

## A new species of *Stethantyx* Townes (Hymenoptera: Ichneumonidae: Tersilochinae) from Argentina

### Новый вид *Stethantyx* Townes (Hymenoptera: Ichneumonidae: Tersilochinae) из Аргентины

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**Key words:** taxonomy, new species, South America, Neotropical Region, key

**Ключевые слова:** систематика, новый вид, Южная Америка, Неотропическая область, определительный ключ

**Abstract.** A new species of the genus *Stethantyx*, *S. leleji* sp.n., is described from east and northeast Argentina. The new species is distinct in having a very short and robust ovipositor, head tapered behind eyes in dorsal view, slender flagellum, reddish brown pronotum, lateral lobes of mesoscutum and upper part of mesopleuron, ovipositor apex slender and with shallow dorsal depression.

**Резюме.** Новый вид рода *Stethantyx* — *S. leleji* sp.n. — описан из восточной и северо-восточной Аргентины. Новый вид отличается очень коротким и крепким яйцекладом, суженной за глазами головой (вид сверху), стройным жгутиком, красно-коричневыми пронотумом, боковыми долями мезоскутума и верхней частью мезоплеура, стройной вершиной яйцеклада с поверхностным вдавлением сверху.

### Introduction

*Stethantyx* Townes, 1971 is the large and almost exclusively Neotropical genus comprising 47 described and many undescribed species. Only two native species occur in USA, and one species introduced from South America was confirmed to be established in this country [Horstmann, 2010]. Six species of *Stethantyx* were recently recorded from Mexico [Khalaim, Ruiz-Cancino, 2015], 22 species were described from Costa Rica [Khalaim, Broad, 2012], and about 30 species are currently known from South America [Blanchard, 1945; Graf, 1980; Khalaim et al., 2013, 2015].

Some species of *Stethantyx* are known to be parasitoids of the beetle families Nitidulidae and Curculionidae (Coleoptera). Two South American species, *S. argentiensis* (Blanchard, 1945) and *S. parkeri* (Blanchard, 1945), are parasitoids of vegetable weevils *Listroderes* spp. (Curculionidae), an important pest of many cultivated vegetables, and were introduced into USA and Australia for the control of this pest.

The aim of this paper is to describe a new species from east and northeast Argentina, and provide a partial key to South American species of *Stethantyx*.

