

Redescription of *Pseudosmittia bilobulata* (Edw.) comb. n. (= *Spaniotoma (Smittia) bilobulata* Edwards 1931) and description of *P. neobilobulata* sp.n. (Diptera : Chironomidae) from Argentina

A.C. Paggi¹

Keywords : Taxonomy, Diptera, Chironomidae, Orthoclaadiinae, *Pseudosmittia*, Argentina.

The Holotype of *Spaniotoma (Smittia) bilobulata* Edwards, 1931 : 299, is redescribed and transferred to the genus *Pseudosmittia* (Goetghebuer) Brundin 1956 emended by Saether 1981. Furthermore *P. neobilobulata* sp.n. is described and figured. The genus is first recorded in Argentina.

Redescription de *Pseudosmittia bilobulata* (Edw.) comb. n. (= *Spaniotoma (Smittia) bilobulata* Edwards 1931) et description de *P. neobilobulata* sp.n. (Diptera : Chironomidae) d'Argentine

Mots clés : taxonomie, Diptera, Chironomidae, Orthoclaadiinae, *Pseudosmittia*, Argentine.

L'holotype de *Spaniotoma (Smittia) bilobulata* Edwards, 1931 : 299, est redécrit et transféré au genre *Pseudosmittia* (Goetghebuer) Brundin 1956 emendé par Saether 1981. De plus, *P. neobilobulata* sp.n. est décrit et dessiné. Le genre est signalé pour la première fois en Argentine.

While revising adult material from Ramos Mexia Lake, Chocón, Province of Neuquen, specimens very similar with the description of *Spaniotoma (Smittia) bilobulata* Edwards (1931 : 299) were examined. A recent key (Oliver 1981) key the species out to *Pseudosmittia* (Goetghebuer) in the sense of Brundin (1956), posteriorly emended by Saether (1981).

As result of the study of this specimens, *Pseudosmittia neobilobula* n.sp. is erected. New material collected from Sauce Grande Stream, Province of Buenos Aires let obtain specimens of *S. (S.) bilobulata* Edwards which allowed thus, to compare, transfer and define both species.

The Holotype of *Spaniotoma (Smittia) bilobulata* Edw. is from British Museum of Natural History. London and was prepared into slides. The morphology terminology follows Saether (1980). Measurements and ratios follow Schlee (1966). The number of individuals measured are given by parenthesis.

Pseudosmittia bilobulata (Edwards) n. comb.

— *Spaniotoma (Smittia) bilobulata* Edwards, 1931.

Type material examined : Holotype male, Argentina : Territorio. Río Negro, Viedma, 23-x-1926, F. & M. Edwards (Type nr. : BM 1927-63). Paratypes : 2 males, Ayo. Sauce Grande, Sierra de la Ventana (alt. : 1.239 m), Buenos Aires, 24-IX-88, Rodrigues Capitulo col., Instituto de Limnología de La Plata, Argentina.

Diagnosis : The species is characterized by an Antennal Ratio of about 0,72 ; normally developed antepnotum, presence of about 4 acrostichals on scutal tubercle ; Venarum Ratio of 1,33, Cu₁ slightly curved ; distinct anal point with setae on it, double inferior volsella of gonocoxite.

Male imago (n = 1-3) (Holotype apart stated)

Total length 1,90 mm (Hol.), 2,17-2,25 mm (2). Wing length 1,17-1,30 mm (3). Total length/wing length 1,62-1,80 (3). Coloration brownish black, pruinose, wings whitish.

Head : Antennae with 13 flagellar segments, A.R. = about 0,72 (Hol.). Temporal setae (postorbitals)

1. Instituto de Limnología « Dr. R.A. Ringuelet », C.C.712, 1900 La Plata, Argentina.
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3-4 (3). Clypeus with 8-12 (3) setae. Tentorium 115-137 μm long (2). Palp segments length (μm): 20 ; 40 ; 72-80 ; 87-90 ; 120-125 (n = 2).

