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Paola A. Rueda Martín [a] & Julieta V. Sganga [b]

[a] Instituto de Biodiversidad Neotropical, Facultad de Ciencias Naturales e InstitutoMiguel Lillo, Miguel Lillo 205, 4000, San Miguel de Tucumán, Argentina

[b] Departamento de Biodiversidad y Biología Experimental, Facultad de Ciencias Exactas y Naturales, Universidad de Buenos Aires, C1428EHA, Buenos Aires, Argentina

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Smicridea McLachlan (Trichoptera: Hydropsychidae) from northwestern Argentina and Bolivia: new species, redescription, association and new records

Paola A. Rueda Martín[a]* and Julieta V. Sganga[b]

[a]*Instituto de Biodiversidad Neotropical, Facultad de Ciencias Naturales e Instituto Miguel Lillo, Miguel Lillo 205, 4000 San Miguel de Tucumán, Argentina;* [b]*Departamento de Biodiversidad y Biología Experimental, Facultad de Ciencias Exactas y Naturales, Universidad de Buenos Aires, C1428EHA, Buenos Aires, Argentina*

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Four new species of *Smicridea* (*Rhyacophylax*) are described from Argentina and Bolivia. *Smicridea* (*Rhyacophylax*) *bifida* sp. nov., *S*. (*R*.) *elisae* sp. nov. and *S*. (*R*.) *valeni* sp. nov. are described from the male; *S*. (*R*.) *thermophyla* sp. nov. is described as the first species of *Smicridea* from thermal springs. The larva and pupa of *S*. (*R*.) *thermophila* were associated using the metamorphotype method. New distributional records of *S*. (*R*.) *dithyra*, *S*. (*R*.) *atrobasis*, *S*. (*R*.) *peruana* and *S*. (*R*.) *pampeana* are included. Morphological characters of male *S*. (*R*.) *peruana* that were not mentioned before are included. Illustrations of all taxa named in this paper are included.

Keywords: Trichoptera; Hydropsychidae; new species; Argentina; Bolivia; Neotropical

Introduction

Smicridea McLachlan (1871) is distributed from the southwest United States to the Chilean Subregion including the Antilles. This is the only genus of Smicrideinae (Hydropsychidae) in the Neotropical Region.

Smicridea is represented by two subgenera: *Smicridea* (*Smicridea*) McLachlan, with 109 described species, and *Smicridea* (*Rhyacophylax*) Müller, with 64 species (Morse 2009).

Adults of *Smicridea* can be differentiated by the wing venation, tibial spurs (1-4-4 for *S*. (*Smicridea*) and 1-4-2 for *S*. (*Rhyacophylax*), and by the presence of two pairs of abdominal glands in *S*. (*Smicridea*) in segments VI–VII, and VII–VIII. Characters of genitalia are used for the identification of adults, but in some species (e.g. *fasciatella* complex) the patterns and colouration of the wings are useful (Blahnik 1995).

In Argentina the genus *Smicridea* is recorded from Jujuy to Chubut provinces. Most species have been described by Flint (1972, 1973, 1978, 1980, 1982, 1983, 1989) and recently some have been illustrated, redescribed and recorded from other localities by Sganga and Angrisano (2006) and Sganga (2006).

*Corresponding author. Email: paolamartinzoo@yahoo.com.ar

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In northwestern Argentina six species are recorded (Sganga 2006): *S. chicoana* Flint (1983), *S. mesembrina* (Navás, 1918), *S. murina* McLachlan (1871), *S. nigerrima* Flint (1983), *S. olivacea* Flint (1983) and *S. peruana* (Matynov, 1912).

The Trichoptera fauna of Bolivia is poorly known; only three species were recorded for this country: *S*. (*R*.) *mesembrina*, *S*. (*R*.) *murina* and *S*. (*S*.) *polyfasciata* (Martynov, 1912).

Recent collection trips were made in northwestern Argentina and Bolivia. New species of *Smicridea* were found and new records of described species are included in this work. The material of *Smicridea* was compared with the holotypes deposited at the Smithsonian Institution, Washington DC, USA.

For all species described here we provide illustrations of complete genitalia.

Materials and methods

Adults were collected in the field with a light trap and preserved in 75% ethyl alcohol. Genitalia of specimens were cleared in 10% NaOH heated for several minutes, then the cuticle was rinsed in distilled water, neutralized with phenol, and mounted in Fauré medium or glycerine for examination with a microscope. The types of the new species are deposited at Instituto Miguel Lillo, San Miguel de Tucumán, Argentina (IML).

Colouration pattern of wings provided in species descriptions correspond to material preserved in alcohol. Wings of *S.* (*R.*) *peruana* were mounted in alcohol and dried for illustration.

Both *S.* (*R.*) *atrobasis* and *S.* (*R.*) *dithyra* were compared with Type material from the Smithsonian Institution, Washington DC (NMNH). Individuals of *S.* (*R.*) *peruana* were compared with material from NMNH previously compared by Dr Oliver Flint with Holotype.

Immature material of *S.* (*R.*) *thermophila* sp. nov. was collected manually, in a hot spring at 33°C. One pharate adult of the same locality was used as metamorphotype. The larval sclerites contained in the pupal exuviae were examined and compared with the larvae.

Because larvae preserved in alcohol begin to lose pigmentation, the cuticle was dyed with acid fuchsine to determine the distribution of muscle scars. Larval sclerites, the pupal cuticle and the cleared male abdomen were mounted in glycerine for observation and illustration. All material was preserved and stored in 75% ethyl alcohol. The terminology used in this paper to describe pre-imaginal stages follows that of Wiggins (1996) and Sganga and Fontanarrosa (2006).

Results

Smicridea* (*Rhyacophylax*) *bifida Rueda Martín and Sganga, sp. nov.
(Figure 1A–E)

Material examined

Holotype male. Argentina: Salta, El Rey National Park, A° La Sala, 2 March 1999, F. Romero col. (IML).