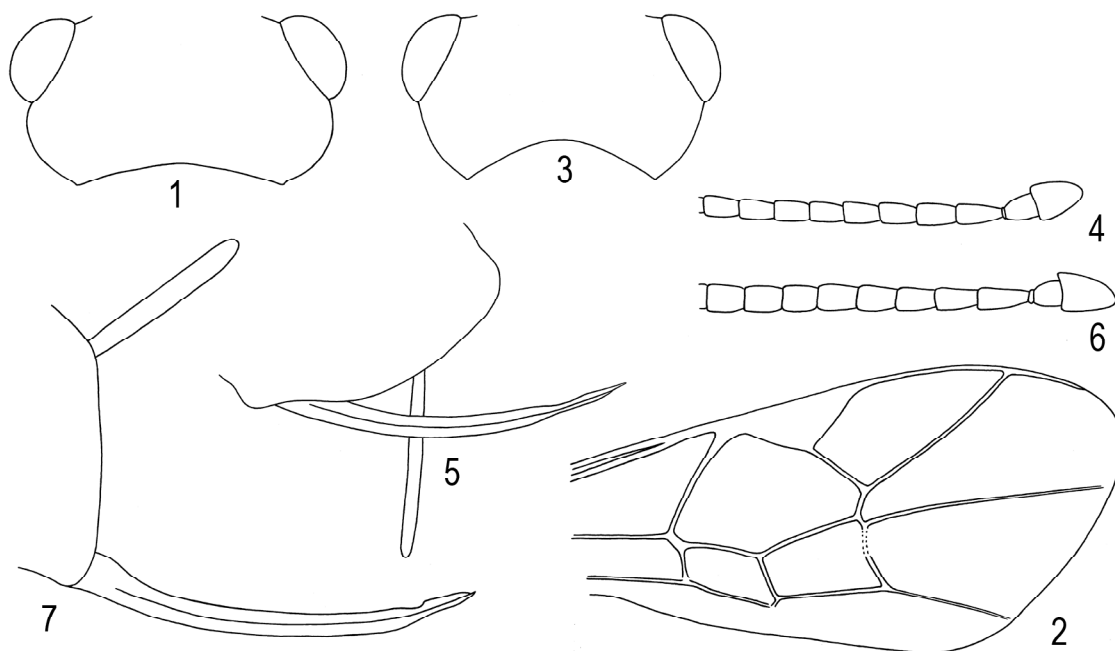
### Material and methods

The type material of the new species will be deposited in the following American and European collections: American Entomological Institute, Gainesville, Florida, USA (AEIC); Florida State Collection of Arthropods, Gainesville, Florida, USA (FSCA); Texas A&M University, College Station, Texas, USA (TAMU); University of California, Riverside, California, USA (UCR); the Natural History Museum, London, UK (BMNH), and Zoological Institute RAS, St. Petersburg, Russia (ZISP). Material of *S. parkeri* was examined from the UCR and ZISP collections.

### Results

#### PORTION OF THE KEY TO SOUTH AMERICAN SPECIES OF *STETHANTYX*

1. Ovipositor very short and robust (Figs 5, 7), its sheath about 0.6 times as long as first metasomal segment. Fore wing with first and second abscissae of radius meeting at obtuse angle; metacarpus short (Fig. 2). Head and mesosoma entirely or mainly black, sometimes with reddish brown marks on pronotum, mesoscutum and mesopleuron .... 2  
— Ovipositor longer and slenderer, its sheath at least as long as first metasomal segment, usually much longer. Fore wing with first and second abscissae of radius meeting at right or obtuse angle; metacarpus often long and almost reaching apex of fore wing. Head and mesosoma usually orange or with extensive yellow and/or orange markings ..... Other species of the genus.
2. Head in dorsal view with temples convex immediately behind eyes and weakly narrowed posteriorly (Fig. 1) .  
..... *S. argentiensis* (Blanchard)



Figs 1–7. Females of *Stethantyx argentiensis* [after Kerrich, 1961] (1, 2), *S. leleji* sp.n. (paratype) (3–5) and *S. parkeri* (6, 7): 1, 3 — head, dorsal view; 2 — fore wing; 4, 6 — base of antenna, lateral view; 5, 7 — apex of metasoma with ovipositor, lateral view.

Рис. 1–7. Самки *Stethantyx argentiensis* [по Kerrich, 1961] (1, 2), *S. leleji* sp.n. (паратип) (3–5) и *S. parkeri* (6, 7): 1, 3 — голова, вид сверху; 2 — переднее крыло; 4, 6 — основание антенны, вид сбоку; 5, 7 — вершина метасомы с яйцекладом, вид сбоку.

- Head in dorsal view with temples weakly to strongly narrowed behind eyes (Fig. 3) ..... 3
- 3. Mesosoma black but with pronotum, lateral lobes of mesoscutum and upper part of mesopleuron reddish brown. Flagellum basally slender, flagellomeres 5–7 distinctly elongate, 1.5–1.7 times as long as broad (Fig. 4). Second tergite 1.6–1.9 times as long as broad anteriorly. Ovipositor apically slender, with shallow dorsal subapical depression (Fig. 5). Mesopleuron centrally (above the foveate groove) distinctly punctate on very finely granulate, sometimes almost smooth background ..... *S. leleji* sp.n.
- Mesosoma entirely black, at most with mesopleural margins narrowly reddish brown. Flagellum basally less slender, flagellomeres 5–7 shorter, usually 1.2–1.5 times as long as broad (Fig. 6). Second tergite 1.3–1.5 times as long as broad anteriorly. Ovipositor apically thick, with rather deep dorsal subapical depression (Fig. 7). Mesopleuron centrally (above the foveate groove) usually with rather fine, often indistinct punctures, and more strongly granulate ..... 4
- 4. Metasoma black, hind margins of tergites 2 and following ones sometimes pale .....  
..... *S. parkeri* (Blanchard), thelitokous strain
- Metasomal tergite 1 black, tergites 2 and following ones uniformly reddish brown .....  
..... *S. parkeri* (Blanchard), arrhenotokous strain

*Stethantyx leleji* Khalaim, sp.n.

