Frustula entomol. (2008), n.s. XXXI (XLIV): 125-134

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A CONTRIBUTION TO THE KNOWLEDGE OF *DRYINIDAE* OF ARGENTINA: DESCRIPTIONS OF THE HITHERTO UNKNOWN MALES OF *GONATOPUS ARGENTINUS* OLMI AND *TRICHOGONATOPUS RICHARDSI* OLMI (*HYMENOPTERA CHRYSIDOIDEA*)

CONTRIBUTO ALLA CONOSCENZA DEI *DRYINIDAE* DI ARGENTINA: DESCRIZIONE DEI MASCHI FINORA SCONOSCIUTI DI *GONATOPUS ARGENTINUS* OLMI E *TRICHOGONATOPUS RICHARDSI* OLMI (*HYMENOPTERA CHRYSIDOIDEA*)

ABSTRACT

The males of *Gonatopus argentinus* Olmi and *Trichogonatopus richardsi* Olmi are described for the first time. In consequence of the discovery of its male, *Gonatopus argentinus* Olmi, 1986, in the past considered senior synonym of *Gonatopus doellojuradoi* (Ogloblin, 1938), is revalued and considered a good species. In consequence of the discovery of its male, *Trichogonatopus richardsi* Olmi is transferred from *Trichogonatopus* Kieffer, 1909, to *Gonatopus* Ljungh, 1810. *Gonatopus richardsi* (Olmi) new comb. is preoccupied by *Plectrogonatopus* (= *Gonatopus*) *richardsi* Moczar, 1965, so that *Gonatopus trichosoma* new name is proposed for *G. richardsi* (Olmi). The hosts of both above species are discovered: *Spangbergiella vulnerata* (Uhler) (*Cicadellidae Deltocephalinae*) for *G. argentinus*; *Curtara pagina* DeLong & Freytag (*Cicadellidae Gyponinae*) and *Mendozellus asunctia* Cheng (*Cicadellidae Deltocephalinae*), for G. *trichosoma*.

INTRODUCTION

The *Dryinidae* (*Hymenoptera Chrysidoidea*) are parasitoids of leafhoppers, planthoppers and treehoppers (*Hemiptera*, *Auchenorrhyncha*) (Guglielmino & Olmi, 1997, 2006, 2007; Virla & Olmi, 2008a).

According to the recent papers of Virla & Olmi (2007a, 2007b, 2008a, 2008b) and Remes Lenicov, Olmi & Virla (2009), 135 valid species of *Dryinidae* are recorded from Argentina. However, from the biological point of view, only the hosts of 29 species are known. The gap is important, because it is a large obstacle to the use of Dryinids in biological control programmes.

In 2006, one of the authors (E. Virla) collected and reared extensively in Argentina resulting in the discovery of the unknown opposite sexes and hosts of two species treated below.

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MATERIAL AND METHODS

The descriptions follow the terminology used by OLMI (1984, 1994, 1999) and partly revised after GAULD & BOLTON (1988). The measurements reported are relative, except for the total length (head to abdominal tip, without the antennae), which is expressed in millimetres.

In the descriptions POL is the distance between the inner edges of the two lateral ocelli; OL is the distance between the inner edges of a lateral ocellus and the median ocellus; OOL is the distance from the outer edge of a lateral ocellus to the compound eye; OPL is the distance from the posterior edge of a lateral ocellus to the occipital carina; TL is the distance from the posterior edge of a eye to the occipital carina.

The material studied in this paper is deposited in the following collections:

BD: Eduardo G. Virla's collection, c/o PROIMI, San Miguel de Tucumán, Argentina.

BMNH: The Natural History Museum, London, United Kingdom.

CASC: California Academy of Sciences, San Francisco, California, U.S.A.

IMLA: Instituto de Zoologia y Fundación Miguel Lillo, Universidad Nacional de Tucumán, Tucumán, Argentina.