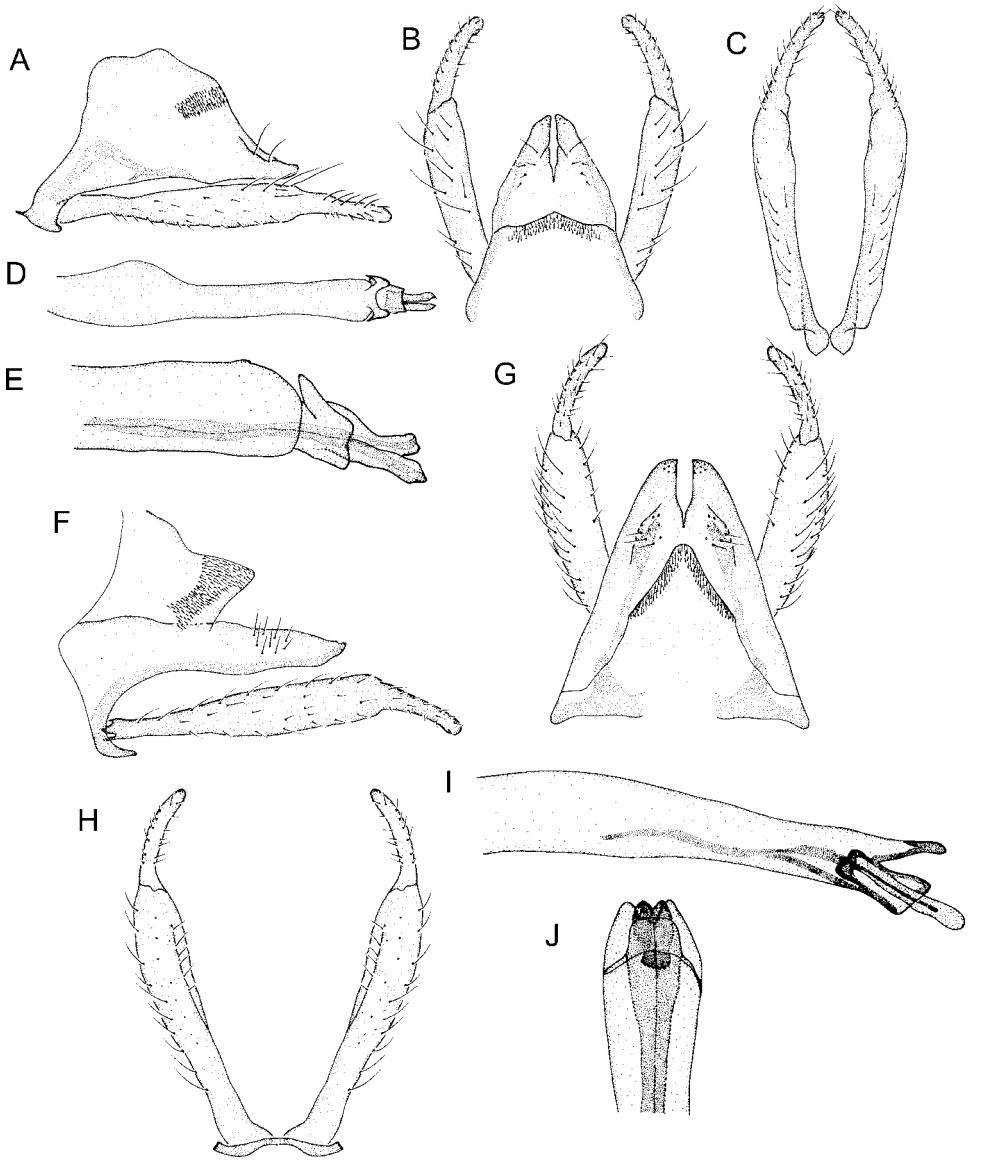

Figure 1. *Smicridea* (*Rhyacophylax*) *bifida* sp. nov. (A) Male genitalia, lateral view; (B) male genitalia, dorsal view; (C) inferior appendages, ventral view; (D) phallus, dorsal view; (E) phallus, lateral detail of tip. *Smicridea* (*Rhyacophylax*) *elisae* sp. nov. (F) male genitalia, lateral view; (G) male genitalia, dorsal view; (H) inferior appendages, ventral view; (I) phallus, lateral view; (J) phallus, dorsal detail of tip.

Species description

Male. Length of forewings 5.1 mm. Colouration of head and thorax light reddish brown, setal warts and abdomen stramineous. Forewing yellowish, with an oval pale macula parallel to the costal margin (pterostigma), and light brown stripes over

transversal veins paler than that of *S. peruana* (Figure 5F). The colouration of the body and wings was observed in specimens preserved in alcohol.

Diameter of eye, in dorsal view, almost half of the interocular distance. Anterolateral process of sternum V as long as the sternum.

Genitalia. Segment IX with anterolateral margin sinuous (Figure 1A). Tergum X, in dorsal view, deeply divided mesally, internal margin of each hemitergite straight with apex slightly curved to midline (Figure 1B); in lateral view with ventral margin almost straight and apex slightly upturned. Inferior appendages two-segmented, setose; basal segment narrow for a short distance proximally, from where it widens to the apex; apical segment narrow, short, rounded at tip (basal segment three times length of apical segment) (Figure 1A–C). Phallus long, tubular; basal portion broad, forming an angle of about 90° with the distal part; with dorsolateral retrorse paired processes (Figure 1D); in lateral view distal part with dorsolateral process directed dorsoanteriorly; endophallus dorsoventrally divergent (Figure 1E). Internal sclerite long and slender; in lateral view slightly sinuous and dorsoventrally divergent at the apex (Figure 1E).

