SALVATORE BELLA (*) - CARMELO RAPISARDA (*)

NEW FINDINGS IN ITALY OF THE RECENTLY INTRODUCED ALIEN PSYLLID *MACROHOMOTOMA GLADIATA* AND ADDITIONAL DISTRIBUTIONAL RECORDS OF *ACIZZIA JAMATONICA* AND *CACOPSYLLA FULGURALIS* (HEMIPTERA PSYLLOIDEA)

(*) *Dipartimento di Agricoltura, Alimentazione e Ambiente, Sez. Entomologia applicata, Università degli Studi di Catania, Via S. Sofia 100, 95123 Catania, Italy; e-mail:* sbella@unict.it; rapicar@unict.it.

Bella S., Rapisarda C. – New findings in Italy of the recently introduced alien psyllid *Macrohomotoma gladiata* and additional distributional records of *Acizzia jamatonica* and *Cacopsylla fulguralis* (Hemiptera Psylloidea).

The distribution in Italy is updated and new regional collecting data are reported of the exotic psyllids *Macrohomotoma gladiata* Kuwayama (Psylloidea, Homotomidae), *Acizzia jamatonica* (Kuwayama) and *Cacopsylla fulguralis* (Kuwayama) (Psylloidea, Psyllidae), all of them native to Asia and recorded in Italy during recent times. In particular, *M. gladiata* is a serious pest of *Ficus microcarpa* L. f. (Moraceae), one of the most frequently cultivated ornamental trees in southern Europe. The psyllid was reported for the first time in Europe in 2009, from Spain, and in 2012 it was recorded in Italy, based on its findings on ornamental *F. microcarpa* trees in Naples town centre. Data here reported on its outbreak presence in many localities in Sicily indicate a dangerous spread over Italy of this noxious psyllid pest.

KEY WORDS: Exotic jumping plant lice; Ornamental trees; Updated distribution data; Italy.

INTRODUCTION

The introduction of alien organisms, including insect pests, is a growing problem worldwide, especially in countries having intensive international trade of goods. This is particularly evident in the Mediterranean basin, where, especially due to recent climatic changes, environmental conditions are favourable to numerous tropical and subtropical species, allowing their establishment in a growing number of new areas.

In Europe, alien invasive species are a major group of organisms causing economic impact. Invertebrates represent one of the largest groups of introduced organisms in Europe and, in particular, Arthropods dominate and make up nearly 94% of the alien terrestrial invertebrate fauna, with the Insects being their most important taxonomic group (ROQUES *et al.*, 2009; HULME & ROY, 2010).

Due to their importance, exotic invasive insects are under extensive studies in Italy (PELLIZZARI *et al.*, 2005; JUCKER *et al.*, 2009). Within the frame of these studies, substantial contribution has been recently given by us to improve knowledge on alien species living on ornamental plants in urban areas (BELLA & LO VERDE, 2002; BELLA & FERRAUTO, 2005; BELLA & MAZZEO, 2006; LO VERDE *et al.*, 2007, 2011; BELLA & D'URSO, 2012; BELLA, 2013a; BELLA & RAPISARDA, 2013; BELLA, 2014; LONGO & RAPISARDA, 2014; SUMA *et al.*, 2014). In particular, biological, ecological and chorological notes are here reported on three psyllid species which have been recently recorded as new arrivals in Italy and are presently spreading their noxious diffusion in the country.

MATERIALS AND METHODS

With the aim to ascertain the presence of possible pests, ornamental exotic trees and shrubs were investigated in different Italian regions by beating or by careful visual search for specimens/colonies or by examination of symptoms. In particular, when psyllids were detected samples were preserved in 75% ethanol and stored until microscope slide preparation. To the latter aim, both adults and preimaginal stages (on which the identification has been based) where dehydrated in absolute alcohol and macerated in KOH, before being dissected and mounted in Canada balsam as permanent microscope slides. On this slide mounted material, morphological identification has been based on the most updated and reliable keys for the identification of psyllid species. All examined material is stored in the entomological collection of the Applied Entomology Section, Department of Agriculture, Food and Environment, University of Catania, Italy.

RESULTS

Among many insect species which have been collected during the survey, the occurrence and spreading in Italy emerged of the following three interesting psyllid species, of which notes are given on geographical distribution, host plants and biology.

