



<http://dx.doi.org/10.11646/zootaxa.3861.2.5>

<http://zoobank.org/urn:lsid:zoobank.org:pub:782DB448-D86E-4BB8-9DB0-3EDB013BED62>

A new genus and species of Delphacini (Hemiptera: Fulgoroidea: Delphacidae) from Argentina

A.M. MARINO DE REMES LENICOV & G. VARELA

División Entomología, Facultad de Ciencias Naturales y Museo, Universidad Nacional de La Plata, Paseo del Bosque S/N° (B1900FW) La Plata, Buenos Aires, Argentina. E-mails: amarino@fcnym.unlp.edu.ar; marinoremes@gmail.com

Abstract

A new genus of Delphacini is described from Argentina, *Pyrophagus* Remes Lenicov gen. n., with one new species, *P. tigrinus* Remes Lenicov & Varela sp. n. The new species, distributing over a wide cultivated area of Northwestern and Central Argentina and recently confirmed as a vector of MRCV (*Rio Cuarto maize virus*) in experimental conditions, is one of the most frequently found delphacid species on wheat, oat, maize, triticale, rye, barley and wild Gramineae. The main diagnostic features of the new genus and species are described and illustrated, and information on the host plants, geographical distribution and vector capacity of the new species is provided.

Key words: Auchenorrhyncha, planthopper, distribution, host plants, MRCV vector, Argentina

Resumen

Un nuevo género y especie de Delphacini (Hemiptera: Fulgoroidea: Delphacidae) desde la Argentina *Pyrophagus* Remes Lenicov gen. n., con una nueva especie, *P. tigrinus* Remes Lenicov y Varela sp. n. se describe desde la Argentina. El nuevo taxón, recientemente confirmado como vector del MRCV (virus del Mal de Río Cuarto del maíz) en condiciones experimentales, es uno de los más frecuentemente capturados sobre trigo, avena, maíz, triticale, centeno, cebada y gramíneas silvestres en áreas cultivadas de noroeste y el centro de la Argentina. En esta contribución se describen e ilustran las principales características diagnósticas del nuevo género y especie, y se adiciona información acerca de las plantas hospedantes, distribución geográfica e importancia fitosanitaria en la Argentina.

Palabras Clave: Auchenorrhyncha, Fulgoroidea, distribución, plantas hospederas, vector MRCV, Argentina

Introduction

Extensive searches for the insect vectors of the “Mal de Río Cuarto” virus (MRCV) have been conducted since 1995 in the agricultural areas of Argentina because the MRCV is the most important and severe disease affecting the maize crops in Argentina (Lenardon, 1987). Among the collected planthopper specimens, one of the frequently found taxa in the northwestern and central cultivated areas is described here as a new genus and species of delphacid tribe Delphacini (Hemiptera: Fulgoroidea: Delphacidae). Recent experimental studies have demonstrated that this undescribed species can transmit the MRCV to triticale (*X Triticosecale* Wittmack), a winter grain with high forage potential in central Argentina (Velazquez *et al.*, 2006).

The family Delphacidae currently includes over 2000 described species in 268 genera worldwide (Bartlett, 2009). To date, the known diversity of Delphacini in Argentina is 32 species in 15 genera. According to the most recent available classification, the genera are: *Delphacodes* (Fieber) (with about 6 species whose generic limits are being revised) (Fennah, 1955, Muir, 1926, Remes Lenicov & Tesón 1978, 1979), *Caenodelphax* Fennah (1sp.) (Velazquez *et al.*, 2005), *Calbodus* Spinola (2 spp.) (Fennah, 1965), *Chionomus* Fennah (2 spp.) (Fennah, 1971, Tesón & Remes Lenicov, 1983), *Dicranotropis* Fieber (2 spp.) (Remes Lenicov, 1996), *Euides* Fieber (1 sp.)

xii.1992, Remes Lenicov col.; 2♂♂, 2♀♀, Río Cuarto, on maize, xii.1992, Dagoberto col.; 1♀, Jesús María, on wheat, x.1988, Truol col.; 2♂♂, Las Peñas, on maize, 2.xii.2002, Truol col. **Buenos Aires:** 3♂♂, 2♀♀, Peña, on wheat, iv.1944; 1♂, 1♀, José C. Paz, xii.1947, Martínez-Bezzi, col.; 2♂♂, 2♀♀, Bragado, on *Sorghum*, i.1980, Remes Lenicov col.; 3♂♂, 2♀♀, La Plata, on maize, xii.1987, Remes Lenicov col.; 2♂♂, 1♀, Castelar, on wheat, maize, grass, xii.1980, Dalbo col.; 1♂, 2♀♀, Gorina, on parsley, alfalfa and clover, xii.1981, Dagoberto col. **BRAZIL:** 1♂, Parana, on maize, xii.2006, Martins col.; 1♂, Goias, on maize, xii.2006, Martins de Oliveira col.

