral teeth (Fig. 81). Empodial appendage absent.

**Type material.** Lectotype ♀, paralectotypes ♀♀ present respectively designated in MNHN.


**Discussion.** *Brachystomella villalobosi* Cassagnau & Rapoport, 1962 is closest to *B. barrerai* Palacios-Vargas & Najt, 1981. They share the same number of the setae on the dens (3), the same shape of mucro and of apical vesicle. They differ in the number of the capitate setae on the tibiotarsi III (2, 3 and 3 in *B. villalobosi* and 3, 4 and 4 in *B. barrerai*), in the number of the setae hr on even anal valves (2 in *B. villalobosi* and 3 in *B. barrerai*).

**Brachystomella zapatai** Najt & Palacios-Vargas, 1986

**Remarks.** Sensory organ of antennal segment III with two guard setae between guard sensilla. Formula of sensory setae s per half tergum: 022/11111. Tibiotarsi I, II and III with 18, 18 and 17 setae, respectively; seta M absent, seta B7 absent on tibiotarsus III. Femora I, II and III with 12, 11 and 10 setae, trochanters I, II and III with 5, 5 and 4 setae, coxae I, II and III with 3, 6 and 7 setae, subcoxae “2” I, II and III with 0, 2 and 2 setae, subcoxae “1” I, II and III with 1, 2 and 2 setae, respectively. Even anal valves each with three setae hr.

**Brachystomella zepa** sp. n.

Figs 84–89

**Diagnosis.** Habitus and buccal cone typical for the genus *Brachystomella*. Postantenal organ with 5 vesicles. 5+5 eyes present. Very short ordinary setae, formula of sensory setae s per half tergum: 022/21111. Head without setae a0 and sd1, setae c2 and c5 present. Thoracic tergum I with 2+2 setae. Furca well developed with 5 setae on each dens. Mucro straight with apex slightly hooked. Tibiotarsi I, II and III with 19, 19 and 18 setae,
respectively, with seta M almost in row B. Subcoxa “2” I, II and III with 1, 2 and 2 setae, respectively. Even anal valves each with two setae hr.

**Description.** Holotype (female) length 0.91 mm, paratypes (females) length 0.70–0.95 mm, paratype (juvenile) length 0.67 mm. Colour in alcohol bluish-grey, ocular plate blue-black. Entire body moderately granulated.

Antennae shorter than head (about 3/4 length of head). Antennal segment I with 7 setae, antennal segment II with 12 setae. Antennae III and IV fused dorsally, ventral...
Figs 84–89. *Brachystomella zerpa* sp. n. 84 – dorsal chaetotaxy (scale 0.1 mm); 85 – maxillum (scale 0.05 mm); 86 – postantennal organ and eyes (scale 0.05 mm); 87 – antennal segments III and IV, dorsal view (scale 0.05 mm); 88 – dens and mucro (scale 0.05 mm); 89 – tibiotarsus III (scale 0.05 mm).

Separation well marked. Sensory organ of antennal segment III consisting of: two small globular internal sensilla, two subcylindrical guard sensilla (dorsoventral sensillum shorter than ventrolateral one) and two guard setae between them; ventral microsensillum present. Antennal segment IV with rather long ordinary setae, with 6 distinct subcylindrical sensilla; dorsoexternal microsensillum, subapical organite present; apical vesicle trilobated, ventral side with a few blunt setae (Fig. 87).

Postantennal organ (Fig. 86) almost three times larger than ocellus B, bearing 5 vesicles. Eyes 5+5. Buccal cone typical for the genus. Mandible absent, maxilla with 8 teeth (Fig. 85). Labral chaetotaxy: 2/2334.
Dorsal chaetotaxy as in Fig. 84 with very short ordinary setae, with longer sensory setae. Their formula per half tergum: 022/21111. Microsensilla present on thoracic tergum II. Head without setae a0 and s1, with setae c2 and c5 present. Thoracic tergum I with 2+2 setae. Abdominal terga I-IV with seta set s = p3. Thoracic sternum lacks setae. Ventral tube with 3+3 setae; abdominal sternum I without setae, abdominal sternum II with 1+1 setae.

Furca well developed with 5 setae on each dens (Fig. 88). Mucro straight with apex slightly hooked. Ratio mucro : dens = 1 : 2.5. Tenaculum with 3+3 teeth. Males unknown. Even anal valves each with 2 setae hr (one specimen with 2+3 setae).