MCZ: Museum of Comparative Zoology, Harvard University, Cambridge, Massachusetts, U.S.A.

MOLC: M. Olmi's collection, c/o Department of Plant Protection, University of Tuscia, Viterbo, Italy.

MY: Instituto de Zoologia Agrícola, Facultad de Agronomia, Maracay, Venezuela.

PT: Facultad de Ciencias Naturales y Museo, La Plata, Argentina.

SO: Museu de Zoologia, Universidade de São Paulo, São Paulo, Brazil.

RESULTS

Gonatopus argentinus Olmi

Gonatopus argentinus Olmi, 1986: 98.

Gonatopus argentinus Olmi: VIRLA, 1998: 13; VIRLA & OLMI, 1998: 30.

Gonatopus doellojuradoi (Ogloblin) complex *partim*: VIRLA, 1998: 13; VIRLA & OLMI, 1998: 30.

Gonatopus argentinus Olmi, 1986, was described after one only female specimen from Argentina, Cordoba Prov., NW of Guanaco Muerto, Cruz del Eje. Afterwards, OLMI, VIRLA & FERNANDEZ (2000) considered this species as junior synonym of *Gonatopus doellojuradoi* (Ogloblin, 1938). More recently, VIRLA & OLMI (2007a), after a study of female specimens from various localities of Argentina expressed the opinion that the above synonymy was not sufficiently proved. However, the above authors were aware that only the discov-

ery of the male of *G. argentinus* should solve the problem connected with the above synonymy. In 2006, both sexes of *G. argentinus* were reared, resulting in the discovery of the male. It is described below.

Material examined

Argentina: Córdoba Prov., NW of Guanaco Muerto, Cruz del Eje, with ants, M. Friz coll., female holotype (MCZ);

La Rioja Prov., Tilimuqui, 2.XII.2006, M. Espinosa coll., reared from *Spangbergiella vulnerata* (Uhler) (*Cicadellidae Deltocephalinae*), 1 female (IMLA); same locality label, 15.XI.2006, 2 females (IMLA); same locality label, 16.XII.2006, 1 female (MOLC), 1 male (IMLA); same locality label, 2.XII.2006, 1 male (MOLC).

Description of the male: fully winged; length 2.43-2.50 mm. Head black, except mandibles testaceous; clypeus brown, except lateral regions testaceous-yellow antennae brown, except segment 1 testaceous; mesosoma black; gaster brown-dark; legs brown, except tarsi and articulations testaceous. Antennae hairy, filiform; antennal segments in the following proportions: 5:4:8.5:7.5 :6.5:7:6.5:7.5:6.5:10; antennal segment 3 more than three times as long as broad (8.5:2.5). Head shiny, granulated and slightly rugose, laterally with two shiny and smooth areas situated between the posterior ocelli and the eyes; frontal line absent; occipital carina absent; occiput concave; temples distinct; POL = 8; OL = 3; OOL = 3; greatest breadth of anterior ocellus as long as OL; temples distinct, shorter than OL (1:3). Palpal formula 5/2. Scutum dull, granulated. Notauli complete, posteriorly separated; minimum distance between the notauli as long as greatest breadth of anterior ocellus. Scutellum and metanotum shiny, finely hairy, very finely punctate, without sculpture among punctures. Propodeum dull, completely granulated; dorsal surface with a median longitudinal furrow. Forewing hyaline, without dark transverse bands; marginal cell open; distal part of stigmal vein much longer than proximal part. Dorsal process of the parameres (Fig. 1) short and with distal apex broadened, shorter than parameres. Tibial spurs 1, 1, 2.

