RECORDS OF THE MINT APHID, *EUCARAZZIA ELEGANS* (FERRARI) (HEMIPTERA: APHIDIDAE) IN AUSTRALIA

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Summary

We report here records of the mint aphid, *Eucarazzia elegans* (Ferrari) (Hemiptera: Aphididae) in Australia, from its first appearance in 1994.

Keywords: mint, lavender, sage, quarantine

INTRODUCTION

Exotic aphids continue to be accidentally introduced to Australia. Since the detailed account by Eastop (1966), nearly sixty additional species of aphids have been recorded in Australia (Carver pers. comm., Hollis and Eastop 2005, Valenzuela, Hoffmann *et al*. 2007, Valenzuela, Carver *et al*. in press), and the majority of these are exotic aphids thought to have arrived recently on international flights. The mint aphid, *Eucarazzia elegans* (Ferrari), caused a flurry of activity amongst quarantine authorities in 2007 when it was detected firstly on catmint in greenhouses at the Waite Campus, University of Adelaide and subsequently on other hosts in New South Wales (NSW) and Victoria. The Adelaide record was not, however, the first record of the species in Australia, as it had been collected previously in Sydney in 1994. *E. elegans* is morphologically distinctive, with highly expanded siphunculi and patterned wing venation: it is unlikely to be confused with any other species in Australia (Figure 1).

The aphid feeds on plants in the family Lamiaceae, such as mint, sage, *Coleus* and lavender, though stray winged females may be collected from a wide range of unrelated hosts (Stoetzel 1985). Sexual forms are unrecorded. The genus may have two or three species (Blackman and Eastop 2000) but elsewhere only one is noted (Blackman and Eastop 2006, Fauna Europaea Web Service 2004).

RECORDS

Details of available records are given in Table 1. The species was first collected in Australia by P. Sunnucks in Gladesville NSW in November 1994 and was identified as *E. elegans* by Mary Carver at the CSIRO Australian National Insect Collection (ANIC). It seems not to have been recorded again until the Waite Campus record of 26.ix.2007, when it was reported by Michael Keller to the Department of Primary Industries and Resources of South Australia as a possible new introduction. No specimens were found during inspections of catmint outside the greenhouse and it has not

Figure 1. A winged viviparous female of *Eucarazzia elegans*. Photograph by Peter J. Bryant, University of California, Irvine, reproduced with permission.

Table 1. Collections of *Eucarazzia elegans* in Australia.

Date	Location	Host	Collector	Repository where material held
xi.1994	Gladesville NSW (33° 59'S 151°07'E) (winged and wingless adults, nymphs)	*Mentha*	P. Sunnucks	ANIC (specimens not found). Agricultural Scientific Collections Unit, Orange Agricultural Institute.
26.ix.2007	Waite Campus, University of Adelaide, SA (34° 06'S 138°04'E) (persistent colony)	*Nepeta mussinii*	M. Keller	Department of Primary Industries and Resources, South Australia
12.x.2007	Mornington Vic. (38° 02'S 145°03'E) (a winged adult and early instar nymphs)	*Salvia sp.*	G. Irvine	Department of Primary Industries in Victoria
17.x.2007	Cranbourne Vic. (38° 01'S 145°28'E) (winged and wingless adults and nymphs)	*Salvia sp.*	G. Irvine	Department of Primary Industries in Victoria
23.x.2007	Leeton NSW (34°33'S 146°24'E) (mummies parasitised by aphidiid wasps only)	*Salvia officinalis*	A. Boulton	Yanco Agricultural Institute
iii.2008	Beecroft NSW (34°01'S 150°49'E) (persistent colony)	*Lavandula* cv 'Bee Pretty'	D. Hales	Agricultural Scientific Collections Unit, Orange Agricultural Institute

subsequently been observed at the Waite Campus (through to February 2009) despite continuous culture of catmint. Further collections were made in Victoria from Mornington and Cranbourne on leaves of sage. The aphid was identified from parasitised mummies collected from garden sage in Leeton NSW, but was not collected in the area again despite continued monitoring. Subsequently it was collected from lavender (*Lavandula* cv. 'Bee Pretty') in Beecroft NSW. In this case the colony was large and persistent with winged and wingless adults and all nymphal stages, causing yellowing of the leaves. Only one of two contiguous bushes was affected.

DISCUSSION

The isolated record from 1994 may suggest that the initial introduction did not survive in Australia, perhaps because of a period of extended drought when aphids in general were in very low numbers. Alternatively, it may simply have been present but unobserved, as its wide discovery after the quarantine alert in 2007 suggests. The rapid expansion of the voracious introduced aphid predator *Hippodamia variegata* (Goeze) (Coleoptera: Coccinellidae), now a significant tool in aphid control in Australian crops, may have depressed already low numbers. The effective aphidicide imidacloprid, used throughout Australia, has also suppressed aphid populations especially in commercial seedling production.

Of Mediterranean and Middle Eastern origin, *E. elegans* is now known from southern Africa and North and South America (see Blackman and Eastop 2006, Stoetzel 1985, Heie *et al*. 1996). Thus this species has demonstrated the capacity to spread readily via modern transport pathways. The evidence presented here indicates that *E. elegans* is widely established in Australia, but it is unlikely to become a significant pest.

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