Acknowledgements

We wish to express our thanks to Eduardo Virla (PROIMI, Tucumán, Argentina) and Graciela Truol (IFFIVE-INTA, Córdoba, Argentina) for sending us the specimens for study and warning us of the abundance of the new species and to Christopher Dietrich for helpful suggestions regarding the manuscript. We also thank Dr. Arnaldo Maciá (CIC: Scientific Research Committee of the Province of Buenos Aires, Argentina) for the technical assistance. This work was partially supported by the National Research Council (CONICET) and La Plata National University (UNLP) from Argentina Project Cód. 623 and FONCYT- PICT 2007 N° 00143–03.

References

- Arneodo, J.D., Lorenzo, E., Laguna, I.G., Abdala, G. & Truol, G.A. (2002) Cytopatological characterization of Mal de Río Cuarto virus in corn, wheat and barley. *Fitopatologia Brasileira*, 27, 298–302.
<http://dx.doi.org/10.1590/s0100-41582002000300010>
- Asche, M. (1985) Zur phylogenie der Delphacidae Leach, 1815 (Homoptera Cicadina Fulgoromorpha). *Marburger Entomologische Publikationen*, 2 (1–2), 1–910.
- Bartlett, C.R. (2000) An annotated list of planthoppers (Hemiptera: Fulgoroidea) of Guana Island (British West Indies). *Entomological News*, 111 (2), 120–132.
- Bartlett, C.R. (2009) A new genus of new world Tropidocephalini (Hemiptera: Delphacidae: Delphacinae), with the description of two new species. *Entomological News*, 120 (4), 387–396.
<http://dx.doi.org/10.3157/021.120.0407>
- Bartlett, C.R. & Deitz, L.L. (2000) *Revision of the New World delphacid planthopper genus Pissonotus (Hemiptera: Fulgoroidea)*. Thomas Say Publications in Entomology, Monographs, 234 pp.
- Fennah, R.G. (1955) Delphacidae from Juan Fernandez (Homoptera-Fulgoroidea). *Proceeding of the Royal Entomological Society of London (B)*, 24, 129–137.
<http://dx.doi.org/10.1111/j.1365-3113.1955.tb01488.x>
- Fennah, R.G. (1963) New delphacidae (Homoptera Fulgoroidea) from South America and West Africa. *Annals and magazine of Natural History*, 13 (5), 689–700.
- Fennah, R.G. (1965) New species of Fulgoroidea (Homoptera) from the West Indies. *Transactions of the Royal Entomological Society of London*, 117 (4), 95–126.
<http://dx.doi.org/10.1111/j.1365-2311.1965.tb00048.x>
- Fennah, R.G. (1971) Fulgoroidea from the Cayman Islands. *Journal of Natural History*, 5, 299–342.
<http://dx.doi.org/10.1080/00222937100770241>
- Gonzon, A.T. & Bartlett, C.R. (2008, dated 2007) Systematics of *Hadropygos* n.g., *Metadelphax* Wagner and New World *Toya* Distant (Hemiptera: Delphacidae) *Transactions of the American Entomological Society*, 133 (3–4), 205–278.
- Laguna, G., Remes Lenicov, A.M.M. de, Virla, E., Avila, A.O., Gimenez Pecci, M.P., Herrera, P., Garay, J., Ploper, D. & Mariani, R. (2002) Difusión del virus del Mal de Río Cuarto (MRCV) del maíz, su vector, delfácidos asociados y huéspedes alternativos en la Argentina. *Revista de la Sociedad Entomológica Argentina*, 61 (1–2), 87–97.
- Lenardon, S. (1987) Mal de Río Cuarto. *Revista CREA*, 1987, 6–15.
- Lenardon, S.L., March, G.J., Beviacqua, J.E., Marinelli, A., Ornaghi, J.A. & Astorga, E.M. (1987) Diferentes épocas de siembra y cultivares de maíz como una alternativa para disminuir la incidencia del maize rough dwarf virus (MRDV) agente causal del "Mal de Río Cuarto". *IDIA, INTA*, 441–444, 78–83.
- Mariani, R. & Remes Lenicov, A.M.M. de (2000/2001) *Tagosodes orizicolus* (Muir, 1926), vector del virus de la hoja blanca del arroz. (HBV) en la República Argentina (Homoptera-Delphacidae). *Revista de la Facultad de Agronomía, La Plata*, 104 (2), 151–156.
- Mariani, R. & Remes Lenicov, A.M.M. de. (2001) El género *Euides* en la República Argentina (Hemiptera-Fulgoromorpha-Delphacidae). *Revista de la Sociedad Entomológica Argentina*, 60 (1–4), 89–92.
- Mariani, R. & Remes Lenicov, A.M.M. de. (2005) El complejo *Sogatella* en Argentina: un problema fitosanitario creciente (Insecta-Hemiptera-Delphacidae). *XIII Congreso Latinoamericano de Fitopatología, III Taller de la Asociación Argentina*

de Fitopatólogos. Córdoba, Argentina, 566 pp.