Remarks: the male of *G. argentinus* is different from all other known males of Neotropical species of *Gonatopus*. After its description, the key to the males of the Neotropical *Gonatopus* published by Virla & Olmi (2007a), should be modified by replacing couplet 30 as follows:

30 Dorsal process of the parameres transverse (Fig. 19 in Virla & Olmi, 2007a); head with anterior ocellus approximately 1.5-2.0 times as broad as OOL ..... *variistriatus* Fenton

– Dorsal process of the parameres not transverse (Fig. 30 in Virla & Olmi, 2007a; Fig. 1); head with anterior ocellus approximately as broad as OOL..... ..... 30’

30’Minimum distance between the notauli approximately as long as greatest breadth of anterior ocellus ..... *argentinus* Olmi
– Minimum distance between the notauli shorter that greatest breadth of anterior ocellus (1:2) ..... *desantisi* Olmi & Virla

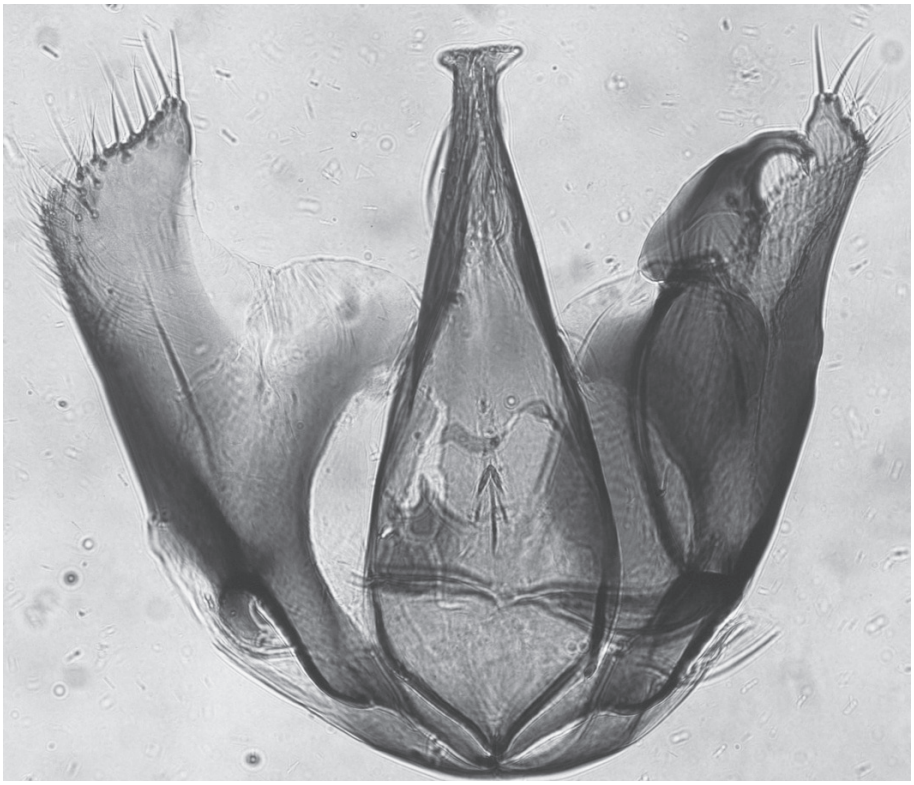

Fig. 1 - Genital armature of a male specimen of *Gonatopus argentinus* Olmi from Argentina, Tilimuqui (La Rioja Prov.). Left volsellae removed.

The females of *G. argentinus* and *G. doellojuradoi* are very similar, but that of the first species is robuster (Fig. 2A) than that of *G. doellojuradoi* (Fig. 2B). In addition, the above females can be also separated for the different sculpture of the head and metathorax + propodeum (completely granulated in *G. argentinus*; with face, disc of pronotum and anterior surface of metathorax + propodeum shiny and without sculpture in *G. doellojuradoi*) and for slighter differences regarding the chela and colour. During some studies on the holotypes of *G. argentinus* and *G. doellojuradoi* and on a series of females from various localities of Argentina, Virla (1998) found a wide variability in some

morphological characters, principally concerning POL/OL ratio, number of lamellae in segment 5 of fore tarsus, presence/absence of frontal line, length ratio of fore tarsal segments I/IV, palpal formula (4/2 and 5/2), and different coloour patterns from totally testaceous to mostly dark brown (see Figs. 25 to 30 in VIRLA, 1998). Considering that *G. argentinus* was known only after one specimen (the holotype), VIRLA (1998) believed that there were not enough data to separate the two above species or to propose a synonymy. The recent discovery of the male of *G. argentinus* permits to prove that it is a good species, and not a synonym of *G. doellojuradoi*, as supposed in the past.

