

New records of “jejenes” on the subgenus *Stilobezzia* of *Stilobezzia* (Diptera: Ceratopogonidae) from the Neotropical Region

CAZORLA, Carla G.

División Entomología, Museo de La Plata, Paseo del Bosque s/n, B1900FWA La Plata, Argentina. Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET), Argentina. E-mail: carlacazorla@fcnym.unlp.edu.ar

Nuevos registros de jejenes del subgénero *Stilobezzia* de *Stilobezzia* (Diptera: Ceratopogonidae) en la Region Neotropical

RESUMEN. Se proporcionan nuevos registros de las siguientes diez especies del subgénero *Stilobezzia* (*Stilobezzia*) de la región Neotropical: *S. blantoni* Lane & Forattini, *S. chaconi* Macfie, *S. fiebrigi* Kieffer, *S. glauca* Macfie, *S. kiefferi* Lane, *S. maculata* Lane, *S. pallescens* Lane & Forattini, *S. paulistensis* Lane, *S. punctulata* Lane y *S. rabelloi* Lane. Tres de estas especies, *S. glauca*, *S. kiefferi* and *S. maculata*, se registran por primera vez de la Argentina.

PALABRAS CLAVE. Nuevos registros. Ceratopogoninae. Argentina. América.

ABSTRACT. New records of the following ten species of the subgenus *Stilobezzia* of *Stilobezzia* are provided for the Neotropical region: *S. blantoni* Lane & Forattini, *S. chaconi* Macfie, *S. fiebrigi* Kieffer, *S. glauca* Macfie, *S. kiefferi* Lane, *S. maculata* Lane, *S. pallescens* Lane & Forattini, *S. paulistensis* Lane, *S. punctulata* Lane and *S. rabelloi* Lane. Three of these species, *S. glauca*, *S. kiefferi* and *S. maculata*, are recorded for the first time in Argentina.

KEY WORDS. New records. Ceratopogoninae. Argentina. America.

Stilobezzia Kieffer is a large and diverse genus of Ceratopogonidae, placed into the tribe Ceratopogonini of the subfamily Ceratopogoninae, and it is known from every zoological region, except Antarctica. They are common inhabitants of aquatic environments but are often overlooked because of their small size (1-3 mm). Adult females are predaceous on other small soft-bodied insects, especially midges of the family Chironomidae (Wirth & Spinelli, 1992). The genus *Stilobezzia* is represented in America by three subgenera: *Acanthohelea* Kieffer, *Eukraiohelea* Ingram & Macfie and *Stilobezzia* Kieffer. The cosmopolitan *Stilobezzia* is the most abundant in the Neotropical region, where Borkent & Spinelli (2007) cited 44 species. Some of these species were also recorded for the Nearctic region (Grogan *et al.*, 2010).

In the present work the geographic distribution of ten species of *Stilobezzia* is extended to several countries in the Neotropical region, and three of them are recorded for the first time in Argentina.

The examined slide-mounted specimens of *Stilobezzia* belong to the collection of the Museo de La Plata (MLP) and the collection of the U.S. National Museum of Natural History (USNM). The specimens of *S. fiebrigi* Kieffer and *S. punctulata* Lane collected during entomological surveys carried out in the Argentinean provinces of Chaco and Buenos Aires, are preserved in 70% alcohol. Type specimens of *S. blantoni* Lane & Forattini, *S. glauca* Macfie, *S. kiefferi* Lane, *S. pallescens* Lane & Forattini, *S. paulistensis* Lane and *S. rabelloi* Lane were examined in the Collection of the Faculdade de Saúde Pública da Universidade de São Paulo (FSP).

***Stilobezzia (Stilobezzia) blantoni* Lane & Forattini**

Stilobezzia (Stilobezzia) blantoni Lane & Forattini, 1956: 211 (female, male; Panama); Lane & Forattini, 1961: 85 (in key); Das Gupta & Wirth, 1968: 139 (in World checklist); Borkent & Spinelli, 2000: 53 (in New World catalog south of the USA; distribution); Borkent & Spinelli, 2007: 86 (in Neotropical catalog; distribution); Borkent, 2016: 140 (in online World catalog).