Tibiotarsi I, II and III with 19, 19 and 18 setae, respectively, with acuminate distal setae, seta M (= microchaeta) between setae B4 and B5 present, seta B7 absent on tibiotarsi III. Femora I, II and III with 12, 11 and 10 setae, trochanters I, II and III with 5, 5 and 4 setae, coxae I, II and III with 3, 6 and 7 setae, subcoxae “2” I, II and III with 1, 2 and 2 setae, subcoxae “1” I, II and III with 1, 2 and 2 setae, respectively. Claw with inner tooth at 1/3 length of its inner edge, with pair of lateral teeth (Fig. 89). Empodial appendage absent.

Type material. Holotype °, paratypes 2 ° ° ° and 1 juvenile in MNHN; 2 ° ° in ISEA.

Type locality. Venezuela, Monte Zerpa, 2,400 m a.s.l., cloud forest, litter, 11.v.1980, lgt. A. Pascual.

Etymology. The name of the new species is derived from the type locality.

Discussion. The new species shares with B. montebella Najt & Palacios-Vargas, 1981 and B. chilensis Rapoport & Rubio, 1963 the same number of eyes (5+5) and the same number of setae on thoracic tergum I (2+2). It differs from the first species in the number of setae on tibiotarsi (18, 18 and 17 in B. montebella and 19, 19, and 18 in the new species), the number of dental setae (6 in B. montebella and 5 in the new species) and the shape of the apical vesicle on antennal segment IV (simple in B. montebella and trilobated in the new species). The new species is closest to B. chilensis, which has the same number of tibiotarsal setae and the same sensillar formula. The two species differ in the number of dental setae (6 in B. chilensis, 5 in the new species), and vesicles in the postantennal organ (4 in B. chilensis, 5 in the new species), in the shape of apical vesicle (simple in B. chilensis and trilobated in the new species), and in the arrangement of eyes (in B. chilensis, D, F and H absent, in the new species, F, G and H absent). There are also some differences in chaetotaxy: B. chilensis has seta a0 on head and 3+3 setae on thoracic tegum I, and the new species has no seta a0 on head, and 2+2 setae on thoracic tegum I.

Key to the species of Brachystomella Ägren 1903 from the Neotropical region

1. Less than 8-8-8 eyes present ................................. 2
   - 8-8-8 eyes present ............................................ 6
2. 6-7-6-7 eyes present .......................................... 3

- 5-5 eyes present ................................................. 4
3. 6-6 eyes present, postantennal organ with 6 vesicles, dens with 6 setae .............................. B. sexoculata Massoud, 1967
4. 7-7 eyes present, postantennal organ with 5 vesicles, dens with 5 setae .............................. B. septemoculata Denis, 1931
5. Thoracic tergum I with 2+2 setae, postantennal organ with 5 vesicles, even anal valves each with 1 or 2 setae hr ........................ 5
   - Thoracic tergum I with 3+3 setae, postantennal organ with 4 vesicles, apical vesicle on antennal segment IV simple, even anal valves each with 3 setae hr .............................. B. chilensis (Rapoport & Rubio, 1963)
6. Tibiotarsi with capitate setae ..................................... 7
   - Tibiotarsi without capitate setae .......................... 11
7. Tibiotarsi with 7-16 capitate setae ........................... 8
   - Tibiotarsi with 1-4 capitate setae .......................... 9
8. Thoracic tergum I with 4+4 setae, tibiotarsi with about 17-18 capitate setae, postantennal organ with 4 vesicles .............................. B. tuberculata Wahlgren, 1906
   - Thoracic tergum I with 2+2 setae, tibiotarsi with 7 capitate setae, postantennal organ with 5-6 vesicles .............................. B. ronderosi Najt, 1973
   - Thoracic tergum I with 3-4 capitate setae .......................... 10
9. Tibiotarsi with 3-4 capitate setae .......................... 10
   - Tibiotarsi with 1 capitate seta .............................. 14
10. Thoracic tergum I with 3+3 setae, tibiotarsi I, II and III with 18, 18 and 17 setae, respectively ......................... 11
   - Thoracic tergum I with 2+2 setae, tibiotarsi I, II and III with 19, 19 and 18 setae, respectively, of which 3, 4 and 4 are capitate .............................. B. platensis Najt & Massoud, 1974
11. Dens with 3 setae each, tibiotarsi I, II and III with 2, 3 and 3 or 3, 4 and 4 capitate setae, even anal valves each with 3 setae hr ............................. 12
   - Dens with 4 setae each, tibiotarsi I, II and III with 3, 4 and 4 capitate setae each, even anal valves each with 2 setae hr .............................. B. globulosa Cassagnau & Rapoport, 1962
12. Tibiotarsi I, II and III with 3, 4 and 4 capitate setae .......................... 13
   - Tibiotarsi I, II and III with 2, 3 and 3 capitate setae, apical vesicle on antennal segment IV slightly trilobated .............................. B. villalobosi Cassagnau & Rapoport, 1962
   - Mucro reduced, mamelon-shaped, about 1/4 length of dens, apical vesicle on antennal segment IV simple .............................. B. minimaurnata Palacios-Vargas & Najt, 1981
14. Apical vesicle on antennal segment IV simple, dens with 4 setae .............................. B. baconoensis Gruia, 1983