Figs 3–5.

**Type material.** Holotype: ♀ (ZISP), Argentina, Buenos Aires Prov., Moreno, 38 km W of Buenos Aires, S 34°08'57", W 58°46'57", Malaise trap, 3.VII.2005, coll. C. Coviella.

Paratypes. **Argentina:** same label as holotype, 3♀♀ (AEIC, TAMU, ZISP) and 1♂ (ZISP). Misiones Prov., Loreto Municipio, Ruinas Jesuíticas, S 34°08'57", W 58°46'57", Malaise trap, 21–24.VIII.2000, coll. P. Fidalgo, 3♀♀ (BMNH, FSCA, UCR) and 5♂♂ (AEIC, BMNH, FSCA, TAMU, UCR).

**Description.** Female. Body length 5.2 mm. Fore wing length 4.1 mm.

Head in dorsal view distinctly tapered behind eyes (Fig. 3); temple about 0.9 times as long as eye width. Mandible with upper tooth distinctly longer than the lower tooth. Clypeus broad, lenticular, weakly but distinctly convex in lateral view, smooth in lower 0.4 and punctate on smooth or very finely granulate background in upper part, separated from face by weak furrow. Malar space 0.6–0.8 times as long as basal width of mandible. Antennal flagellum basally slender (Fig. 4), distinctly narrowed towards apex, with 25–28 flagellomeres; flagellomeres 5–7 distinctly elongate, 1.5–1.7 times as long as broad; subapical flagellomeres weakly elongate to subsquare; flagellomeres 3 to 7 with very small subapical finger-shaped structures on outer surface. Face, frons and vertex distinctly granulate, dull, with punctures weak and partly indistinct. Temple finely granulate peripherally and almost smooth centrally, dull to weakly shining, with dense and shallow punctures. Occipital carina complete.

Mesoscutum distinctly granulate, dull, with fine and dense (sometimes indistinct) punctures. Notaulus in shape of short and weak wrinkle distant from anterolateral margin of mesopleuron. Scutellum with lateral longitudinal carinae developed in its anterior 0.5–0.7. Foveate groove situated in anterior 0.7–0.8 of mesopleuron, usually reaching prepectal carina anteriorly, with strong transverse wrinkles, rather broad and deep anteriorly, narrow and weak posteriorly,

S-curved. Mesopleuron granulate and dull peripherally; distinctly punctate on weakly shining, shallowly granulate (sometimes almost smooth) background centrally, usually with a small impunctate area anteriorly above foveate groove. Propodeum distinctly granulate, impunctate or with punctures (mostly indistinct because of granulation) on its dorsolateral area. All propodeal carinae complete and distinct; basal area broad, elongate, weakly to strongly widened anteriorly, 0.5–0.9 times as long as apical area. Propodeal spiracle separated from pleural carina by 1.5–2.0 times diameter of spiracle. Apical area slightly convex, truncated or widely rounded anteriorly.

Fore wing with first and second abscissae of radius meeting at very obtuse angle; second abscissa of radius slightly curved. Intercubitus longer than abscissa of cubitus between intercubitus and second recurrent vein, both not or very weakly thickened. Metacarpus short, reaching about 0.6 times the distance to tip of wing. Hind wing with nervellus vertical. Legs slender. Hind femur 5.5 times as long as broad and almost 0.9 times as long as tibia.

First tergite about 4.0 times as long as posteriorly broad, smooth or with petiole partly striate laterally and sometimes also dorsally. Glymma distinct or vestigial, situated behind middle of tergite, isolated or joining by very fine furrow to ventral part of postpetiole. Second tergite 1.6–1.9 times as long as anteriorly broad. Thyridial depression moderately deep, about twice as long as broad. Ovipositor very short, weakly upcurved, slender apically and with shallow dorsal subapical depression (Fig. 5); sheath 0.5–0.6 times as long as first tergite and hind tibia.