Thorax : (n = 3). Scutum : tubercular area about 2-6 acrostichals (not clearly seen, better with phase contrast) ; dorsocentrals 8-9 ; prealars 3. Scutellum with 8 setae.

Wing : (n = 3). VR = 1,33-1,38 ; R with 3-9 setae ;

R₂₊₃ running between R₄₊₅ and C, closer to C at distal third, coalescing with R 4 + 5 at junction with C.

Legs : Spur of front tibia 37,5-42,5 μm long, spurs of middle tibia 15-22,5 (Hol.) μm long, of hind tibia 22,5 μm and 42,5 μm long ; comb of 15-16 setae, 27,5 μm long.

Lengths (μm) and proportions of legs (n = 1)

	Fe	Ti	Ta1	Ta2	Ta3	Ta4	Ta5	LR	BV	SV	
PI	430	520	240	160	110	70	60	0,46	2,97	3,96	(Hol.)
PII	430	520	240	130	100	60	60	0,46	3,31	3,96	(Hol.)
PIII	520	600	340	170	140	75	70	0,56	3,21	3,29	(Par.)

Hypopygium : (Fig. 1), (n = 3) (somewhat flattened by the cover slide ; re-drawn for better details). IX tergum with 8-10 setae and 3-5 setae on anal point ; laterosternite IX with 6 setae. Anal point 15-17,5 μm long. Phallapodeme 42,5-50 μm long. Transverse sternapodeme 57,5-77,5 μm long. Pars ventralis (« thumb-like » process of Edwards) 25-37,5 μm long. Gonocoxite 165-175 μm long with double inferior volsella. Gonostylus 62,5 μm long. HR = 2,64-2,8 ; HV = 3,48-3,6.

Female imago : unknown.

Remarks

Pseudosmittia bilobulata n. comb. is close related with *P. recta* (Edwards 1929) ; *P. setavena* (Saether 1969) ; *P. brevicornis* (Strenzke 1950) and *P. hol-sata* (Thienemann & Strenzke 1940) in having a double inferior volsella but, the great development of the lobes of the inferior volsella, the wing venation, the setae on the anal point, the higher Antennal Ratio and the lower Venarum Ratio will separate this from all previously described species.

Ecology : Adults were collected from a zone of streams and rivers which flow into Atlantic ocean, it extends from the mountain-strings of Sierra de la Ventana to the south of Buenos Aires province and part of Rio Negro province. Moderate to cold and arid climate ; scarce vegetation and soil varies from hard and rocky to sandy and pebble at sea level.

Pseudosmittia neobilobulata n. sp.

Type material examined : Holotype male. Argentina : Embalse Arroyito, Neuquen, 18-3-78, Coscarón

col., in coll. Museo de Ciencias Naturales de La Plata. Paratypes : 1 male, same data as Holotype. 3 males, Laguna de Lobos, Buenos Aires, 15-6-89, Paggi col. in coll. Instituto de Limnología de La Plata.

Diagnosis : The species is characterized by an Antennal Ratio of about 1,11, normally developed antepnotum, presence of about 6 acrostichals on scutal tubercle. Venarum Ratio of 1,24. Cu1 slightly curved, distinct and naked annal point, single inferior volsella and a pair of basal lobes of gonocoxite.

Male imago (n = 5, except when otherwise stated)

Total length 2,17-2,50 ; 2,33 mm. Wing length 1,15 1,67 ; 1,43 mm. Total length/wing length 1,43-1,79 (n = 3). Coloration dark brownish, wings hyaline.

Head : (Fig. 2). Antennae with 13 flagellar segments. A.R. = 1,02-1,21. Temporal setae (postorbital) 4. Clypeus with 8-10 setae. Tentorium 112-125 μm (Fig. 3). Palp segments length (μm) : 25-43, 37 ; 52-82, 63 ; 52-87, 67 ; 77-130, 96 ; proportion of the palps : 11 : 18 : 21 : 39.