Previous distribution. Panama.

New records. Colombia, Costa Rica, Honduras.

Types. Holotype female: PANAMA: Panama, Tocumen, XI-1953, F. S. Blanton col.; allotype male: same data except Santiago, XI-1952; paratypes: same data except Cocle, Aguadulce, IX-1952, 2♀♀ (FSP, examined).

Material examined. COLOMBIA: Valle, Rio Raposo, VIII-1964, light trap, V. H. Lee col., 1♂ (USNM); COSTA RICA: Cartago, Turrialba, 1-VII-1962, light trap, F. S. Blanton col., 1♀ (USNM); HONDURAS: Zamorano, Francisco Morazan, 15-VI-1966, J. F. Matta col., 1♂ 1♀ (USNM).

***Stilobezzia (Stilobezzia) chaconi* Macfie**

Stilobezzia chaconi Macfie, 1938: 166 (male; Trinidad).

Stilobezzia (Stilobezzia) chaconi Lane & Forattini, 1961: 87 (pupa; distribution); Borkent & Spinelli, 2000: 54 (in New World catalog south of the USA; distribution); Borkent & Spinelli, 2007: 86 (in Neotropical catalog; distribution); Borkent, 2016: 140 (in online World catalog).

Previous distribution. Brazil (Goiás, São Paulo), Costa Rica, Panama, Trinidad.

New records. Jamaica.

Type. Holotype male: TRINIDAD: St. Augustine, 29-VIII-1936, at light (BMNH, not examined).

Material examined. JAMAICA: Clarendon Parish, Milk River Bath 19/XI/1968, black light trap, R. E. Woodruff col., 1♂ 1♀ (USNM); TRINIDAD: Chaguanas, 6-II-1970, M. Yaseen col., 1♂ (USNM); Carlsen Field, 15-V-1970, M. Yaseen col., 1♂ (USNM).

***Stilobezzia (Stilobezzia) fiebrigi* Kieffer**

Stilobezzia fiebrigi Kieffer, 1917: 309 (female; Paraguay); Lane, 1947: 199 (male; Brazil). *Stilobezzia (Stilobezzia) fiebrigi* Forattini & Rabello, 1956: 45 (larva, pupa; Brazil); Lane & Forattini,

1961: 85 (in key); Spinelli, 1983: 410 (Argentina record; Buenos Aires province); Das Gupta & Wirth, 1968: 139 (in World checklist); Spinelli & Wirth, 1993: 51 (in list; Argentina); Borkent & Spinelli, 2000: 54 (in New World catalog south of the USA; distribution); Cazorla *et al.*, 2006: 111 (adult and pupa redescription, Argentina); Borkent & Spinelli, 2007: 87 (catalogue of Neotropical species); Cazorla *et al.*, 2013: 94 (larva redescription, Argentina); Borkent, 2016: 141 (in online World catalog).

Previous distribution. Argentina (Buenos Aires, Corrientes); Brazil (Rio de Janeiro, São Paulo), Paraguay.

New records. Argentina (Chaco, Entre Ríos, Formosa, Misiones, Salta) and Bolivia.

Type. Holotype female: PARAGUAY (Fiebrig) in Musée National Hongrois de Budapest, destroyed by fire.

Material examined. ARGENTINA: Chaco, Villa Río Bermejito, 31-X-2010, C. Melo col., at light, 3♀♀ (preserved in alcohol 70%) (MLP); Entre Ríos, Balneario Villa Elisa (Colón), II-2003, light trap, G. Bonnet col., 1♂ (MLP); Formosa: Estancia La Marcela, 35 km E El Colorado, V/2005, at light, J. Williams col., 2♀♀ (MLP); Misiones: El Soberbio, 11-XI-2006, at light, G. Spinelli col., 2♀♀ (MLP); Salta, Dto. Rivadavia, misión La Paz, VIII-1970, black light trap, Martinez col., 1♂ 3♀♀ (MLP); BOLIVIA: 60 mi. n. Santa Cruz, 2-II-1960, R. B. Cumming col., 1♂, 1♀ (USNM).