Homotomidae, Homotominae

Macrohomotoma gladiata Kuwayama 1908
(Fig. I)

DISTRIBUTION – The genus *Macrohomotoma* Crawford, with 14 described species, is distributed from India to Australia (HOLLIS & BROOMFIELD, 1989). *M. gladiata* is of Asian origin and in this continent it has been reported from China, Hong Kong, Japan (Ryukyu Islands), Sumatra and Taiwan (OUVRARD, 2014). In 2009 the species was introduced into Europe, with infestations

– Received 29 September 2014 Accepted 5 November 2014 Published 10 December 2014

Fig. I – *Macrohomotoma gladiata* on *Ficus microcarpa*: 1) infested twig; 2) nymphs.

reported from the Balearic Islands (Olmo García & Nieto López, 2009) and mainland Spain (Provinces of Andalucía, Cádiz, Málaga, Murcia, Valencia and Alicante) (Galindo, 2010; Mifsud & Porcelli, 2012; Sánchez, 2012). Recently reported also from the Canary Islands (Cruz, 2013). In Italy *M. gladiata* has been found up to now only on ornamental *Ficus* plants in the town centre of Naples (Campania region) (Pedata *et al.*, 2012).

Material examined – *M. gladiata* was detected in Sicily on *Ficus microcarpa* in different sites of urban and suburban areas of the towns of Catania and Siracusa: Aci Castello (CT), loc. Cannizzaro 2.IX.2014, 24.X.2014; Catania, loc. Ognina, 5.IX.2014; Catania, loc. Cibali, 16.IX.2014; Aci Catena (CT), 28.VIII.2014; Catania, loc. Fasano, 22.IX.2014; Acireale (CT), 23.IX.2014; Gravina di Catania (CT), 26.IX.2014; Siracusa, *in urbe*, 7.IX.2014.

Host plants – *M. gladiata* lives on *Ficus microcarpa* L.f. [= *retusa* (L.); *nitida* Thunb.] (Urticales, Moraceae). *Ficus benghalensis* L. and *F. microphylla* Salzm. ex Miq. are also reported as hosts of the psyllid but these quotations are probably erroneous (Ouvrard, 2014).

Biological notes – Colonies of the psyllid develop and feed on new shoots of the host plant, which become covered by white waxy secretions, in both form of compact and irregular flakes; young stages of the psyllid live protected under these secretions. During the sampling period, all immature stages and adults were always found simultaneously. Eggs, yellow in colour, are generally laid in clusters of 10-20 units, on the new leaves of the twigs and on the withered bracts (Pedata *et al.*, 2012). Shortly after the attack, the shoots become deformed, stop developing and finally die.

Predators – *Anthocoris nemoralis* (Fabricius) (Hemiptera, Anthocoridae) (Sánchez, 2012).

Remarks – Serious damages by this psyllid to ornamental trees of *Ficus microcarpa* (even old plants) are reported from Mallorca (Balearic Islands, Spain) and have been directly noted there by the first author (S. Bella).

Psyllidae, Acizziinae

Acizzia jamatonica (Kuwayama 1908)

Distribution – Native to Eastern Asia (China, Japan and South Korea). In Europe, it was first detected in Italy (Alma *et al.*, 2002; Zandigiacomo *et al.*, 2002) and later recorded from numerous other countries: Bulgaria, Croatia, France (including Corsica), Germany, Great Britain, Greece, Hungary, Montenegro, Portugal, Serbia, Slovakia, Slovenia, Spain and Switzerland (Sánchez García & Burckhardt, 2009; Mifsud *et al.*, 2010; Pásztor *et al.*, 2010; Lauterer *et al.*, 2011; Bella, 2013b; Malumphy *et al.*, 2013). Since 2006, it has been found in the United States of America (Alabama, North and South Carolina, Florida, Georgia and Tennessee) (Ulyshen & Miller, 2007; Wheeler & Hoebeke, 2009) and recently in Iran (Manzari & Sahragard, 2014). As far as presently known, distribution of this species in Italy involves up to now the following regions: Valle d'Aosta, Piedmont, Liguria, Lombardy, Veneto, Friuli-Venezia Giulia, Emilia Romagna, Tuscany, Sicily (Zandigiacomo *et al.*, 2002; Consorzio Fitosanitario Provinciale di Parma, 2007).

Material esamined – Latium: Roma, *in urbe*, 20.X.2008; Marche: Ancona, 18.VI.2009; Sardinia: Sassari, *in urbe*, 21.IX.2010; Calabria: Altomonte (CS), 20.VII.2006; Sicily: Catania, *in urbe*, 13.VI.2006, 16.IX.2006, 26.V.2007, 19.X.2007, 11.IX.2012. All colonies were found on leaves of *Albizia julibrissin*.