Thorax : (Fig. 4). Scutum : tubercular area with 4-8 acrostichal setae ; and 4 more acrostichals beyond (not always clearly seen) ; dorsocentrals 6-8 ; prealars 3. Scutellum with 5-8 setae.

Wing : (Fig. 5). VR = 1,20-1,31 ; R with 3-4 setae. R₂₊₃ running between R₄₊₅ and C, on distal third closer to C coalescing with R₄₊₅ at junction with C.

Legs : Spur of front tibia 40-50, 44 μm long, spurs of middle tibia 15-17 and 12 μm long, of hind tibia 38-42 μm and 11-15 μm long. Comb of 13-16 setae. Lengths (μm) and proportion of legs (n = 5)

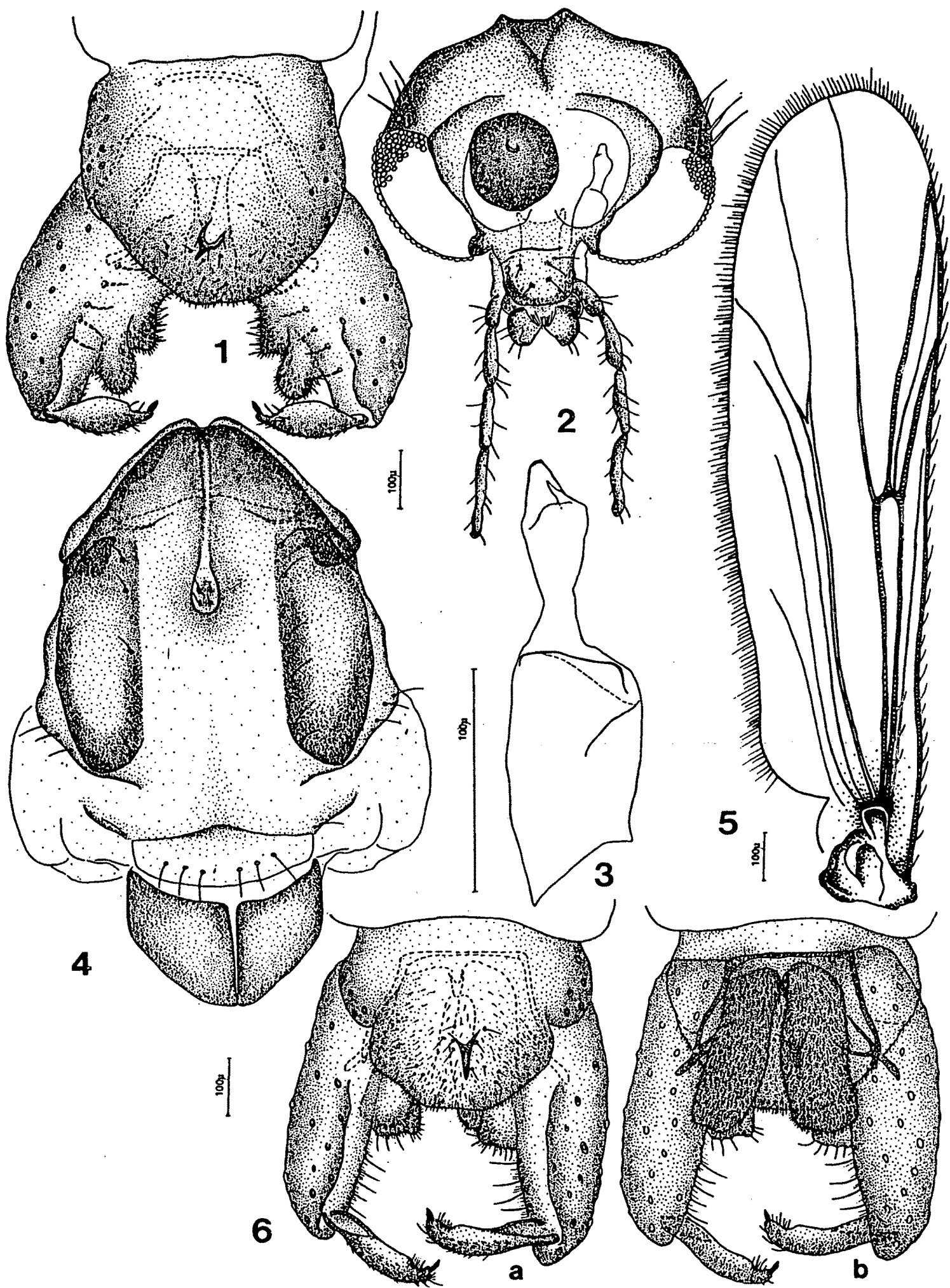


Fig. 1-6. *Pseudosmittia* spp. - 1 : *P. bilobulata* n. comb.. hypopygium, dorsal view. - 2-6 : *P. neobilobulata* n. sp. : 2 : head ; 3 : tentorium ; 4 : thorax, dorsal view ; 5 : wing ; 6 : hypopygium, (a) dorsal view, (b) ventral view.

Fig. 1-6. *Pseudosmittia* spp. - 1 : *P. bilobulata* n. comb.. hypopygium, vue dorsale. - 2-6 : *P. neobilobulata* n. sp. : 2 : tête ; 3 : tentorium ; 4 : thorax, vue dorsale ; 5 : aile ; 6 : hypopygium, (a) vue dorsale, (b) vue ventrale.

	Fe	Ti	Ta1	Ta2	Ta3
PI	441-510,472	592-673,627	244-278,255	162-197,174	116-128,120
PII	487-592,534	557-638,588	232-255,240	116-139,128	93-116,104
PIII	522-603,568	580-673,630	313-348,332	151-174,159	116-151,135
	Ta4	Ta5	LR	BV	SV
PI	70-81,77	58-70,62	0,40-0,43 ;0,41	3,07-3,20 ;3,1	4,12-4,33 ;4,2
PII	58-70,62	58-70,62	0,40-0,44 ;0,43	3,65-3,90 ;3,4	4,47-4,81 ;4,6
PIII	58-70,66	58-70,62	0,52-0,55 ;0,54	3,39-4,06 ;3,3	3,52-3,66 ;3,6