Head black; clypeus brownish yellow in lower 0.4–0.5 and dark reddish brown to black in upper part; mandible brownish yellow, teeth blackish; mouthparts brownish yellow, sometimes infuscate. Antenna pale brown to dark brown, apically blackish. Mesosoma predominantly black with entire pronotum and lateral lobes of mesoscutum reddish brown; upper part (or only upper anterior corner) of mesopleuron reddish brown. Tegula yellowish. Pterostigma dark brown. Legs brownish yellow; fore and mid coxae sometimes darkened basally; hind coxa basally or entirely brown to black; hind femur brown to dark brown (especially on outer side), with extreme apex pale; hind tibia sometimes infuscate; hind tarsus fuscous. First metasomal tergite black; tergites 2 and following ones dark brown to black with narrow pale band on hind margins, sometimes also with yellow markings laterally and ventrally.

Male. Similar to female but flagellum with 28–32 flagellomeres, somewhat longer and darker, and second tergite more slender.

**Variation.** Head in dorsal view with temple straightly to rather roundly tapered behind eyes. All specimens collected from Moreno have about 10 % more flagellomeres than specimens from Ruinas Jesuíticas. Four females (including holotype) collected from Moreno possess flagellum with 28 flagellomeres while three females from Ruinas Jesuíticas possess only 25–26 flagellomeres; and only male from Moreno has 32 flagellomeres while five males from Ruinas Jesuíticas have 28–29 flagellomeres. Specimens from Moreno have somewhat shorter malar space (about 0.6 times as long as basal mandibular width) than specimens from Ruinas Jesuíticas (about 0.8 times). All specimens from Ruinas Jesuíticas are darker, with markings on mesosoma dark reddish brown and only upper anterior corner of mesopleuron dark reddish brown (in specimens from Moreno entire upper part of mesopleuron is reddish brown).

**Comparison.** Similar to *S. argentiensis* and *S. parkeri* by having very short ovipositor (Fig. 5), first and second abscissae of radius meeting at obtuse angle, short metacarpus, and predominantly black head and mesosoma, but differs from these species by features given in the key. In the key to six species from east and southeast Brazil [Graf 1980] the new species runs to *S. alicae* Graf in the couplet 4a, but may be distinguished from this species by somewhat shorter ovipositor, notaulus with short wrinkle or tubercle, and profuse reddish brown markings on mesosoma which is entirely black in *S. alicae*.

**Etymology.** The name of the new species is dedicated to the well-known Russian hymenopterist, Professor Arkady S. Lelej, in recognition to his contribution to the study of the World Hymenoptera, and his 70th anniversary.

**Distribution.** Argentina (Buenos Aires, Misiones).

#### *Stethantyx parkeri* (Blanchard, 1945)

Figs 6–7.

**Material examined.** Thelitokous strain. USA. California: Riverside, 31.X.1965, 1♀ (UCR); Riverside, 8.VI.1961 and 11.V.1963, coll. Timberlake, 2♀♀ (UCR); San Bernardino Co., Redlands, 20.V.1962, coll. Patricia Gavin, 1♀ (UCR); San Bernardino Co., Lytle Creek, ?April 1960, coll. Albert Roller, 1♀ (UCR). Argentina: Corrientes, 8.VI.1979, coll. G. Gordh, 1♂ (UCR); Buenos Aires Prov., Moreno, 38 km W of Buenos Aires, S 34°08'57", W 58°46'57", Malaise trap, 10.X.2005, coll. C. Coviella, 1♀ (ZISP).

**Arrhenotocous strain.** «Ex cocoons of *Listroderes obliquus*», «either received from Parker South America», «or propagated at Riverside from Parker stock», «1942–1943», 1♀ (UCR). Argentina: Buenos Aires Prov., Moreno, 38 km W of Buenos Aires, S 34°08'57", W 58°46'57", Malaise trap, 10.X.2005, coll. C. Coviella, 1♀ (ZISP).

**Remarks.** Kerich [1961] recognized and keyed two strains of *S. parkeri*, thelitokous and arrhenotokous (bisexual), in materials reared in Argentina and Uruguay and introduced into USA. The two strains differ from each other only by the colour pattern of metasoma (see the key above). Horstmann [2010] in his revision of the Nearctic fauna of *Stethantyx* reported only females with black metasoma (thelitokous strain) and supposed that the population of *S. parkeri* currently occurring in USA originated from a few thelitokous females with a reduced genetic variation.

**Distribution.** Argentina, Brazil, Uruguay. Introduced into USA (Arizona, California, Texas) and Australia.

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