***Stilobezzia (Stilobezzia) glauca* Macfie**

Stilobezzia glauca Macfie, 1939: 204 (male; Brazil); Lane, 1947: 207 (female, Brazil); Johannsen, 1952: 162 (in key, Nearctic distribution); Wirth, 1953: 77 (redescription, distribution).

Stilobezzia fluminensis Lane, 1947: 210 (female; Brazil); Lane *et al.*, 1955: 84 (pupa; synonym of *S. glauca*).

Stilobezzia (Stilobezzia) glauca Das Gupta & Wirth, 1968: 140 (in World checklist); Wirth & Grogan 1981: 81 (redescription); Wilkening *et al.*, 1985: 526 (Florida records); Borkent & Spinelli, 2000: 54 (in New World catalog south of the USA; distribution); Borkent & Grogan, 2009: 22 (in Nearctic catalog; distribution); Borkent, 2016: 141 (in online World catalog).

Previous distribution. Brazil, Mexico (Chiapas), USA (Maryland to Mississippi and Florida).

New records. Argentina (Buenos Aires, Misiones); Colombia, Mexico, Peru (Cuzco).

Type. Holotype male: BRAZIL: Nova Teutonia, 22-XI-1937 (FSP, examined).

Material examined. ARGENTINA: Buenos Aires, Reserva Punta Lara, 34° 47' 21.2" S, 57° 59' 56.8" W, I-2015, CDC light trap, R. Campos & C. Cazorla col., 1♀ (MLP); Misiones, arroyo León, RP10 e/ Apóstoles y Concepción de La Sierra, 27° 55' 55.2" S, 55° 37' 10.2" W, 10-XII-2009, sweep net, A. Siri col., 3♂♂, 4♀♀ (MLP); COLOMBIA: Rio Raposo, II/1964, light trap, V. H. Lee col., 2♂♂; same data except 10-VI-1964, 1♀ (USNM); MEXICO: Veracruz, Cuitlahuac, 10-VIII-1964, 1♂ (USNM); PERU: Cuzco, Pagoreni, 11° 42' 21.9" S, 72° 54' 21.9" W, VII-2004, at light, J. Williams col., 1♂ (MLP).

***Stilobezzia (Stilobezzia) kiefferi* Lane**

Stilobezzia kiefferi Lane, 1947: 205 (female; Brazil).

Stilobezzia (Stilobezzia) punctipes Wirth, 1953: 79 (Florida); Wilkening *et al.*, 1985: 526 (syn. of *S. kiefferi*).

Stilobezzia (Stilobezzia) kiefferi Lane & Forattini, 1961: 85 (male, distribution); Das Gupta & Wirth, 1968: 140 (in World checklist); Wilkening *et al.*, 1985: 526 (Florida records); Borkent & Spinelli, 2000: 54 (in New World catalog south of the USA; distribution); Borkent & Spinelli, 2007: 87 (in Neotropical catalog; distribution); Borkent & Grogan, 2009: 22 (in Nearctic catalog; distribution); Borkent, 2016: 142 (in online World catalog).

Previous distribution. Brazil (Minas Gerais), Mexico (Yucatán, Tamaulipas), Panama, USA (Florida).

New records. Argentina (Buenos Aires); Belize, Jamaica, Mexico (Tabasco).

Type. Holotype female: BRAZIL: Estado de Minas Gerais, Governador Valadares, X-1945, S. Oliveira col. (FSP, examined).

Material examined. ARGENTINA: Buenos Aires, Reserva Integral de Punta Lara, 34° 47' 21.2" S, 57° 59' 56.8" W, 10-XI-2014, CDC light trap, R. Campos & C. Cazorla col., 1♂ (preserved in alcohol 70%) (MLP); same data except 10-XII-2014, 2♀♀; Belize: Cayo District, Western Hwy MP66, VI-1969, light trap, W. & D. Hasse col., 1♂ 1♀ (USNM); Jamaica: Negril Westmoreland Park, light trap, 22-VI-1970, E. G. Farnworth col.,

1♂ (USNM); MEXICO: Tabasco, Villahermosa, 6-VII-1964, P. J. Spangler col., 1♀ (USNM).