Hypopygium : (Fig. 6 a, b), (n = 5). IX tergum with 8-15 setae ; laterosternite IX with 4 setae. Anal point 17-27, 22 μm long. Phallapodeme 42-50, 45 μm long. Transverse sternapodeme 60-70, 65 μm long. PV 10-12,5 μm long (3). Gonocoxite 155-173, 169 μm long with single inferior volsella and a ventral pair of well developed basal lobes. Gonostylus 65-74 μm long. HR = 2,33-2,60 ; 2,43 ; HV = 2,95-3,57 ; 3,38.

Female imago : unknown.

Remarks

This species keys in Pinder (1978) to *P. curtica* (Edwards) and both are closer with *P. digitata* Saeth. (Saether 1981) and *P. topei* Lehm. (Lehmann 1979) in having a single volsella and a well developed anal point (not so long in our species), but the higher antennal ration, the lower venarum ratio, the well developed anal lobe of wing and specially the ventral pair of well developed basal and pillosed appendix of the hypopygium will separate it from all previously described species.

Ecology : Adults were collected from a zone of reservoirs made along the Limay river in the north western patagonian region, characterized by an arid and cold climate, scarce vegetation and sandy-pebble soil.

The other zone is in the pampasic region with a lot of ponds and streams of low gradient. Moderate-warm climate with rains all the year, gramineous vegetation and humic soil with a sub-soil of loess or mud.

Discussion

This two species belong in an intermediate position between the *P. recta* and *P. angusta* group

of Brundin (1956 : 169) because of the normally developed pronotum (*recta* group) and the presence of an anal point (*angusta* group).

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