A NEARCTIC PEST OF PINACEAE ACCIDENTALLY INTRODUCED INTO EUROPE: _LEPTOGLOSSUS OCCIDENTALIS_ (HETEROPTERA: COREIDAE) IN NORTHERN ITALY

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ABSTRACT: The western conifer-seed bug, _Leptoglossus occidentalis_, an important pest of pines in North America, is reported from urban areas of northern Italy as the first Old World record for this coreid.

_Leptoglossus occidentalis_ Heidemann, the western conifer-seed bug, is a pest of trees, primarily species in the Pinaceae (Mitchell 2000), on which it typically is found at the tips of branches and on cones (Blatt and Borden 1996b, Mitchell 2000). It feeds on seeds of the host tree (Koerber 1963, Krugman and Koerber 1969) and extracts lipids and probably proteins (Bates et al. 2000a), affecting seed production (Blatt and Borden 1996b, Bates et al. 2000b, Mitchell 2000). Hosts include many species of _Pinus_, Douglas fir (_Pseudotsuga menziesii_ (Mirbel) Franco), and _Tsuga canadensis_ (L.) Carrière (Mitchell 2000). The recent spread of _L. occidentalis_ from the western part of North America (Mexico, the United States, and Canada) across the continent to the east is well documented (Katovich and Kulman 1987, McPherson et al. 1990, Marshall 1991, Gall 1992, Mitchell 2000). It may be transported with Christmas trees (Mitchell 2000), in shipments of corn, and, possibly, with landscaping materials or by transcontinental shipping (Gall 1992). It probably is able to move into commercial pine plantations because of its strong flight ability (Gall 1992). The overwintering adults commonly are attracted to buildings in the autumn (Gall 1992) and may form large (Blatt 1994), pheromone-mediated (Blatt and Borden 1996a) aggregations.

Two of us (MV and GT) observed specimens of _Leptoglossus_ in autumn and early winter of 1999 and 2000 in gardens and in and near houses at various locations (Abbiategrasso, Corbetta, Gessate, Arcugnano) in northern Italy. Specimens were hand collected in Abbiategrasso, Gessate, and Arcugnano and later determined to be _L. occidentalis_. Voucher material is housed in the collections of the Museo Naturalistico Archeologico (Vicenza, Italy), the Museo Civico di Storia Naturale (Venice, Italy), Museo Civico di Storia Naturale (Milan, Italy), the Illinois Natural History Survey Insect Collection (Champaign, Illinois, USA), and the collections of MV and GT.

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ENT. NEWS 112(2): 101-103, March & April, 2001
MATERIAL EXAMINED


DISCUSSION

The morphologically similar Leptoglossus gonagra (F.) [= Leptoglossus australis (F.) (Baranowski and Slater 1986)] is known from the tropics and subtropics throughout the world (Packauskas and Schaefer 2001) including northern Africa (Moulet 1995) but has not been reported from Europe. Leptoglossus gonagra has scalloped emarginations along the outer border of the metatibial dilation, whereas the margin is entire in L. occidentalis. The two species are separated easily in the keys provided by McPherson et al. (1990) and Packauskas and Schaefer (2001). The remaining species of Leptoglossus are native only to the Western Hemisphere (Brailovsky and Sánchez 1983). No native Italian coreids (Faraci and Rizzotti Vlach 1995) have metatibial dilations, which allows even the somewhat similar species of Gonocerus Latreille to be distinguished easily from Leptoglossus.

Based on its well-documented spread across North America, L. occidentalis could rapidly become a well-established pest of coniferous trees throughout Italy and other parts of Europe.

ACKNOWLEDGMENTS

We thank Vittorio Bordin, Barb Capocy, Antonio De Angeli, Pierre Moulet, Carl W. Schaefer, Mark J. Wetzel and two anonymous reviewers for their help with earlier versions of this paper.

LITERATURE CITED