Female. Unknown.

Systematic considerations

The male genitalia of this new species is different from the other species described in the genus. The divergent endophallus and internal sclerite are the main diagnostic characters of this species, and are unique in the genus.

Etymology

The name of this species refers to the bifid apex of the phallus.

Smicridea* (*Rhyacophylax*) *elisae Rueda Martín and Sganga, sp. nov.
(Figure 1F–J)

Material examined

Holotype male. Argentina: Salta, Chicoana, Rio Chicoana, 29 February 2000 (IML).

Paratypes. Same data as holotype: two males (IML).

Species description

Male. Length of forewings 6.1 mm. Colouration of head and thorax light reddish brown, setal warts, antennae, legs and abdomen stramineous. Forewing yellowish, with an oval pale macula parallel to the costal margin (pterostigma), and brown stripes over transversal veins with a transversal line at the mid-length of anastomosis of R. The colouration of the body and wings was observed in specimens preserved in alcohol.

Diameter of eye, in dorsal view, 2.3 times the interocular distance. Anterolateral process of sternum V about 1.5 times the length of the sternum.

Genitalia. Segment IX with anterolateral margin angulated (Figure 1F). Tergum X, in dorsal view, deeply divided mesally with a V-shaped excision (Figure 1G); in lateral view with ventral margin almost straight and apex slightly upturned, dorsal area membranous (Figure 1F). Inferior appendages two-segmented, setose, basal segment broadened apically (four times the length of the apical portion); apical segment short, rounded at the tip (Figure 1F–H). Phallus long, tubular and curved; basal portion slightly broader; apical area with dorsal bifid process and ventral quadrangular membranous structure with internal folded membrane (endophallus partially exerted), internally with a dorsal sclerotized, pyriform plate (cleft meso-posteriorly) (Figure 1I,J); endophallus long and digitate. Internal sclerite sinuous in lateral view and slightly broadened in dorsal view (Figure 1I,J).

Female. Unknown.

Systematic considerations

The male genitalia of this new species could be related to *S.* (*R.*) *valeni* sp. nov. because of the bifid dorsal process of phallus. The folded membrane in the apex of phallus and the sclerotized plate are the main diagnostic characters of *S.* (*R.*) *elisae* sp. nov.

Etymology

This species is dedicated to Dr Elisa Beatriz Angrisano, researcher in Trichoptera from South America and director of the doctoral thesis of both authors.

Smicridea* (*Rhyacophylax*) *thermophila Rueda Martin and Sganga, sp. nov.
(Figures 2, 3)

Material examined

Holotype male. Argentina: Jujuy province, Ledesma, Río Aguas Calientes, 23°44′46″ S, 64°31′29″ W, 100 m, 18 November 2004, Rueda Martín col. (IML).

Paratypes. Same data as the holotype: two males, one male metamorphotype, 26 larvae (IML).

Species description

Male. Length of forewings 4.87–4.96 mm. Colouration of head and thorax light reddish brown, setal warts and abdomen stramineous. Forewing light reddish brown, with an oval, pale macula parallel to the costal margin (pterostigma), a circular dark spot over nigma, and dark stripes over transversal veins. General colouration of wing paler and less contrasting than that of *S. peruana* (Figure 5F). The colouration of the body and wings was observed in specimens preserved in alcohol.