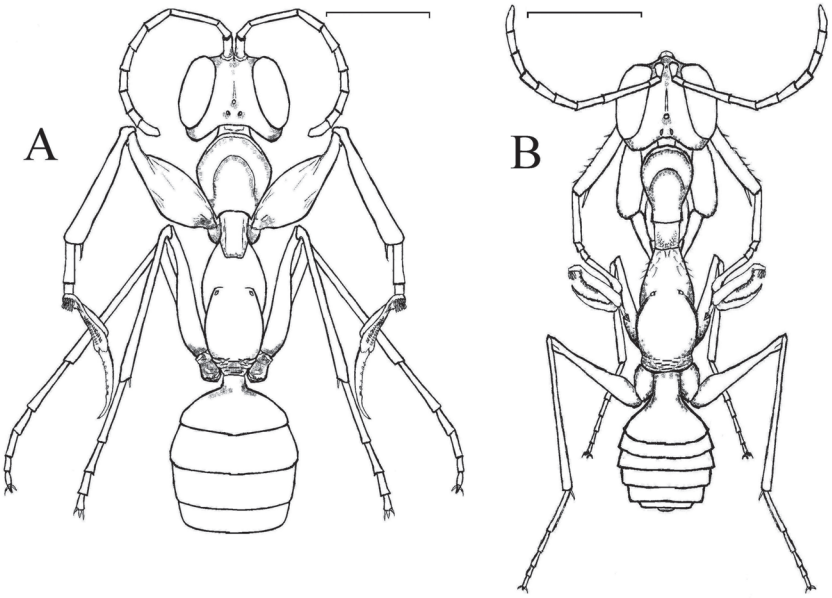

Fig. 2 - Female specimens of *Gonatopus argentinus* Olmi from Argentina, Tilimuqui (La Rioja Prov.) (A) and *Gonatopus doellojuradoi* (Ogloblin) from Argentina, La Ovejería (Tucumán Prov.) (B). Scale bar = 1 mm.

Gonatopus trichosoma new name

Nec Plectrogonatopus richardsi Moczar, 1965: 396.
Trichogonatopus richardsi Olmi, 1984: 1476.
Trichogonatopus richardsi Olmi: Virla, 1998: 26.
Trichogonatopus richardsi Olmi: Olmi, Virla & Fernández, 2000: 156.
Trichogonatopus richardsi Olmi: Virla & Olmi, 2001: 71.

Trichogonatopus richardsi Olmi, 1984, was described after one only female specimen from Brazil, Mato Grosso, 12°50'S 51°47'W. More recently further female specimens were discovered in Argentina (Virla, 1998; Virla & Olmi, 2001), Venezuela (Olmi, Virla & Fernández, 2000) and other neotropical countries (unpublished data). The known records can be summarized as follows:

Argentina:
Catamarca: Chumbicha, 16.IV.1998, reared from an unidentified nymph of *Gyponinae*, E. Virla coll., 1 female (BD).
Misiones: Loreto, 7.XII.1936; 1.I.1939, A. Ogloblin coll., 2 females (PT).

Brazil:
Mato Grosso: 12°50'S 51°47'W, 3.X.1968, O.W. Richards coll., female holotype (BMNH); Barra do Tapirapés, 1 female (SO).
Mato Grosso do Sul: Três Lagoas, Fazenda Floresta, 1 female (MOLC).

Paraguay:
Cordillera: 9 km S San Bernardino, 6.VII.1968, L. & C.W. O'Brien coll., 1 female (CASC).