* B. mauriesi Thibaud & Massoud, 1983 is not included in this key.
Apical vesicle on antennal segment IV trilobated, dens with 5-6 setae ........................................... B. neomexicana (Scott, 1960)

USA, (New Mexico, California, Louisiana, Texas, Colorado), Mexico

15. Postantennal organ with 4 vesicles ........................................... 16

16. Thoracic tergum I with 3+3 setae ........................................... 17

17. Thoracic tergum I with 2+2 setae ........................................... 18

17. Apical vesicle on antennal segment IV simple, femora I, II and III with 12, 11 and 10 setae, tibiotarsi with short inner setae (B4 and B5) ........................................... B. maturaniensis sp. n.

Peru

18. Abdominal tergum I with 1+1 sensory setae s, tibiotarsi I, II and III with 18, 18 and 17 setae ........................................... 19

18. Abdominal tergum I with 2+2 sensory setae s, tibiotarsi I, II and III with 19, 19 and 18 setae ........................................... 20

19. Head with seta a0, apical vesicle on antennal segment IV trilobated, dens with 7 setae ........................................... B. zapatai Najt & Palacios-Vargas, 1986

Mexico

20. Abdominal terga II and III with 1+1 sensory setae s, dens each with 5 normal setae, even anal valves each with 1 or 2 setae hr ........................................... 21

21. Apical vesicle on antennal segment IV simple, even anal valves each with 2 setae hr each, animals of big size ........................................... B. agrosta Wray, 1953

Puerto Rico, the French West Indies, Ecuador, Cuba, Brasil, French Guiana

22. Apical vesicle on antennal segment IV trilobated, even anal valves each with 1 seta hr, animals of small size ........................................... B. purma sp. n.

Peru

22. Head without seta a0 ........................................... 23

23. Furca well developed, dens with 5-6 setae, mucro present ........................................... 24

24. Dens with 5 setae ........................................... 25

25. Apical vesicle on antennal segment IV trilobated ........................................... 26

26. Even anal valves each with 2 setae hr, ratio mucro : dens = 2.6 ........................................... B. saladaensis sp. n.

Argentina

27. Apical vesicle on antennal segment IV trilobated, straight mucro with apex slightly hooked ........................................... 28

28. Even anal valves each with seta hr, subcoxae "2" I, II and III with 0, 2 and 2 setae, respectively ........................................... B. pefauri sp. n.

Venezuela

29. Even anal valves each with 1 seta hr, subcoxae "2" I, II and III with 0, 1 and 1 setae, respectively ........................................... B. desutterae sp. n.

Peru

ACKNOWLEDGEMENTS. We are most grateful to the following colleagues who supplied us with the materials described in this study: Ch. Amedegnato, L. Desutter-Grandcolas and S. Fournil from the Laboratoire d'Entomologie, Museum national d'Histoire naturelle (Paris, France), A. Pascual and J. Pefaur, University of "Los Andes" (Mérida, Venezuela), J. Snack and L. Bulla, Facultad de Ciencias y Museo de La Plata (Argentina). We are also grateful to A. Camoussseigt, Museo Nacional de Historia Natural, (Santiago, Chile), K.A. Christiansen, Grinnell College (Grinnell, USA), M. Groia, Institutul de Speologie "Emil Racovitza" (Bucharest, Romania), J.G. Palacios-Vargas, Facultad de Ciencias, UNA (Mexico), Torbjörn Kronestedt, Naturhistoriska Riksmuseet (Stockholm, Sweden) for loan of type material, and H. Strümpel, Zoologisches Institut und Zoologisches Museum, Universität Hamburg (Hamburg, Germany) for information. We express our sincere gratitude to Maria Bieniek for her effective assistance. Finally, we thank the two reviewers and the English language editor for valuable comments to the manuscript.

The work is supported by grant KBN 6P04C 004 14 from the Polish Committee for Research.

REFERENCES


Received May 2, 2000; revised February 8, 2001; accepted June 8, 2001.