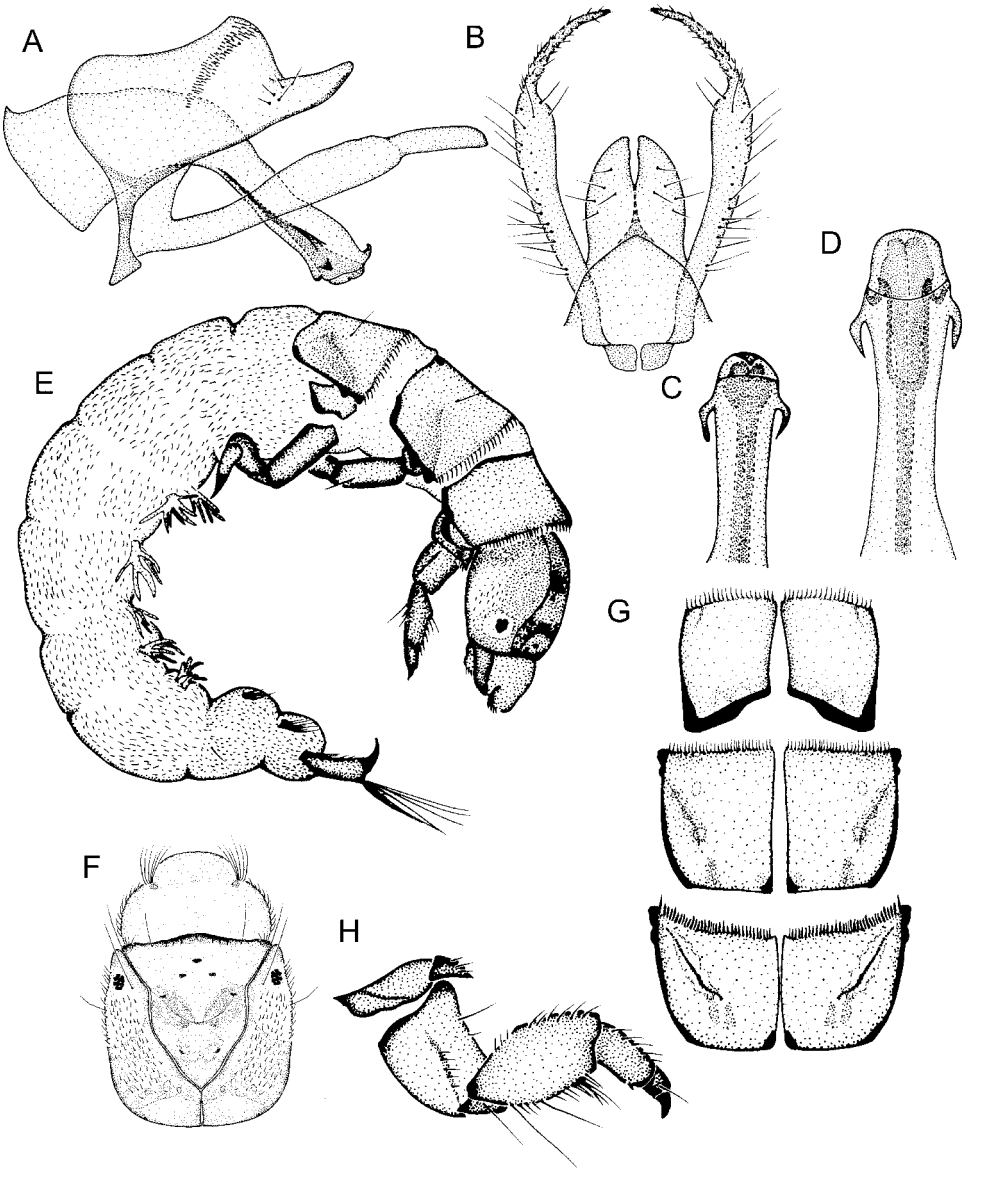

Figure 2. *Smicridea* (*Rhyacophylax*) *thermophila* sp. nov., adult male. (A) Male genitalia, lateral view; (B) male genitalia, dorsal view; (C) phallus, dorsal detail of tip; (D) phallus, ventral detail of tip. *Smicridea* (*Rhyacophylax*) *thermophila* sp. nov., larva. (E) habitus; (F) head, dorsal view; (G) thoraxic nota; (H) anterior leg.

Diameter of eye, in dorsal view, almost half of the interocular distance. Anterolateral process of sternum V about 1.5 times length of sternum.

Genitalia. Segment IX with anterolateral margin rounded (Figure 2A). Tergum X, in dorsal view, deeply divided mesally, internal margin of each hemitergite concave,

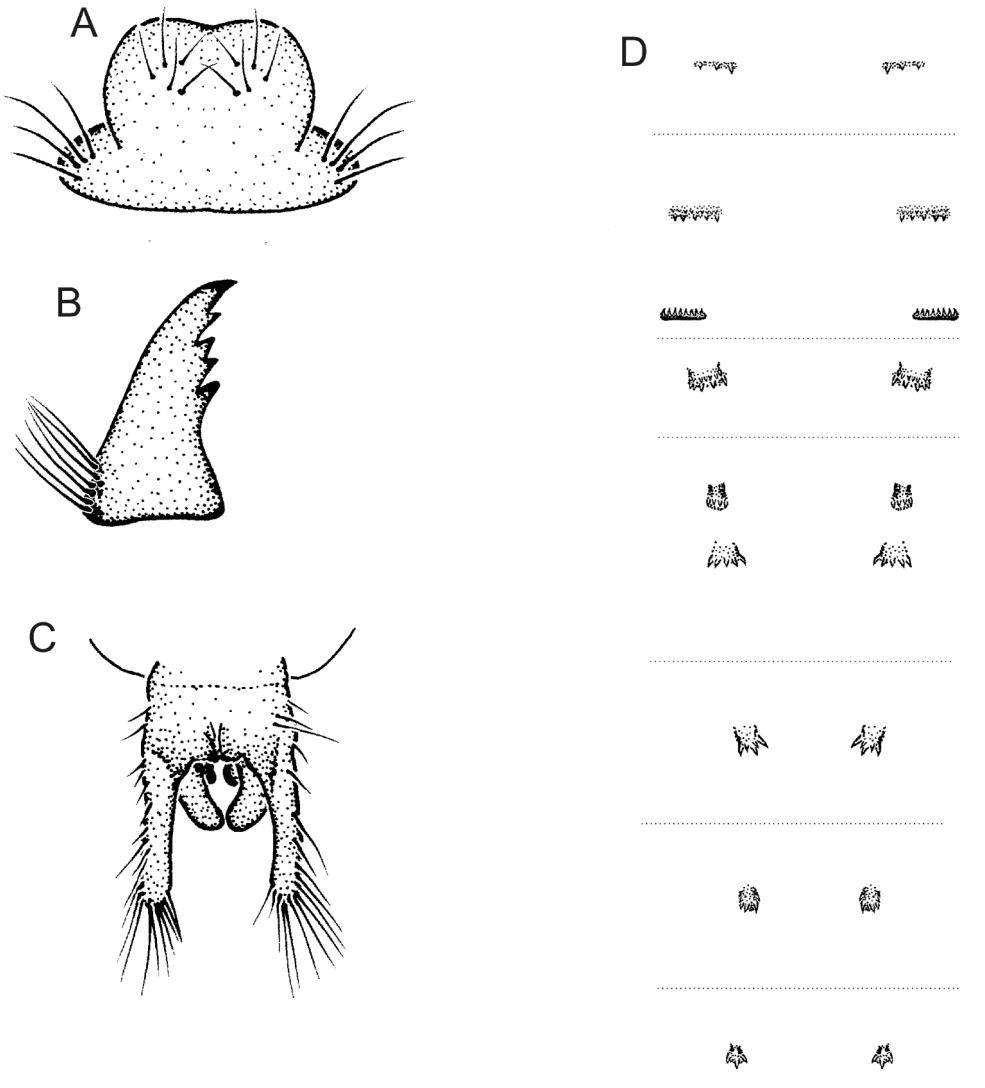

Figure 3. *Smicridea* (*Rhyacophylax*) *thermophila* sp. nov., pupa. (A) Labrum, dorsal view; (B) left mandible; (C) terminal abdominal segment, dorsal view; (D) abdominal dorsal plates.

posterior margin rounded (Figure 2B); in lateral aspect with ventral margin rounded and tip lightly upturned (Figure 2A). Inferior appendages two-segmented, setose; basal portion long and slender (two times longer than the apical segment), slightly inflated apicad; apical segment short, ending in a blunt point (Figure 2A,B). Phallus long, tubular, wide basally, with basal and apical sections meeting at an angle of about 100° (Figure 2A); apical section lightly sinuous in lateral view, ending in an apicodorsal, mesal, retrorse point; tip of phallus with two lateral, sclerotized, thick spines, directed anteriorly (Figure 2C,D); internal sclerite simple, sinuate in lateral view, apex enlarged, forming an hexagonal plate in dorsal view (Figure 2C); in ventral view, endophallus with two lateral hook-like structures (Figure 2D).

