

The Western Conifer Seed Bug (*Leptoglossus occidentalis* Heidemann, 1910) (Hemiptera, Coreidae) found in SW Norway

ALF TORE MJØS, TORE R. NIELSEN & FRODE ØDEGAARD

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Leptoglossus occidentalis Heidemann, 1910 (Hemiptera, Coreidae) was introduced to Europe from North America, probably in 1999. Later it has spread rapidly northwards, and in October and November 2009 it was recorded for the first time in Norway and Denmark. *L. occidentalis* can be a pest on about 40 conifer species.

Key words: Hemiptera, Coreidae, *Leptoglossus occidentalis*, Norway.

Alf Tore Mjø, Stavanger Museum, Muségaten 16, NO-4010 Stavanger. E-mail: alf.tore.mjøs@stavanger.museum.no.

Tore Randulff Nielsen, Sandvedhagen 8, NO-4318 Sandnes. E-mail: tore@nielsen.cc

Frode Ødegaard, Tungasletta 2, NO-7485 Trondheim. E-mail: frode.odegaard@nina.no

Introduction

Leptoglossus occidentalis Heidemann, 1910 (Hemiptera, Coreidae) is originally a Nearctic species, native to the western areas of North America, from Mexico in the south through California and Utah to British Columbia, Alberta, and Saskatchewan in the north. After World War II the species spread eastwards: in the 1950s and 1960s it reached America's Midwest, and later it has been found in all the eastern states (McPherson et al. 1990, Gall 1992, Kment & Banar 2008).

L. occidentalis was accidentally introduced to Europe. The insect was first discovered near Vicenza in northern Italy in autumn 1999, and soon spread to other parts of Italy (Taylor et al. 2001, Bernardinelli & Zandigiacom 2001). Recently it was found in additional South and Central European countries (Baranek 2007, Földessy 2006, Kment & Banar 2008), and in 2008–2009

an influx of *L. occidentalis* to the south coast of England was reported on various websites.

The records

RY Klepp: Reve (EIS 7) 10 October 2009, on grass lawn, UTM 6518523 N, 297911 E, sone 32, leg. Alf Tore Mjø, in coll. Stavanger Museum. **VAY** Lindesnes: Jørgenstad near Stusvik (EIS 1) 22 November 2009 indoor at window, leg. Inger M. Nielsen, in coll. T.R. Nielsen.

Remarks

The first records from Scandinavia are from 2009; in Denmark a specimen was found indoor at Lemvig, NW Jylland on 20 October, and one was beaten down from *Pinus* on Langø, Hindsholm, Falster on 30 October (Buhl & Stephensen 2009). Also the Norwegian records are also from that period (see above), which indicates a migration



Figure 1. *Leptoglossus occidentalis* Heidemann, 1910, Revtangen Bird Observatory, Klepp, Rogaland 10 October 2009. Photo: Alf Tore Mjøs, Stavanger Museum.

towards Scandinavia that year.

According to Veikko Rinne, Zoological Museum, University of Turku and Carl-Cedric Coulianos (both pers. comm.) the species has not yet been found in Finland and Sweden.

Buhl & Stephensen (2009) describe the ecology and the active global spreading of the species.

Identification

L. occidentalis Heidemann, 1910 is a large and spectacular Hemiptera in the family Coreidae, with characteristic expansions on the hind tibiae and a white zigzag mark across the centre of the forewing. The adults are long and wide. Most of their body varies in colour from reddish brown to grey brown. It can hardly be mistaken for any native European species. It is, however, similar

to *L. corculus* (Say, 1832), but the tibia dilation extends further down on *L. corculus*.

Biology

Adults start egg laying on the foliage of conifers in mid to late spring. The eggs hatch after approximately 10 days. The nymphs go through five stages of development before they become adults in late August. The bug feeds on the developing cones and seeds of conifer trees, host plants include about 40 species, including *Abies*, *Cedrus*, *Picea*, *Pinus*, *Pseudotsuga menziesii* (Mirbel) Franco, *Tsuga canadensis* (L.) Carrière and *Calocedrus decurens* (Torr.) Florin. *L. occidentalis* does not feed on the foliage, but pierces the cones of host plants, sucks out the seed endosperm, causing abortion and infertility of the seeds (Bates & Borden 2005). It is considered a severe pest of conifer seed orchards in North

America. As a result, seed losses can be as high as 50% and seedling emergence has been severely reduced (Blatt 1996, Bates et al. 2000, 2001).

As imago *L. occidentalis* usually spends the winter in aggregations under peeled bark or in bird or rodent nests. In parts of the North America the species is a household nuisance due to its habit of entering houses for the winter. It is interesting, therefore, that the second Norwegian record was made indoor in late November.

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