***Stilobezzia (Stilobezzia) maculata* Lane**

Stilobezzia maculata Lane, 1947: 207 (male; Brazil); Ortiz, 1950: 429 (female; Venezuela).

Stilobezzia (Stilobezzia) maculata Lane & Forattini, 1958: 215 (distribution); Lane & Forattini, 1961: 86 (in key); Das Gupta & Wirth, 1968: 141 (in World checklist); Borkent & Spinelli, 2000: 54 (in New World catalog south of the USA; distribution); Borkent & Spinelli, 2007: 87 (in Neotropical catalog; distribution); Borkent, 2016: 142 (in online World catalog).

Previous distribution. Brazil (Rio de Janeiro), Mexico (Yucatán), Panama, Venezuela (Maracay).

New record. Argentina (Misiones)

Type. Holotype male: BRAZIL: Estado do Rio de Janeiro, estrada Rio- S. Paulo, km 47, XI-1944, P. Wygodzinsky col. (FSP, examined).

Material examined. Argentina: Misiones, Campo Grande, 12-XII-2016, light trap, M. Ayala col., 1♂ (MLP).

***Stilobezzia (Stilobezzia) pallescens* Lane & Forattini**

Stilobezzia pallescens Lane & Forattini, 1958: 218 (male, female; Panama).

Stilobezzia (Stilobezzia) pallescens Lane & Forattini, 1961: 86 (in key); Das Gupta & Wirth, 1968: 141 (in World checklist); Borkent & Spinelli, 2000: 54 (in New World catalog south of the USA; distribution); Borkent & Spinelli, 2007: 87 (in Neotropical catalog; distribution); Borkent, 2016: 142 (in online World catalog).

Previous distribution: Panama, Brazil (São Paulo).

New record. Colombia.

Types. Holotype male, allotype female; 15 paratypes: 2 males, 13 females: Panama: Panama, Almirante, Bocas del Toro, III-1953, F. S. Blanton col. (FSP, examined); other paratypes: PANAMA: Aguadulce, IX-1951, F. S. Blanton col., 1♀; Arraijan, I-1952, F. S. Blanton col. 1♀; Canal Zone, Loma Borracha, X-1951, F. S. Blanton col. 1♀; BRAZIL: São Paulo, Agua Funda, V-1955, J. Lane col., 1♂ (FSP, examined).

Material examined. COLOMBIA: Valle, Rio Raposo, II-1965, light trap, V. H. Lee col., 1♀;

same data except I-1964, 1♂; same data except II/1964, 2♀♀ (USNM).

***Stilobezzia (Stilobezzia) paulistensis* Lane**

Stilobezzia paulistensis Lane, 1947: 200 (male, female, Brazil).

Stilobezzia (Stilobezzia) paulistensis Lane & Forattini, 1961: 85 (in key); Das Gupta & Wirth, 1968: 141 (in World checklist); Borkent & Spinelli, 2000: 54 (in New World catalog south of the USA; distribution); Borkent & Spinelli, 2007: 87 (in Neotropical catalog; distribution); Borkent, 2016: 142 (in online World catalog).

Previous distribution. Brazil (Rio de Janeiro, São Paulo), Panama, USA (Puerto Rico).

New records. Brazil (Rondônia), Colombia.

Types. Holotype male: BRAZIL: Estado de São Paulo, Casa Grande, III-1940, Barretto & Coutinho col.; allotype female, same data except Osasco, IV-1939; paratypes: Estado de São Paulo, Juquiá and Estado do Rio de Janeiro, estrada Rio- S. Paulo, km 47, IX/X-1944, J. Lane & P. Wygodzinsky col., 2♂♂ 2♀♀ (FSP, examined).

