Short communications

First record of the lace bug *Cochlochila bullita* (Hemiptera: Tingidae) as a pest of rosemary in South Africa

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The lace bug *Cochlochila bullita* Stål (Hemiptera: Tingidae) (Fig. 1) was recently observed for the first time feeding in large numbers on rosemary (*Rosemarinus officinalis*) in home gardens in Stellenbosch, Western Cape Province. It is mostly known as a pest in the Oriental Region where it feeds on many different species of the plant family Lamiaceae (Kumar 2013). In India it is a particularly destructive pest of aromatic and medicinal plants of the genus *Ocimum*. These plants are commonly known as 'basil', with *O. basilicum* and *O. sanctum* the most widely distributed species (Kumar 2013). It sucks the cell sap from the leaves, causing them to curl, dry and drop off. In Malaysia similar damage, as well as wilting of tender shoots, was observed on *Orthosiphon stamineus*, a plant used for making herbal tea (Sajab & Peng 2010). Stonedahl *et al.* (1992) and Deckert & Göllner-Scheiding (2006) also mention *R. officinalis* (rosemary) and *Salvia coccinia* (sage) as hosts.

In addition to the Oriental Region the insect is also found in many African countries, from Sudan and Ethiopia in the north along the countries of the east coast and to Namibia and South Africa in the south (Smith-Pardo 2013). In the South African National Collection of Insects (ARC Plant Protection Research Institute, Pretoria) the earliest specimen records are from Grahamstown (1900), Nylstroom (now Modimolle) (1926) and Aliwal North (1979), with many samples from localities in the northeastern parts of the country, but nothing from the Western Cape. Duarte Rodrigues (1982) only mentioned (the old) Natal, Orange Free State and Transvaal provinces as localities for *C. bullita*. There are also no specimens of this species from the Western Cape in the insect collection of the South African Museum in Cape Town or the collection of the Department of Conservation Ecology

and Entomology of the University of Stellenbosch. *Cochlochila bullita* therefore joins a group of beetles and butterflies from the northern and eastern parts of South Africa that in recent years have moved into the southwestern Cape (Giliomee 2000; Perissinotto *et al.* 2011). It is not yet clear whether these movements are merely due to transportation on infested plant material or migration in response to climate change.

The adults are tiny insects, about 2.5–3 mm long and orange-brown to black in appearance. The paranotum is strongly elevated and curved backwards to form a conspicuous, crescent-shaped structure. The nymphs are black and spiny. The insects are gregarious in nature and the adults not inclined to fly off when disturbed.

In India, *C. bullita* infests plants during the summer months from July to December and passes through five generations. During adverse climatic conditions adults hibernate in the plant debris (Kumar 2013). In Stellenbosch, the insects were first noticed on rosemary during December and were still on the plants in low populations at the end of May. The biology of *C. bullita* is discussed by Neal & Schaefer (2000), Dhanasekaran (2009) and Kumar (2013).

Despite its common occurrence and wide distribution, *C. bullita* has not been recorded as a pest in South Africa, and it has not yet been observed in nurseries at Paarl, Worcester and Brits where rosemary and other herbs are grown. The damage caused by the insect is quite conspicuous: the feeding of the nymphs and adults causes yellow to purple discolouration of the upper surface of the leaf, leaf dehiscence and stunted growth of the plant, while black drops of excrement are common on the underside of the leaf (Fig. 2). Affected leaves cannot be marketed.

Fig. 1. The lace bug *Cochlochila bullita*.

Fig. 2. Drops of excrement from the lace bug *Cochlochila bullita* on the underside of rosemary leaves.

It is not clear why *C. bullita* is not a pest of basil and rosemary in South Africa as in the Oriental Region. The damage it caused to rosemary in Stellenbosch gardens shows that it has the potential of also becoming a serious pest on these herbs in South Africa.

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