Female. Unknown.

Larva. Length: 7.2 mm ($n = 10$) (Figure 2E). Colouration of the head light reddish brown, with anterior margin of frontoclypeal apotome darker; pale (yellowish), oval maculae around stemmata, extending lateroposteriorly through parietal apotomes, joining to a transverse band at posterior end of head; yellowish at clypeus; with two lateral, dark reddish brown, oblique stripes over medial depression; and three pale maculae (two behind each anterior tentorial pit, and other at posterior end of frontoclypeal apotome); between the maculae there are six small, pale muscle scars (three at each side of the apotome), aligned obliquely as shown in Figure 2F.

Head capsule quadrangular in dorsal view. Anterior margin of frontoclypeal apotome symmetrical, rounded, smooth at middle, with three dots at each side; lateral notches wide, lightly insinuated; medial U-shaped depression very marked (Figure 2F). Postero-ventral apotome lacking. Labrum with a row of marginal setae. Chaetotaxy of the head typical of the genus. Parietal apotome with pale muscle scars, and anterolaterally bearing short pale setae.

Nota and legs stramineous. Distribution of muscle scars on pro-, meso- and metanota as in Figure 2G. Poststernal sclerites of prosternum lacking. Mesosternum with two posterolateral subtriangular sclerites. Abdominal sternum VIII with two triangular sclerites bearing setae. Anterior leg with dark trocantin bearing three strong setae, tibia without pinnate setae, general chaetotaxy as in Figure 2H.

Pupa. Length: 4.5 mm. Anterior margin of labrum rounded, with a shallow median depression, bearing short setae in the anterior margin; lateral lobes with setae longer than that of anterior margin (Figure 3A). Mandibles long, with inner margin finely serrated distally, and with long posterolateral setae; right mandible with three teeth, and left with four (Figure 3B). Abdominal terga with pairs of anterior plates on segments II to VIII and posterior plates on segment III and IV (Figure 3D). Apical appendages long and bearing long straight setae (Figure 3C).

Systematic considerations

The male genitalia of this new species is like no other described species in the genus. The tip of the phallus with the apicodorsal, retrorse point and the lateral spines is unique.

Etymology

From the Greek words *thermos* for hot and *philos* for friend, referring to the temperature of the water where the larvae were found.

Biology

This species was collected in a hot spring, named Aguas Calientes (Jujuy province, Argentina). The temperature of the springs ranges from 46°C to 58°C where it emerges (Miranda and Johanis 2000). The larvae and metamorphotype of *S. thermophila* sp. nov. were collected at 33°C in a small waterfall. Trichoptera have been recorded from hot springs in North America, larvae of *Helicopsyche borealis* were collected in

Yellowstone National Park, Wyoming at 34°C (Wiggins 1996). This is the first record of larvae of Hydropsychidae from a hot mesothermal spring.

Smicridea* (*Rhyacophylax*) *valeni Rueda Martín and Sganga, sp. nov.
(Figure 4A–G)

Material examined

Holotype male. Argentina: Tucumán, El Siambón, Río el Siambón, 1 November 2008, Rueda Martín col. (IML).

Paratypes. Argentina: Tucumán, El Siambón, Río el Siambón, 1 November 2008, Rueda Martín col.: one male; Trancas, Gonzalo, 29 October 1999: one male. Bolivia: Tarija, Río Camacho, 27 Ferbuary 2008, Rueda Martín col.: one male; Río Salinas, 6 March 2006, Rueda Martín col.: one male (IML).

Species description

Male. Length of forewings 4.9 mm. Colouration of head and thorax light reddish brown, setal warts and abdomen stramineous. Forewing yellowish, with an oval pale macula parallel to the costal margin (pterostigma), and light brown stripes over transversal veins. The colouration of the body and wings was observed in specimens preserved in alcohol.

Diameter of eye, in dorsal view, 2.3 times the length of the interocular distance. Anterolateral process of sternum V 1.5 times the length of the sternum.

Genitalia. Segment IX with anterolateral margin rounded (Figure 4A). Tergum X, in dorsal view, deeply divided mesally, internal margin of each hemitergite concave with apex slightly curved to the midline bearing a small fold preapically (Figure 4B); in lateral view with ventral margin almost straight, apex pointed (Figure 4A). Inferior appendages two-segmented, setose; basal portion long (2.5 times the length of the apical segment), narrow basally, broad at apex (Figure 4A,C). Phallus long, tubular; basal portion broad, forming an angle of about 90° with the distal part (Figure 4D,E); distal portion with apex produced dorsally, bifid in dorsal view (Figure 4D); ventroapical area of phallus membranous when the endophallus is invaginated (Figure 4E). Endophallus membranous, tubular, truncated at apex, without spines or processes; when evaginated the tip can be seen through the dorsal process of the phallus as an oval membranous structure, because of the transversal wrinkles that cover its surface. Internal sclerite long and slender, in lateral view slightly curved in the apex (Figure 4E).