Venezuela:
Cojedes: El Pao, Galeras, 09°34'N 68°09'W, 220 m, 24-28.IV.1995, 1 female (MOLC); El Pao, Pilancones, 09°43'N 88°08'W, 188 m, 20-23.I.1995, 1 female (MY).

In spite of the efforts, the male of *Tr. richardsi* continued to be unknown, as well as the hosts. However, in 2006, both sexes of *Tr. richardsi* were reared, resulting in the discovery of the hosts and the male, as follows.

Material examined
Argentina: La Rioja Prov., Tilimuqui, 15.XI.2006, M. Espinosa coll., reared from *Curtara pagina* DeLong & Freytag (*Cicadellidae Gyponinae*), 1 female (IMLA); same locality label, 2.XII.2006, reared from *Mendozellus asunctia* Cheng (*Cicadellidae Deltocephalinae*), 1 female (MOLC); same locality label, 16.XII.2006, reared from *Mendozellus asunctia* Cheng, 1 male (IMLA).

Description of the male: fully winged; length 2.00 mm. Head brown, except mandibles testaceous; antennae brown; mesosoma black; gaster brown; legs brown, except tarsi testaceous. Antennae filiform; antennal segment 3 approximately twice as long as broad (5:3); antennal segments in the following proportions: 4:4.5:5:5:5:4.5:4.5:4.5:4:7. Head shiny, smooth, punctate, without sculpture among the punctures; frontal line absent; occipital carina absent; POL = 5.5; OL = 2.5; OOL = 2; greatest breadth of anterior ocellus as long

as OL; temples distinct, shorter than OL (1:2.5). Palpal formula 6/3. Scutum granulated. Notauli complete, posteriorly separated; minimum distance between notauli much shorter than greatest breadth of anterior ocellus (1:2.5). Scutellum and metanotum shiny, finely punctate, without sculpture among the punctures. Propodeum shiny, with dorsal surface granulated and with a deep median longitudinal furrow; posterior surface shiny, almost completely without sculpture. Forewing hyaline, without dark transverse bands; marginal cell open; stigmal vein regularly curved, with distal part much longer than proximal part. Dorsal process of the parameres (Fig. 3) short, with proximal part slender and distal apex broadened. Tibial spurs 1, 1, 2.

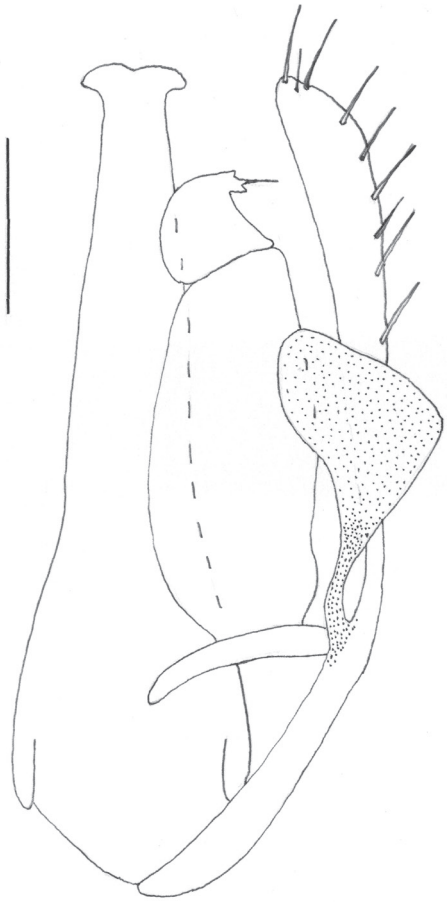

Fig. 3 - Genital armature of a male specimen of *Gonatopus trichosoma* Virla & Olmi from Argentina, Tilimuqui (left half removed). Scale bar = 0.06 mm.

