

Observations on the distribution of the spear thistle gall fly *Urophora stylata* and thistle receptacle weevil *Rhinocyllus conicus* in south eastern Australia

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Summary Spear thistle *Cirsium vulgare* (Savi) Tenore was targeted in Australia with three biological control agents released during the 1990s: 1) the spear thistle gall fly *Urophora stylata* Fabricius, 2) a spear thistle biotype of the receptacle weevil *Rhinocyllus conicus* (Froelich), and 3) the thistle crown weevil *Trichosirocalus horridus* (Sagliocco *et al.* 2012). Observations up to 2003 confirmed localised *U. stylata* establishment in Victoria at several sites (Swirepik and Smyth 2001, Smyth and Swirepik 2002) but none of agents had received sufficient attention to enable a good understanding of their more recent establishment and distribution status. In a recent survey, from 2010 to 2012 about 2500 *C. vulgare* plants across 142 sites were examined opportunistically for signs of the agents.

A total of nearly 5800 *C. vulgare* capitula were examined for signs of *U. stylata*. The fly was common and widespread in Victoria (Figure 1) and was found in locations with climates as dissimilar as Jeparit (annual rainfall 383 mm) in north western Victoria and the Strzelecki Ranges (annual rainfall ~1200 mm) in south eastern Victoria. It was also found in south eastern South Australia and at Lake Mulwala on the

NSW/Victoria border, so is likely to have colonised southern NSW too. The greatest distance that *U. stylata* was found away from the nearest release site was 170 km. There was also a *U. stylata* sighting in Tasmania at a release site several months after a release in 2010, suggesting that the fly will establish and disperse readily in that State.

The same capitula as above were also examined for signs of *R. conicus* and the weevil was found in three widely separated districts (Figure 2). Interest was peaked when, in January 2010, Ian Faithfull found it in the grounds of the Department of Primary Industries in Frankston, 200 m from where it had been reared in cages 12 years prior. Presumably this population derived from escapees of the rearing colony. The weevil was also found in the Mitchell River National Park in eastern Victoria, at a place 20 km away from the nearest release site. The other district colonised by the receptacle weevil was in western Victoria between Casterton and Strathdownie. Several sightings were made there and the most widely separated were 28 km apart. Eleven *R. conicus* releases were made around Strathdownie in the 1990s. Signs of *R. conicus* were found in a smaller proportion of capitula per sample

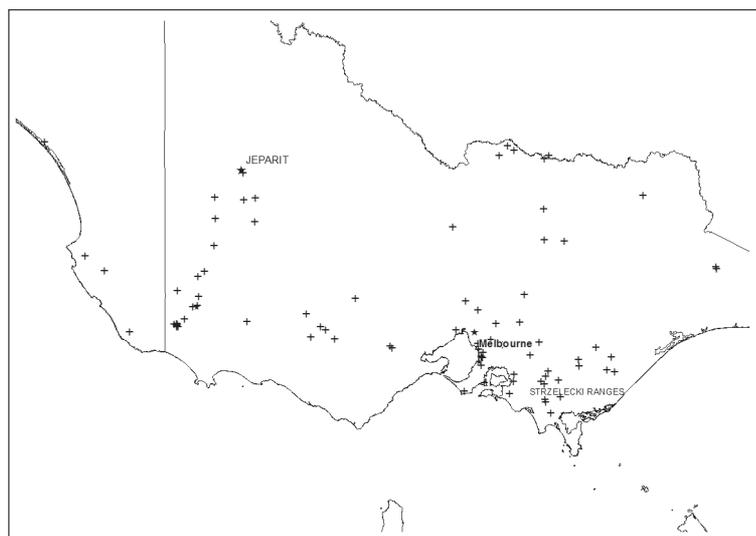


Figure 1. *Urophora stylata* sightings in Victoria and south eastern South Australia 2010 to 2012.