Female. Unknown.

Systematic considerations

This species is related to *S.* (*R.*) *elisae* sp. nov. Both species share the bifid dorsoapical area of phallus. The *S.* (*R.*) *valeni* is distinguished from other species by the tip of

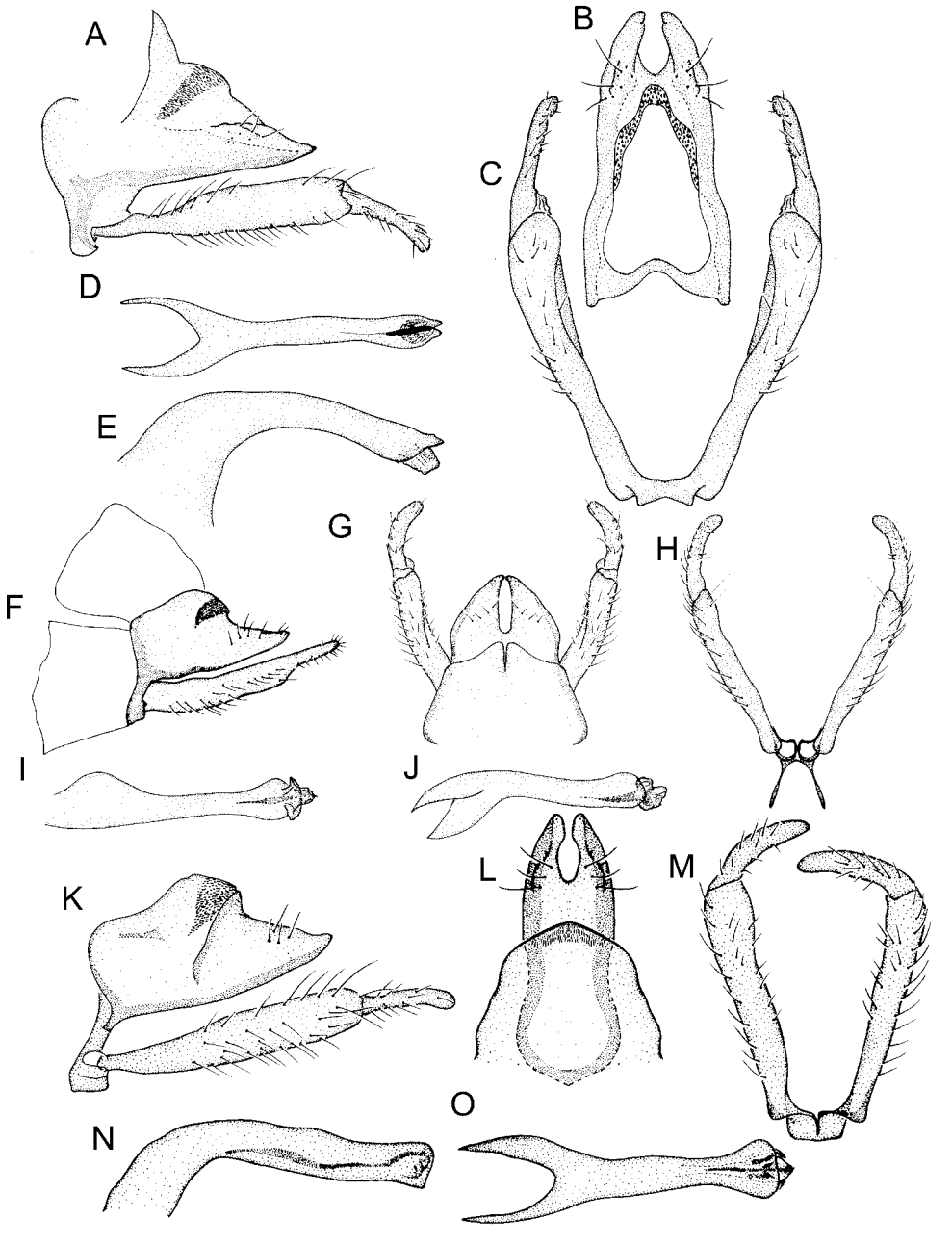

Figure 4. *Smicridea* (*Rhyacophylax*) *valeni* sp. nov. (A) Male genitalia, lateral view; (B) male genitalia, dorsal view; (C) inferior appendages, ventral view; (D) phallus, dorsal view; (E) phallus, lateral view. *Smicridea* (*Rhyacophylax*) *atrobasis*. (F) male genitalia, lateral view; (G) male genitalia, dorsal view; (H) inferior appendages, ventral view; (I) phallus, dorsal view; (J) phallus, lateral view. *Smicridea* (*Rhyacophylax*) *dithyra*. (K) male genitalia, lateral view; (L) male genitalia, dorsal view; (M) inferior appendages, ventral view; (N) phallus, lateral view; (O) phallus, dorsal view.

phallus. The bifid apex and the membranous tubular endophallus truncated at apex are the main characters for the identification of this species.

Etymology

This species is dedicated to Valentino, son of one of the authors (JVS). The name *valeni* is derived from his nickname, "Valen".

Smicridea* (*Rhyacophylax*) *atrobasis Flint, 1983
(Figure 4F–J)

Smicridea (*Rhyacophylax*) *atrobasis*: Flint, 1983: 63; Flint, Holzenthal and Harris, 1999: 72; Sganga and Angrisano, 2006: 132.