Host plants – Different species of the genus *Albizia* Durazz. (Fabales, Fabaceae) are known to host this species; in Europe the psyllid has been collected only on

the Persian silk tree, *A. julibrissin* (Willd.) Durazz. (OUVRARD, 2014).

BIOLOGICAL NOTES – *Acizzia jamatonica* performs numerous overlapping generations and overwinters in the adult stage on the primary host plants. Leaves, flowers and shoots can be completely colonized by juvenile and adult stages, with serious damage (leaf yellowing, defoliation) leading to total or partial desiccation. Large amount of honeydew is produced and may cause some inconvenience in urban environment (JUCKER *et al.*, 2009; SÁNCHEZ GARCÍA & BURCKHARDT, 2009).

PREDATORS – Coleoptera Coccinellidae [*Adalia bipunctata* (L.), *Harmonia quadripunctata* (Pontoppidan), *Oenopia conglobata* (L.)], *Orius* sp., *Anthocoris* sp. (Hemiptera, Anthocoridae), and *Chrysopa* sp. (Neuroptera, Chrysopidae) (PELLIZZARI *et al.*, 2009).

Psyllidae, Psyllinae

Cacopsylla fulguralis (Kuwayama 1908)

DISTRIBUTION – *Cacopsylla fulguralis* is native to Asia, where it occurs in China, Japan, Philippines, South Korea and Taiwan (INOUE, 2010). In Europe, the psyllid has been first recorded from plant nurseries in France (COCQUEMPOT & GERMAIN, 2002) and then reported from Belgium, Croatia, Great Britain, Italy, Netherlands, Russia (Kuril Islands), Spain and Switzerland (BAUGNEE, 2003; MALUMPHY & HALSTEAD, 2003; OUVRARD, 2014). In Italy it was reported for the first time in 2003 in the region Lombardy and successively in Friuli Venezia Giulia and Veneto, on *Elaeagnus* x *ebbingei* (SÜSS & SAVOLDELLI, 2003; CARGNUS *et al.*, 2012).

MATERIAL EXAMINED – Liguria: Laigueglia (SV), 3.V.2011. Colonies of the psyllid were detected on young shoots of *Elaeagnus* x *ebbingei* shrubs planted near the sea coast.

HOST PLANTS – On different species of the genus *Elaeagnus* L.: *E. commutata* Bernh. ex Rydb., *E. cuprea* Rehder, *E.* x *ebbingei* Boom., *E. glabra* Thunb., *E. macrophylla* Thunb., *E. oldhamii* Maxim., *E. pungens* Thunb. (Proteales, Elaeagnaceae) (OUVRARD, 2014).

BIOLOGICAL NOTES – Adults and nymphs of *C. fulguralis* feed on plant sap, usually on the underside of leaves, and produce copious amount of honeydew, which sooty moulds develop on. Strong infestations by *C. fulguralis* lead to chlorosis, leaf drop and die back (MALUMPHY *et al.*, 2002).

PREDATORS – *Anthocoris nemoralis* (Fabricius), *Orius laevigatus* (Fieber), *O. majusculus* (Reuter) (Hemiptera, Anthocoridae) and *Chrysoperla lucasina* (Lacroix) (Neuroptera, Chrysopidae) are reported to prey on this psyllid (FERRE & DENIS, 2011).

REMARKS – This pest has been included in the EPPO Alert List for more than three years and during this period no particular international action was requested by the EPPO member countries; therefore, in 2004 it was considered that sufficient alert has been given and the pest was deleted from the Alert List (EPPO, 2004).

DISCUSSION AND CONCLUSION

According to MIFSUD *et al.* (2010), exotic psyllids which are invading Europe originate mainly from Australasia (57.1%) and Asia (28.6%). All three species of jumping plant lice that are here considered are of Asian origin and started to spread in Europe during the last decade or so. One of them (*A. jamatonica*) has been recorded in Italy as new for the European fauna while the other two species apparently reached Italy coming from other European countries where they have been recorded slightly earlier.

As a basic rule, the introduction of new alien pests must be considered accidental and pathways for these introductions are not always easy to identify precisely. Nevertheless, they can be often assumed, especially for species living on plants of economic importance, such as crop or (above all) ornamental plants. In fact, in the latter cases all newly introduced pest species are phytophagous and are strictly associated with their host plants; thus, the "commercial pathway" of their host plants appears as the main method of introduction for these species.