Remarks: the transverse impression of the females of *Tr. richardsi* can be very deep (as in specimens from Paraguay and Argentina) or very weak (as in the holotype; see Fig. 1019 C in Olmi, 1984), with some intermediate deepth levels. The difference between *Trichogonatopus* Kieffer and species of *Gonatopus* Ljungh with palpal formula 6/3 and enlarged claw without a large subapical tooth is mainly based on the above different deepth (strong transverse impression in the above species of *Gonatopus*; transverse impression absent or very weak in *Trichogonatopus*). After the discovery of the above pronotal variability, the first idea of the authors was to synonymize the two genera, also because the male of *Tr. richardsi* does not show characters different from those of *Gonatopus* males. However, the chela of *Tr. richardsi* has not the distal apex of fore tarsal segment 5 bent at right angle (as in the typical chela of *Trichogonatopus*), so that, waiting for the discovery of a male of a typical *Trichogonatopus*, we prefer only to transfer *Tr. richardsi* to *Gonatopus* and propose a new combination: *Gonatopus richardsi*. However, this new combination is preoccupied by *Plectrogonatopus richardsi* Moczar, 1965, because *Plectrogonatopus* Richards, 1939, is junior synonym of *Gonatopus* Ljungh, 1810 (syn. established by Olmi, 1984). It is necessary then to select a new name: *Gonatopus trichosoma*.

In the genus *Gonatopus*, the female of *G. trichosoma* is similar to that of *G. whartoni* Olmi, 1991. The main differences between these two species are the following:

1 Posterior surface of propodeum sculptured by numerous transverse striae ... .*whartoni* Olmi
– Posterior surface of propodeum not sculptured by transverse striae..... ..... *trichosoma* new name

The male of *G. trichosoma* is similar to those of *G. caraibicus* (Olmi, 1986), *G. moyaraygozai* Olmi, 1991, and *Labeo sanctivincenti* Ashmead, 1894. Following its description, the key to the males of Neotropical *Gonatopus* published by Virla & Olmi (2007a) can be modified by replacing couplets 3 and 4 as follows:

3 Dorsal process of the parameres reduced and lobe shaped (Fig. 32 in Virla & Olmi, 2007a) .....*caraibicus* (Olmi)
– Dorsal process of the parameres not reduced, not lobe shaped (Figs. 4, 27 in Virla & Olmi, 2007a; Fig. 3) 4
4 Propodeum with dorsal surface granulated and posterior surface almost completely without sculpture ..... *trichosoma* new name
– Propodeum completely reticulate rugose..... 4'
4' Dorsal process of the parameres long and with proximal part broad (Fig. 27 in Virla & Olmi, 2007a) .....*Labeo sanctivincenti* Ashmead
– Dorsal process of the parameres short and with proximal part slender (Fig. 4 in Virla & Olmi, 2007a).....*moyaraygozai* Olmi

ACKNOWLEDGMENTS

The authors are indebted to Dr. Philip Perkins and Dr. Stefan Cover (Museum of Comparative Zoology, Harvard University, Cambridge, USA) and Dr. David Notton (The Natural History Museum, London, UK) for the loan of the holotypes respectively of *Gonatopus argentinus* Olmi and *Trichogonatopus richardsi* Olmi. Many thanks also to Dr. Susana Paradell (Facultad de Ciencias Naturales y Museo, Universidad Nacional de La Plata, Argentina) for the identifications of hosts. The research described in the present paper was done under the scientific and technological cooperation between the Italian Republic and the Republic of Argentina (IT-PA05-AYE/XV/040).