Material examined. COLOMBIA: Valle, Rio Raposo, II-1964, V. H. Lee col., light trap, 1♀ (USNM); same data except VIII-1964, 1♂ (USNM); same data except III-1965, 1♀ (USNM); same data except IV-1965, 1♂ (USNM); BRAZIL: Rondônia, 62 km SW Ariquemes vic. Rancho Grande, 25-IX-1992, UV light trap, U. Schmitz col., 1♂, 1♀ (USNM).

***Stilobezzia (Stilobezzia) punctulata* Lane**

Stilobezzia punctulata Lane, 1947: 204 (female; Brazil)

Stilobezzia (Stilobezzia) punctulata: Lane & Forattini, 1958: 220 (male; Brazil, Panama); Das Gupta & Wirth, 1968: 142 (in World checklist); Borkent & Spinelli, 2000: 54 (in New World catalog south of the USA; distribution); Cazoria & Marino, 2004: 75 (pupa; Mexico, Colombia, Peru, Bolivia [misident in part]); Borkent & Spinelli, 2007: 87 (in Neotropical catalog; distribution); Cazoria *et al.*, 2013: 96 (larva; Argentina); Torreias *et al.*, 2014: 118 (distribution); Borkent, 2016: 142 (in online World catalog).

Previous distribution. Argentina (Buenos Aires, Corrientes), Brazil (Amazonas, Mato Grosso, Rio de Janeiro), Mexico (Tabasco), Panama, Peru.

New record. Argentina (Chaco).

Type. Holotype female: BRAZIL: Estado do Rio de Janeiro, estrada Rio- S. Paulo, km 47, 09-X-1944, P. Wygodzinsky col. (FSP, examined).

Material examined. ARGENTINA: Chaco: Villa Río Bermejito, 31-X-2010, C. Melo col., at light, 3♀♀ (preserved in alcohol 70%) (MLP); Chaco, 35 km Tres Estacas (60 km Charata), 27° 8' 14.5"S 61° 34' 26"W, 25-XI-2007, at black light, Marti & Pelliza col., 1♀ (MLP); same data except Parque Nacional Chaco, 24° 48' 25"S-59° 36' 26"W, 20/27-IX-2009, at light, C. Cazorla col., 6♀♀ (preserved in alcohol 70%) (MLP).

***Stilobezzia (Stilobezzia) rabelloi* Lane**

Stilobezzia rabelloi Lane, 1947: 203 (male, female; Brazil)

Stilobezzia (Stilobezzia) rabelloi Wirth, 1953: 81 (review of North American *Stilobezzia*); Lane & Forattini, 1961: 85 (in key); Das Gupta & Wirth, 1968: 142 (in World checklist); Wirth & Grogan 1981: 90 (redescription); Spinelli, 1983: 411 (distribution); Wilkening *et al.*, 1985: 526 (Florida records); Borkent & Spinelli, 2000: 54 (in New World catalog south of the USA; distribution); Borkent & Craig, 2001: 657 (pupa; Costa Rica); Borkent & Spinelli, 2007: 87 (in Neotropical catalog; distribution); Borkent & Grogan, 2009: 22 (in Nearctic catalog; distribution); Torreias *et al.*, 2014: 119 (distribution); Borkent, 2016: 140 (in online World catalog).

Previous distribution. Argentina (Buenos Aires), Brazil (Mato Grosso, Rio de Janeiro), Costa Rica, Ecuador, Uruguay, USA (Maryland to Louisiana and Florida).

New records. Argentina (Chaco, Corrientes), Bolivia, Brazil (Minas Gerais).

Types. Holotype male, allotype female, 1 paratype female: BRAZIL: Estado do Rio de Janeiro, estrada Rio- S. Paulo, km 47, XI-1944, P. Wygodzinsky col. (FSP, examined).