In the specific case here considered, all three psyllid species show a high level of host plant specificity and, consequently, their diffusion is limited by the presence of their allochtonus ornamental host plants; thus, their diffusion in Italy is expected to remain restricted to anthropic habitats, such as nurseries, parks, gardens and city areas.

Among the psyllids here reported, *M. gladiata* is the one causing the greatest visible and significant damage, especially when infesting young trees or anyway new vegetation. Symptoms by this species reported from other Italian regions and observed in Sicily do not seem dramatically severe up to now; therefore, since the same pest has caused serious damage in other European countries where it has been established for some time, attention must be paid to its possible future diffusion and development of its populations.

ACKNOWLEDGEMENTS

We thanks Paola Giambertone (Sesto San Giovanni, Italy) for valuable support in field activities.

REFERENCES

ALMA A., TEDESCHI R., ROSSI J., 2002 - Acizzia jamatonica *(Kuwayama) nuova psilla per l'Europa (Homoptera Psyllidae).* - Informatore Fitopatologico, 52 (4): 64-65.

BAUGNEE J.Y., 2003 - *Sur la presence en Belgique du Cicadellidae* Kyboasca maligna *(Walsh, 1862) et du Psyllidae* Cacopsylla fulguralis *(Kuwayama, 1907) (Hemiptera Homoptera).* - Bulletin de la Société Royale Belge d'Entomologie, 139: 72-73.

BELLA S., 2013a - *The box tree moth* Cydalima perspectalis *(Walker, 1859) continues to spread in southern Europe: new records for Italy (Lepidoptera Pyraloidea Crambidae).* - Redia, 96: 51-55.

BELLA S., 2013b - *New alien insect pests to Portugal on urban ornamental plants and additional data on recently introduced species*.- Annales de la Société entomologique de France (N.S.), 49 (4): 374-382.

BELLA S., 2014 - *Invasive insect pests and their associated parasitoids on ornamental urban plants on Corfu island* - Phytoliriomyza jacarandae *Steyskal and Spencer 1978*

(Diptera, Agromyzidae) a new record in Greece. - Hellenic Plant Protection Journal, 7: 53-59.

BELLA S., D'URSO V., 2012 - *First record in the Mediterranean basin of the alien leafhopper* Balclutha brevis *living on invasive* Pennisetum setaceum. - Bulletin of Insectology, 65 (2): 195-198.

BELLA S., FERRAUTO G., 2005 - *Presence of* Megalorhipida leucodactyla *(Lepidoptera Pterophoridae) in Sicily: new report for the Italian fauna and notes on the diffusion of its host plant* Boerhavia repens *L. ssp.* viscosa *(Choisy) Maire (Nyctaginaceae)*. - Biological Invasions, 7: 577-587.

BELLA S., LO VERDE G., 2002 - *Presenza nell'Italia continentale e in Sicilia di* Ophelimus prope eucalypti *e* Aprostocetus *sp., galligeni degli Eucalipti (Hymenoptera Eulophidae).* - Naturalista siciliano, 26: 191-197

BELLA S., MAZZEO G., 2006 - *First record of* Anatrachyntis badia *(Hodges, 1962) (Lepidoptera Cosmopterigidae) in Italy*. - Bollettino di Zoologia agraria e di Bachicoltura, Milano, Ser. II, 38 (3): 255-260.

BELLA S., RAPISARDA C., 2013 - *First record from Greece of the invasive red gum lerp psyllid* Glycaspis brimblecombei *Moore (Hemiptera Psyllidae) and its associated parasitoid* Psyllaephagus bliteus *Riek (Hymenoptera Encyrtidae).* - Redia, 96: 33-35.

CARGNUS E., VILLANI A., PAVAN F., ZANDIGIACOMO P., 2012 - *Su quattro specie di insetti alloctoni rilevati in Friuli Venezia Giulia.* - Bollettino Società Naturalisti "Silvia Zenari", Pordenone, 36: 133-146.

COCQUEMPOT C., GERMAIN J.F., 2002 - *Un nouveau ravageur de l'*Elaeagnus *x* ebbingei *en France:* Cacopsylla fulguralis. - PHM Revue Horticole, 416: 32-34.

CONSORZIO FITOSANITARIO PROVINCIALE DI PARMA, 2007 - *Bilancio fitosanitario 2007 in provincia di Parma,* 5pp.

CRUZ A., 2013 - Macrohomotoma gladiata, *nueva plaga de* Ficus microcarpa *encontrada en Tenerife: la culpa de todo la tiene el cambio climático*. La Opinión de Tenerife. 13.02.2013. http://www.laopinion.es/tenerife/2013/02/13/escasez-lluvias-aumenta-aparicion-plagas-parques/459435.html.