- Muir, F. (1926) Contributions to our knowledge of South American Fulgoroidea (Homoptera). Part I. The family Delphacidae. *Bulletin of the Hawaiian Sugar Planter's Association (Entomological Series)*, 18, 1–51.
- Remes Lenicov, A.M.M. de. (1996) El género *Dicranotropis* Fieber, 1866, en la República Argentina y Chile (Insecta-Homoptera-Delphacidae). *Acta Entomológica Chilena*, 20, 123–128.
- Remes Lenicov, A.M.M. de, Olmi, M. & Virla, E. (2009) *Phrictopyga holmgreni* (Muir): new record for Argentina and description of a new parasitoid, *Gonatopus concinnus* (Hemiptera: Delphacidae et Hymenoptera: Dryinidae). *Journal of the Kansas Entomological Society*, 82 (2), 174–182.
<http://dx.doi.org/10.2317/jkes803.06.1>
- Remes Lenicov, A.M.M. de & Tesón, A. (1978) Contribución al estudio de los fulgóridos argentinos I. (Homoptera-Fulgoroidea-Delphacidae). *Revista de la Sociedad Entomológica Argentina*, 37 (1–4), 17–22.
- Remes Lenicov, A.M.M. de & Tesón, A. (1979) Contribución al estudio de los fulgóridos argentinos II. (Homoptera-Fulgoroidea-Delphacidae). *Neotrópica*, 25 (73), 69–76.
- Remes Lenicov, A.M.M. de & Tesón, A. (1989) Contribución al estudio de los fulgoroideos argentinos IV (Homoptera-Fulgoroidea). Observaciones sobre tres especies halladas en cultivos de maíz (*Zea mays* L.). *Revista de la Sociedad Entomológica Argentina*, 47 (1–4), 101–107.
- Remes Lenicov, A.M.M. de & Virla, E. (1993) Homópteros Auquenorrincos asociados al cultivo de trigo en la República Argentina. I. Análisis preliminar de la importancia relativa de las especies. *Studies on Neotropical Fauna and Environment (Ecology and Systematic)*, 28 (4), 211–222.
<http://dx.doi.org/10.1080/01650529309360905>
- Remes Lenicov, A.M.M. de & Virla, E. (1999) Delfácidos asociados a cultivos de maíz en la República Argentina. (Insecta-Homoptera-Delphacidae). *Revista de la Facultad de Agronomía, La Plata*, 104 (1), 1–15.
- Sosa, A.J., de Remes Lenicov, A.M.M., Mariani, R. & Cordo, H. (2004) Redescription of *Megamelus scutellaris* Berg (Hemiptera: Delphacidae), a candidate for biological control of waterhyacinth. *Annals of the Entomological Society of America*, 97 (2), 271–275.
- Sosa, A.J., Remes Lenicov, A.M.M. de & Mariani, R. (2007) Species of *Megamelus* (Hemiptera-Delphacidae) associated to Pontedereaceae in South America. *Annals of the Entomological Society of America*, 100 (6), 798–809.
[http://dx.doi.org/10.1603/0013-8746\(2004\)097\[0271:romsbh\]2.0.co;2](http://dx.doi.org/10.1603/0013-8746(2004)097[0271:romsbh]2.0.co;2)
- Tesón, A. & Remes Lenicov, A.M.M. de. (1983) Contribución al estudio de los Fulgóridos argentinos III (Homoptera-Fulgoroidea-Delphacidae). *Revista de la Sociedad Entomológica Argentina*, 42 (1–4), 313–323.
- Truol, G.A., Usugi, T., Hirao, J., Arneodo, J., Gimenez Pecci, M.P. & Laguna, I. (2001) Transmisión experimental del virus del Mal de Río Cuarto (MRCV) por *Delphacodes kuscheli*. *Fitopatología Brasileira*, 26, 39–44.
<http://dx.doi.org/10.1590/s0100-41582001000100007>
- Urban, J.M., Bartlett, C.R. & Cryan, J.R. (2010) Evolution of Delphacidae (Hemiptera: Fulgoroidea): combined-evidence phylogenetics reveals importance of grass host shifts. *Systematic Entomology*, 35 (4), 678–691.
<http://dx.doi.org/10.1111/j.1365-3113.2010.00539.x>
- Velazquez, P., Guzmán, F.A., Conci, L.R., Remes Lenicov, A.M.M. de & Truol, G.A. (2006) *Pyrophagus tigrinus* Remes Lenicov & Varela (Hemiptera: Delphacidae), nuevo vector del Mal de Río Cuarto virus (MRCV, Fijivirus) en condiciones experimentales. *Agriscientia*, 23 (1), 9–14.
- Velazquez, P.D., Marino de Remes Lenicov, A.M. & Truol, G.A. (2005) *Caenodelphax teapae* Fowler (Hemiptera Delphacidae): nueva especie vectora del Mal de Río Cuarto virus (MRCV) en Argentina. *VI Congreso Argentino de Entomología*. Tucumán, 280.
- Yang, J.-T. & Yang, Ch.-T. (1986) Delphacidae of Taiwan (I). Asiracinae and the tribe Tropidocephalini (Homoptera: Fulgoroidea). *Taiwan Museum Special Publication*, 6, 1–79.