Material examined. ARGENTINA: Chaco, 35 km Tres Estacas (60 km Charata), 27° 8' 14.5"S, 61° 34' 26"W, 25-XI-2007, at black light, Marti & Pelliza col., 1♀ (MLP); Corrientes, Estación Biológica Corrientes (EBCo) 27° 33' 01"S, 58° 40' 42"W, 26-XI-2010, light trap, P. Marino col., 1♂ (MLP); Brazil: Minas Gerais, Caratinga, 13-VII-1976, light trap, R. Lane col., 1♀ (USNM); Bolivia: 60 mi. n. Santa Cruz, 2-II-1960, R. Cumming col. 1♀ (USNM); Ecuador: Guayas, Pedro Carbo, 140 mts, 11-I-78, W. Mathis col., 2♂♂ (USNM).

ACKNOWLEDGMENTS

This work was supported by Consejo Nacional de Investigaciones Científicas y Técnicas, CONICET. Special thanks to the colleagues who have shared their insects samples with me.

LITERATURE CITED

- Borkent, A. (2016) World species of biting midges (Diptera: Ceratopogonidae). Available from: <http://www.inhs.illinois.edu/files/4514/6410/0252/CeratopogonidaeCatalog.pdf>
- Borkent, A. & Craig, D.A. (2001) Submerged *Stilobezzia rabelloi* Lane (Diptera: Ceratopogonidae) pupae obtain oxygen from the aquatic fern *Salvinia minima* Baker. *Proceedings of the Entomological Society of Washington*, **103**(3), 655-665.
- Borkent, A. & Grogan, W.L. (2009) Catalog of the New World Biting Midges North of Mexico (Diptera: Ceratopogonidae) *Zootaxa*, **2273**, 1-48.
- Borkent, A. & Spinelli, G.R. (2000) Catalogue of the New World biting midges south of the United States of America (Diptera: Ceratopogonidae). *Contributions on Entomological International*, **4**(1), 1-107.
- Borkent, A. & Spinelli, G.R. (2007) *Neotropical Ceratopogonidae (Diptera: Insecta)*. Aquatic Biodiversity in Latin America (ABLA) (ed. Adis, J., Arias J. R., Rueda-Delgado G., Wantzen, K. M.), pp. 1-198, Pensoft, Sofia-Moscow.
- Cazorla, C.G. & Marino, P.I. (2004) The pupa of *Stilobezzia punctulata* Lane from Peruvian Amazonia (Diptera: Ceratopogonidae). *Amazoniana*, XVIII (1/2), 75-80.
- Cazorla, C.G., Diaz, F. & Ronderos, M.M. (2006) Redescription of pupa and adult of *Stilobezzia fiebrigi* Kieffer 1917 (Diptera: Ceratopogonidae). *Transactions of the American Entomological Society*, **132**(1+2), 111-119.
- Cazorla, C.G., Diaz, F., Marino, P.I., Spinelli, G.R. & Ronderos, M.M. (2013) New contributions to the knowledge of the immatures of *Stilobezzia punctulata* Lane and *Stilobezzia fiebrigi* Kieffer (Diptera: Ceratopogonidae). *Zootaxa*, **3747**(1), 93-99.
- Das Gupta, S.K. & Wirth, W.W. (1968) Revision of the Oriental species *Stilobezzia* Kieffer (Diptera, Ceratopogonidae). *United States National Museum Bulletin*, **283**, 1-149.
- Forattini, O.P. & Rabello, E.X. (1956) As formas imaturas de *Culicoides guyanensis* Floch e Abonnenc, 1942 e de algumas espécies de *Stilobezzia* (Diptera: Ceratopogonidae). *Revista Brasileira de Entomologia*, **6**, 43-50.
- Grogan, W.L., Hribar, L.J., Murphree, C.S. & Cilek, J.E. (2010) New records of biting and predaceous midges from Florida, including species new to the fauna of the United States (Diptera: Ceratopogonidae). *Insecta Mundi*, **147**, 1-59.
- Johannsen, O.A. (1952) Guide to the insects of Connecticut. Part VI. The Diptera or true flies of Connecticut. Fifth fascicle: midges and gnats. Heleide (Ceratopogonidae). *Connecticut State Geological and Natural History Survey Bulletin*, **80**, 149-175.