EPPO, 2004 - Cacopsylla fulguralis (*Homoptera, Psyllidae*) – Elaeagnus *sucker*. https://www.eppo.int/QUARANTINE/Alert_List/deleted%20files/insects/Cacopsylla_fulguralis.doc.

FERRE A., DENIS A., 2011 - *Eléments de biologie du psylle de* l'Elaeagnus Cacopsylla fulguralis *(Kuwayama) (Hemiptera: Psyllidae).* AFPP - 9ème Conférence internationale sur les ravageurs en agriculture, Montpellier, 26-27 octobre 2011.

GALINDO M.J., 2010 - *Una agresiva plaga de chinches pone en peligro a los ficus de la ciudad*. La Opinión de Murcia, 13. oct. 2010. http://www.laopiniondemurcia.es/cartagena/2010/10/13/agresiva-plaga-chinches-pone-peligro-icus-ciudad/276283.html.

HOLLIS D., BROOMFIELD P.S., 1989 - Ficus-*feeding psyllids (Homoptera), with special reference to the Homotomidae.* - Bulletin of the British Museum Natural History (Entomology), 58 (2): 131-183.

HULME P.E., ROY D.B., 2010 - *DAISIE and arthropod invasions in Europe*. In: Roques A *et al.* (Eds) Alien terrestrial arthropods of Europe. - BioRisk, 4 (1): 1-3.

INOUE H., 2010 - *The generic affiliation of Japanese species of the subfamily Psyllinae (Hemiptera: Psyllidae) with a revised checklist.* - Journal of Natural History, 44 (5): 333-360.

JUCKER C., BARBAGALLO S., ROVERSI P.F., COLOMBO M., 2009 - *Insetti esotici e tutela ambientale: morfologia, biologia, controllo e gestione*. - MiPAAF, Cermenate (CO), Italy. 416 pp.

LAUTERER P., BARTOŠ R., MILONAS P., 2011 - *First records of the Jumping Plant-Louse* Acizzia jamatonica *(Kuwayama) (Hemiptera: Sternorrhyncha: Psyllidae) in Slovakia and Greece.* - Plant Protection Science, 47: 37-40.

LONGO S., RAPISARDA C., 2014 - *Spreading of the citrus nesting whitefly,* Paraleyrodes minei *Iaccarino, in Italian citrus groves.* - Bulletin OEPP/EPPO Bulletin, 44 (3): 5 pp., in press, DOI: 10.111/epp.12146.

LO VERDE G., BELLA S., CALECA V., RAPISARDA C., SIDOTI A., 2011 - *Presenza in Sicilia di* Glycaspis brimblecombei *Moore (Hemiptera Psyllidae) su* Eucalyptus camaldulensis *Dehn*. - Naturalista siciliano, 35 (3-4): 425-434.

LO VERDE G., PORCELLI F., BELLA S., RASPLUS J.I., 2007 - *Imenotteri Agaonidi nuovi per l'Europa e loro ruolo nella naturalizzazione di* Ficus *spp. in Italia*. In: Atti XXI Congresso Nazionale Italiano di Entomologia: 60.

MALUMPHY C.P., HALSTEAD A.J., 2003 - Cacopsylla fulguralis *(Kuwayama), an Asian jumping plant louse (Hemiptera: Psyllidae), causing damage to* Elaeagnus *in Britain*. - British Journal of Entomology and Natural History, 16: 89-93.

MALUMPHY C., MACLEOD A., MATTHEWS L., 2002 - Elaeagnus *sucker*, Cacopsylla fulgurali*s*. - Plant Pest Notice, no. 32, Central Science Laboratory, UK, 3 pp.

MALUMPHY C., PEROVIĆ T., HRNČIĆ S., RADONJIĆ S., RAIČEVIĆ M., 2013 - *First records of* Acizzia jamatonica *(Kuwayama) and* Glycaspis brimblecombei *Moore, (Hemiptera: Psyllidae, Aphalaridae) in Montenegro.* - Acta entomologica serbica, 18 (1/2): 11-16.

MANZARI S., SAHRAGARD A., 2014 - *First record of* Acizzia jamatonica *(Kuwayama) (Hemiptera: Psyllidae: Acizziinae) in Iran*. - Journal of Crop Protection, 3 (Supplementary): 611-614.