Material examined

Argentina: Salta, Río Juramento (Entre Ruta 9 y Dique Cabra Corral), 29 February 2000: one male (IML); Jujuy: Río Zora, 410 m above sea level, 4 June 2000, one male (IML). Río Piedras, 580 m, 23°30′97″ S, 64°33′04″ W, 1 June 2000, C. Molineri, V. Manzo, F. Romero and C. Nieto cols.: one male (IML); Tucumán, Lules, Potrero de la Tablas, Río Los Membrillos, 26 January 2005: one male (IML); Burruyacú, Sunchal, A° Artaza, 27 October 1999: one male (IML); Alberdi, Dique Escava, Río Cavaría, 12 October 1999: one male (IML). Bolivia: Tarija, Río Salinas, 6 March 2006, E. Domínguez and C. Nieto cols.: two males (IML); Río Saican, 5 October 2004, C. Molineri and V. Manzo cols.: one male (IML).

Type material

Holotype male. Argentina: Entre Ríos, Salto Grande, Uruguay River, 19 November, O. S. Flint, Jr. col. (NMNH).

Remarks

This species was recorded from Eastern Argentina, Uruguay and Southern Brazil. In this paper it is recorded for the first time from northwestern Argentina and from Bolivia, being the first country record for the species (Figures 4F–J).

Distribution

Argentina, Bolivia, Brasil, Uruguay.

Smicridea* (*Rhyacophylax*) *dithyra, Flint, 1974
(Figures 4K–O)

Smicridea (*Rhyacophylax*) *dithyra*, Flint, 1974: 42; Flint, Holzenthal and Harris, 1999; Sganga and Fontanarrosa, 2006: 8.

Material examined

Argentina: Tucumán, Río Pueblo Viejo, 4 May 2005, Rueda Martín and Reynaga: two males (IML). Bolivia: Tarija, 27 February 2006: one male; Río Saladito, 10 October 2004, C. Molineri and C. Nieto cols.: one male (IML); Río Saicán, 6 October 2004, C. Molineri and V. Manzo cols.: one male (IML); Río Salinas, 6 March 2006, E. Domínguez and C. Nieto cols.: one male (IML); Río Las Conchas, 2 March 2006, E. Domínguez and C. Nieto cols.: one male (IML); Río Camacho, 27 February 2006, P. Rueda Martín and C. Nieto cols.: one male (IML).

Type material

Holotype male. Mexico nr: Huatusco, 25–26 July 1965, O. A. Flint, Jr. and Ortiz (NMNH).

Remarks

This species was recorded in Argentina from San Luis Province (central-western Argentina). It was collected in Tucuman province from northwestern Argentina, and it is recorded for the first time from Bolivia (Figures 4K–O).

Distribution

Argentina, Bolivia, Guatemala, Honduras, Mexico.

Smicridea* (*Rhyacophylax*) *pampeana Flint, 1980
(Figure 5 A–E)

Smicridea (*Rhyacophylax*) *pampeana* Flint, 1980: 137; 1982: 30; Sganga and Angrisano, 2006: 135; Sganga, 2006: 142.

Material examined

Argentina: Jujuy, Parque Nacional Calilegua, Río San Lorenzo, 5 November 2006: one male (IML); Ledesma, A° Yuto, 23°38′36″ S, 64°32′25″ W, 4–5 April 2004, C. Nieto and V. Manzo cols.: one male (IML). Bolivia: Tarija, O´connor, Cuenca Entre Río, Río Salinas, 21°38′42.5″ S, 64°4′8.2″ W, 1160 m, 6 October 2004, C. Molineri and V. Manzo: one male (IML).

Remarks

Smicridea (*R.*) *pampeana* was described from Buenos Aires province, Argentina. This species was collected in northwestern Argentina and Southern Bolivia for the first time.

Distribution

Argentina, Bolivia, Uruguay.