SUMMARY

The hitherto unknown males of *Gonatopus argentinus* Olmi and *Trichogonatopus richardsi* Olmi (*Hymenoptera Dryinidae*) are described for the first time after material collected in Argentina, La Rioja Prov., Tilimuqui. The discovery of the male of *Gonatopus argentinus* has permitted to declare this taxon a valid species different from *Gonatopus doellojuradoi* (Ogloblin) (in the past the two species were considered dubitatively synonyms). The discovery of the male of *Trichogonatopus richardsi* Olmi, together with the study of a series of females, has suggested to transfer this species from *Trichogonatopus* Kieffer to *Gonatopus* Ljungh. *Gonatopus trichosoma*, new name, was proposed for *Gonatopus richardsi* (Olmi, 1984), new comb., preoccupied by *Plectrogonatopus* (= *Gonatopus*) *richardsi* Moczar, 1965. The following hosts were discovered: *Spangbergiella vulnerata* (Uhler) (*Cicadellidae Deltocephalinae*) for *G. argentinus*; *Curtara pagina* DeLong & Freytag (*Cicadellidae Gyponinae*) and *Mendozellus asunctia* Cheng (*Cicadellidae Deltocephalinae*), for G. *trichosoma*. Changes to the keys to Neotropical *Gonatopus* were presented.

RIASSUNTO

A seguito dello studio di materiale raccolto in Argentina, Provincia di La Rioja, Tilimuqui, vengono descritti i maschi precedentemente sconosciuti di *Gonatopus argentinus* Olmi e *Trichogonatopus richardsi* Olmi (*Hymenoptera Dryinidae*). La scoperta del maschio di *Gonatopus argentinus* ha permesso di dichiarare questo taxon buona specie, differente da *Gonatopus doellojuradoi* (Ogloblin) (in passato le due specie erano considerate dubitativamente sinonimi). La scoperta del maschio di *Trichogonatopus richardsi* Olmi, insieme allo studio di una serie di femmine, ha suggerito di trasferire questa specie dal genere *Trichogonatopus* Kieffer a *Gonatopus* Ljungh. *Gonatopus trichosoma*, nomen novum, viene proposto per *Gonatopus richardsi* (Olmi, 1984), nuova combinazione, preoccupato da *Plectrogonatopus* (= *Gonatopus*) *richardsi* Moczar, 1965. Viene data notizia della scoperta degli ospiti di entrambe le specie prima citate: *Spangbergiella vulnerata* (Uhler) (*Cicadellidae Deltocephalinae*) per *G. argentinus*; *Curtara pagina* DeLong & Freytag (*Cicadellidae Gyponinae*) e *Mendozellus asunctia* Cheng (*Cicadellidae Deltocephalinae*), per G. *trichosoma*. Modifiche alle chiavi dicotomiche dei *Gonatopus* Neotropicali sono presentate.

REFERENCES

ASHMEAD W.H., 1894 - Report upon Parasitic Hymenoptera of the Island of St. Vincent. *Journ. Linnean Soc., Zoology* 25: 56-254.

GAULD I., BOLTON B., 1988 - The Hymenoptera: 1-332. Oxford Univ. Press, Oxford.

GUGLIELMINO A., OLMI M., 1997 - A host-parasite catalog of world Dryinidae (Hymenoptera: Chrysidoidea). *Contr. Entomol., International* 2 (2): 165-298.

GUGLIELMINO A., OLMI M., 2006 - A host-parasite catalog of World Dryinidae (Hymenoptera: Chrysidoidea): first supplement. *Zootaxa* 1139: 35-62.

GUGLIELMINO A., OLMI M., 2007 - A host-parasite catalog of world Dryinidae (Hymenoptera: Chrysidoidea): second supplement. *Boll. Zool. Agr. Bachic.*, Ser. II 39 (2): 121-129.

KIEFFER J.-J., 1909 - Description de nouveaux Dryinides et Belytides d'Amérique. *Ann. Soc. Sci. Bruxelles* 33: 334-380.

LJUNGH S.J., 1810 - Gonatopus, novum insectorum genus. *Beitr. Naturkunde* 2: 161-163.

MOCZAR L., 1965 - Remarks on some types of Dryinini and Gonatopodini (Hymenoptera). *Ann. Hist.-Nat. Musei Nat. Hungarici* 57: 375-406.