MIFSUD D., COCQUEMPOT C., MÜHLETHALER R., WILSON M., STREITO J.C., 2010 - *Other Hemiptera Sternorrhyncha (Aleyrodidae, Phylloxeroidea, and Psylloidea) and Hemiptera Auchenorrhyncha. Chapter 9.4.* In: Roques A et al. (Eds) Alien terrestrial arthropods of Europe. - BioRisk 4 (1): 511-552.

MIFSUD D., PORCELLI F., 2012 - Macrohomotoma gladiata *Kuwayama, 1908: a jumping plant-lice recently introduced into the EPPO Region (Hemiptera: Psylloidea).* - EPPO Bulletin, 42 (1): 161-164.

OLMO GARCÍA D., NIETO LÓPEZ A., 2009 - Macrohomotoma gladiata *Kuwayama, 1908 (Hemiptera: Psylloidea), nueva psila en* Ficus microcarpa. - XXV reunión del grupo de trabajo de laboratorios y prospecciones fitosanitarias. Reus, 10-12 noviembre 2009.

OUVRARD D., 2014 - *Psyl'list* - The World Psylloidea Database. Available: http://www.hemiptera-databases.com/psyll'ist (accessed 2014 Sept. 10).

PÁSZTOR B., RÉDEI D., VÉTEK D., 2010 - *First record of* Acizzia jamatonica *(Kuwayama) (Hemiptera: Psyllidae) in Greece.* - Hellenic Plant Protection Journal, 3: 25-27.

PEDATA P.A., BURCKHARDT D., MANCINI D., 2012 - *Severe infestations of the jumping plant-louse* Macrohomotoma gladiata*, a new species for Italy in urban* Ficus *plantations.* - Bulletin of Insectology, 65 (1): 95-98.

PELLIZZARI G., DALLA MONTÀ L., VACANTE V., 2005 - *Alien insect and mite pests introduced to Italy in sixty years (1945-2004).* - Proceeding of plant protection and plant health in Europe: introduction and spread of invasive species, pp. 275-276, Berlin, Germany, 9-11 June 2005.

PELLIZZARI G., FIOROT L., ZAMPINI M., 2009 - *La psilla dell'Albizzia* Acizzia jamatonica *(Kuwayama).* - Veneto Agricoltura, Regione del Veneto, 4 pp.

ROQUES A., RABITSCH W., RASPLUS J.Y., LOPEZ-VAAMONDE C., NENTWIG W., KENIS M., 2009 - *Alien terrestrial invertebrates of Europe*. In: DAISIE, editor. Handbook of alien species in Europe. - Dordrecht: Springer, pp. 63-79.

SÁNCHEZ I., 2012 - *Primeras citas de* Macrohomotoma gladiata *(Hemiptera: Psylloidea: Homotomidae) en Andalucía (España).* - Boletín de la Sociedad Entomológica Aragonesa, 50: 533-534.

SÁNCHEZ GARCÍA I., BURCKHARDT D., 2009 - *First record of* Acizzia jamatonica *(Kuwayama, 1908) (Hemiptera: Psylloidea) for the Iberian Peninsula*. - Boletín de la Sociedad Entomológica Aragonesa, 45: 525-526.

SUMA P., NUCIFORA S., BELLA S., 2014 - *New distribution record of the invasive bronze bug* Thaumastocoris peregrinus *Carpintero and Dellapé (Heteroptera, Thaumastocoridae) in Italy*. - Bulletin OEPP/EPPO Bulletin, 44 (2): 179-182.

SÜSS L., SAVOLDELLI S., 2003 - *Rinvenimento di* Cacopsylla fulguralis *(Kuwayama) (Homoptera Psyllidae) in Italia. - Bollettino di Zoologia Agraria e di Bachicoltura, Serie II, 35: 95-98.*

ULYSHEN M.D, MILLER D.R, 2007 - *First record of* Acizzia jamatonica *(Hemiptera:Psyllidae) in North America: friend or foe?* - Florida Entomologist, 90 (3): 573.

WHEELER A.G., HOEBEKE E.R., 2009 - Acizzia jamatonica *(Kuwayama) (Hemiptera: Sternorrhyncha: Psyllidae): U.S. distribution of a recently detected Asian psyllid*. - Proceedings of the Entomological Society of Washington, 111 (2): 505-514.

ZANDIGIACOMO P., BERNARDINELLI I., STERGULC F., 2002 - *Psilla dell'albizzia: prima segnalazione per l'Italia nord-orientale*. - Notiziario ERSA, 4: 18-20.