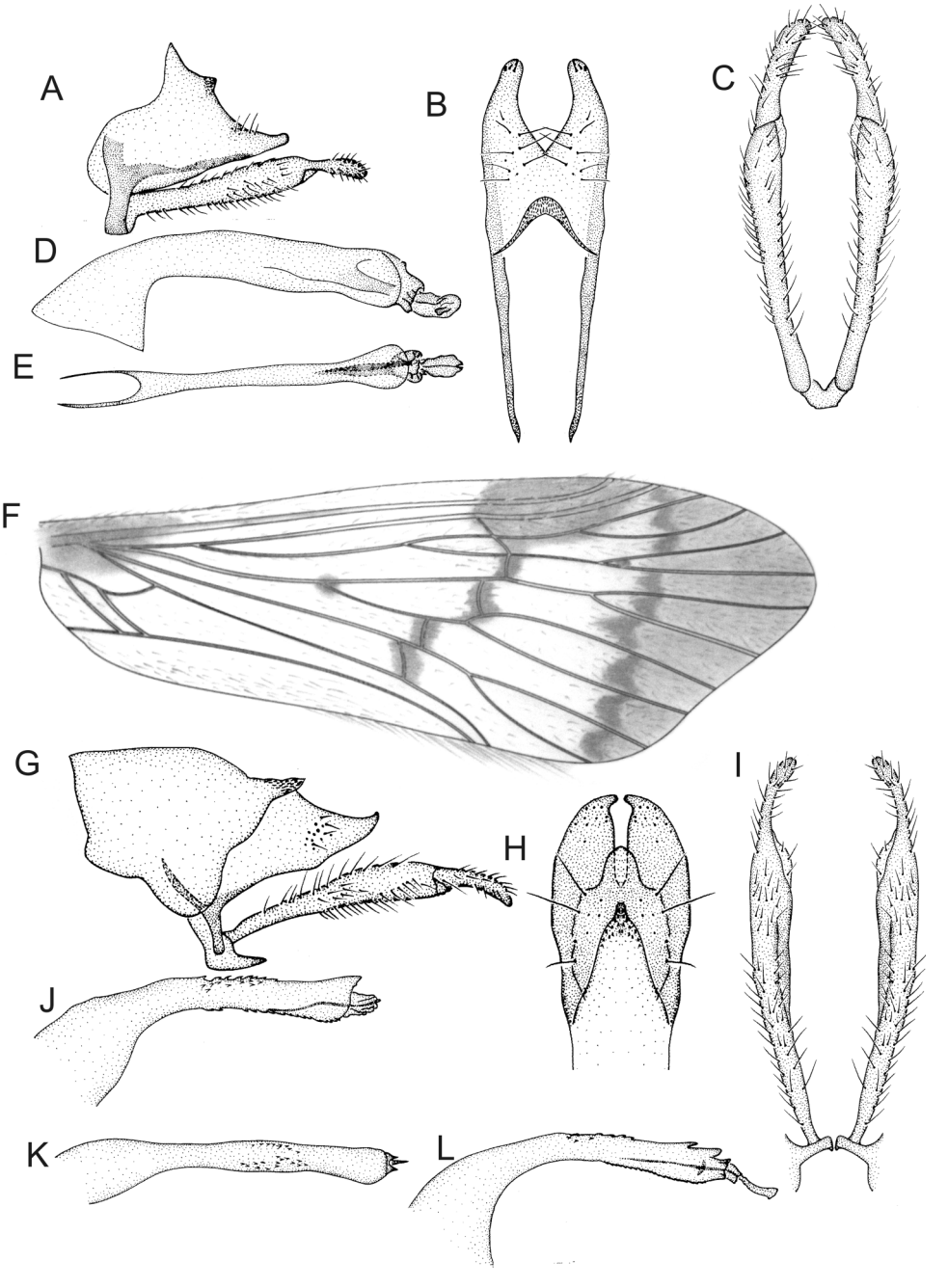

Figure 5. *Smicridea* (*Rhyacophylax*) *pampeana*. (A) Male genitalia, lateral view; (B) male genitalia, dorsal view; (C) inferior appendages, ventral view; (D) phallus, lateral view; (E) phallus, ventral view. *Smicridea* (*Rhyacophylax*) *peruana*. (F) colouration pattern of forewing, (G) male genitalia, lateral view; (H) male genitalia, dorsal view; (I) inferior appendages, ventral view; (J) phallus, lateral view; (K) phallus, dorsal view (L) phallus, lateral view, with endophallus evaginated.

Smicridea* (*Rhyacophylax*) *peruana (Martynov), 1912
(Figure 5F–L)

Smicridea (*Rhyacophylax*) *peruana* Martynov, 1912: 27; Flint, 1975: 572; Flint, 1980: 214; Sganga, 2006: 142.

Material examined

Peru: Cangallo, 2600 m, 22 April 1936: three males (NMNH) (compared with Holotype by Dr O. S. Flint, Jr. 1974). Argentina: Catamarca, Guayamba, El Durazno, 8 November 2000, 28°21′06″ S, 65°25′53″ W, 869 m, H. Fernández, F. Romero, V. Manzo and C. Molineri cols.: one male (IML); Tucumán, Río el Siambón, 1 November 2008: one male (IML); Dique Escaba (Abajo), 30 February 1996: one male (IML); Dique Escaba, Río Chavaría, 12 November 1999: one male (IML); Camino a Los Reales, A° Yacuchina, 10 November 2000, 28°08′23″ S, 65°43′05″ W, Fernandez col.: 10 males (IML); Río Pueblo Viejo, 5 May 2005, P. Rueda Martín and C. Reynaga cols.: one male (IML); Trancas, Río Vipos, 19 April 1997: one male (IML); Salta, Los Toldos, 26 October 1999, C. Molineri col.: one male (IML); Río Huaico Grande, 26 October 1999, C. Molineri col.: six males (IML); Parque Nacional el Rey, A° La Sala, 22 March 1999, F. Romero col.: one male (IML); Río Seco, 23°05′50″ S, 65°46′01″ W, 1090 m above sea level, 15 December 1999, E. Domínguez, F. Romero and V. Manzo cols.: seven males (IML); Jujuy, Río Piedras, 23°30′47″ S, 64°33′09″ W, 580 m, 1 June 2000, F. Romero, C. Molineri, V. Manzo and C. Nieto cols.: one male (IML). Calilegua, A° Tres Cruces, 28 December 1997: 19 males; Río Zora, 23°45′04″ S, 64°41′27″ W, 410 m, 2 June 2000, F. Romero, C. Molineri, V. Manzo and C. Nieto cols.: five males (IML). Bolivia: Tarija, Río Orosa, 5 November 2004, V. Manzo and C. Molineri cols.: one male (IML).

Species redescription

Male. Length of forewings 6.5 mm. Colouration of head and thorax light stramineous, setal warts, antennae, legs and abdomen yellowish. Forewing yellowish, with an oval pale macula parallel to the costal margin (pterostigma) with dark brown setae above, and dark brown stripes over transversal veins with a transversal jagged line at the mid-length of anastomosis of R (Figure 5F). Stigma on fork II dark; median cell with basal dark dot. The colouration of the body and wings was observed in specimens preserved in alcohol.

Diameter of eye, in dorsal view, 2.3 times the interocular distance. Anterolateral process of sternum V about 1.5 times the length of the sternum.

Genitalia. The structure of segment IX, tergum X and inferior appendages are like the original description by Martynov (Figure 5G–I). All males collected in northwestern Argentina and Bolivia, and the males compared with holotype by Flint at the National Museum of Natural History (NMNH) bears ventral and dorsal spines in the dorsal and ventral area of phallus (Figure 5J–L). In the original description of Martynov, the apex of phallus is invaginated as in Figure 5J,K. The apex of phallus when it is evaginated bears two dorsal teeth in lateral view, a central membranous tube and an apical process slightly broadened at the tip (Figure 5L).

Remarks

Smicridea (*R.*) *peruana* was collected from all provinces from northwestern Argentina and for the first time this species is recorded from Bolivia. This species is very common, and was found in most of the collecting sites.

Distribution

Peru, Argentina (northwestern), Bolivia.

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