OGLOBLIN A.A., 1938 - Descripciones de Bethylidae y Dryinidae de las colecciones del Museo Argentino de Ciencias Naturales. *An. Mus. Argentino Cien. Nat.* "*Bernardino Rivadavia*", Buenos Aires 40: 35-50.

OLMI M., 1984 - A revision of the Dryinidae (Hymenoptera). *Mem. Amer. Entom. Inst.* 37: I-XXXI + 1-1913.

OLMI M., 1986 - New species and genera of *Dryinidae* (*Hymenoptera Chrysidoidea*). *Frustula entomol.* (1986), N.S. VII-VIII (XX-XXI): 63-105.

OLMI M., 1991 - Supplement to the revision of the world *Dryinidae* (*Hymenoptera Chrysidoidea*). *Frustula entomol.* (1989), N.S. XII (XXV): 109-395.

OLMI M., 1994 - The Dryinidae and Embolemidae (Hymenoptera: Chrysidoidea) of Fennoscandia and Denmark. *Fauna Entomologica Scandinavica* 30: 1-100. E.J. Brill, Leiden.

OLMI M., 1999 - Hymenoptera Dryinidae - Embolemidae. *Fauna d'Italia* 37, Edizioni Calderini, Bologna: I-XVI + 1-425.

OLMI M., VIRLA E.G., FERNANDEZ F., 2000 - Las Avispas Dryinidae de la Región Neotropical (Hymenoptera: Chrysidoidea). *Biota Colombiana* 1 (2): 141-163.

REMES LENICOV A.M.M. DE, OLMI M., VIRLA E.G., 2009 - *Phrictopyga holmgreni* (Muir): New Record for Argentina and Description of a New Parasitoid, *Gonatopus concinnus* (Hemiptera: Delphacidae and Hymenoptera: Dryinidae). *J. Kansas Entomol. Soc.* 82 (2): 174-182.

RICHARDS O.W., 1939 - The British Bethylidae (s.l.) (Hymenoptera). *Trans. R. Entomol. Soc. London* 89: 185-344.

VIRLA E.G., 1998 - New Neotropical species of *Dryinidae* (*Hymenoptera: Chrysidoidea*). *Frustula entomol.* (1997), N.S. XX (XXXIII): 1-17.

VIRLA E.G., OLMI M., 1998 - The Dryinidae of Argentina (Hymenoptera-Chrysidoidea). *Acta Entomologica Chilena* 22: 19-35.

VIRLA E.G., OLMI M., 2001 - Los ejemplares de Dryinidae (Insecta: Hymenoptera) depositados en la colección del Museo de La Plata. *Neotrópica* 47: 61-80.

VIRLA E.G., OLMI M., 2007a - New records of Dryinidae from Argentina and descriptions of two new species (Hymenoptera: Chrysidoidea). *Boll. Zool. Agr. Bachic.*, Ser. II 39 (3): 165-184.

VIRLA E.G., OLMI M., 2007b - Dryinidae (Hymenoptera: Chrysidoidea) parasitoids of the Corn Leafhopper, *Dalbulus maidis* (DeLong & Wolcott) (Hemiptera: Cicadellidae), in Argentina, with description of the male of *Gonatopus moyaraygozai* Olmi. *Interciencia* 32 (12): 847-849.

VIRLA E.G., OLMI M., 2008a - Dryinidae, pp. 357-372. In: *Claps L.E., Debandi G. & Roig-Juñent S. (Eds.)*, Biodiversidad de Artrópodos Argentinos, Vol. 2. Sociedad Entomológica Argentina, Mendoza, pp. 615.

VIRLA E.G., OLMI M., 2008b - Description of Two New Species of *Gonatopus* Ljungh from Argentina (Hymenoptera: Chrysidoidea: Dryinidae). *J. Kansas Entomol. Soc.* 81 (3): 182-187.

Manoscritto accettato il 30 dicembre 2008