- Kieffer, J.J. (1917) Chirinomides d' Amérique conservés au Musée National Hongrois de Budapest. *Annales Historico-Naturales Musei Nationalis Hungarici*, **15**, 292-364.
- Macfie, J.W.S. (1938) Notes on Ceratopogonidae (Diptera). *Proceedings of the Royal Entomological Society of London*, **7**, 157-166.
- Macfie, J.W.S. (1939) A report on a collection of Brazilian Ceratopogonidae. *Revista de Entomologia*, **10**, 137-219.
- Lane, J. (1947) *Espécies Brasileiras de Stilobezzia* (Diptera: Ceratopogonidae) e *Zigoneura stonei* nov. nom. (Diptera: Mycetophilidae). *Revista Brasileira de Entomologia*, **18**, 197-214.
- Lane, J. & Forattini, O.P. (1956) Neotropical *Stilobezzia* Kieffer, 1911 I. Nine new Panamanian species (Diptera: Ceratopogonidae). *Revista Brasileira de Malariologia*, **8**, 207-226.
- Lane, J. & Forattini, O.P. (1958) Neotropical *Stilobezzia* II. Fourteen new species, chiefly from Panama (Diptera, Ceratopogonidae). *Revista Brasileira de Entomologia*, **8**, 203-224.
- Lane, J. & Forattini, O.P. (1961) Neotropical *Stilobezzia*, 1911 III. Key for the adults of this genus and description of one new species (Diptera, Ceratopogonidae). *Revista Brasileira de Entomologia*, **10**, 83-94.
- Lane, J., Forattini, O.P. & Rabello, E.X. (1955) Biología e espécies novas de *Palpomyia* e *Stilobezzia* (Diptera, Nematocera, Ceratopogonidae). *Duseña*, **6**, 81-88.
- Ortiz, I. (1950) Estudios en *Culicoides* I. Sobre la hembra de *Stilobezzia maculata* Lane, 1947 (Diptera, Ceratopogonidae). *Revista de Sanidad y Asistencia social*, **15**, 429-431.
- Spinelli, G.R. (1983) Notas sobre Ceratopogonidae (Diptera, Nematocera) de la República Argentina I. Una nueva especie del género *Alluaudomyia* Kieffer, redescrpción de *Dasyhelea penthesileae* Macfie, y nuevas citas para el género *Stilobezzia* Kieffer. *Limnobiós*, **2**, 403-411.
- Spinelli, G.R. & Wirth, W.W. (1993). Los Ceratopogonidae de la Argentina (Insecta: Diptera). *Fauna de agua dulce de la República Argentina* (ed. Z.A. de Castellanos.), pp. 1-121. Profadu, La Plata.
- Torreias S.R.S., Ferreira-Keppeler, R.L. & Ronderos, M.M. (2014) Biting midges (Ceratopogonidae: Diptera) present in aquatic macrophytes from wetlands of Marchantaria Island, Iranduba, Central Amazonia, Brazil. *Journal of Natural History*, **48**(1-2), 109-122.
- Wilkening, A.J., Kline, D.L. & Wirth, W.W. (1985) An annotated checklist of the Ceratopogonidae (Diptera) of Florida with a new synonymy. *Florida Entomologist*, **68**, 511-537.
- Wirth, W.W. (1953) Biting midges of the heleid genus *Stilobezzia* in North America. *Proceedings of the United States National Museum*, **103**, 57-85.
- Wirth, W.W. & Grogan, W.L. (1981) Natural History of Plummers Island, Maryland XXV. Biting midges (Diptera: Ceratopogonidae). 3. The species of the tribe Stilobezziini. *Bulletin of the Biological Society of Washington*, **5**, 1-102.
- Wirth, W.W. & Spinelli, G.R. (1992) American predaceous midges of the subgenus *Eukraiohelea* of *Stilobezzia* (Diptera: Ceratopogonidae). *Florida Entomologist*, **75**, 342-349.