

New records of adventive Nitidulidae in New Zealand

Samuel D. J. Brown

Bio-Protection Research Centre, PO Box 84, Lincoln University, Lincoln 7647, Canterbury, New Zealand(sam.brown@lincolnuni.ac.nz)

Abstract

Since the publication of a recent checklist of New Zealand Nitidulidae (Leschen and Carlton, 2007), specimens of an additional two adventive nitidulid species have been found. An extension to the range of a third species is also recorded here.

Introduction

At the time of the publication of Leschen and Carlton (2007), some haphazard collecting by the author in Hamilton revealed a specimen of *Urophorus humeralis*. Further inspection of his collection revealed another two specimens collected from Rotorua in March 2006. These specimens have been deposited in the Lincoln University Entomological Research Museum. Wider investigations into the presence of *U. humeralis* in New Zealand uncovered specimens collected from the northern North Island in the 1980s in the MAF investigation and diagnostic centre collection, revealing that this species has been established here for the past three decades at least. The earliest of these specimens was collected from apples in the Bay of Plenty in 1981 (J. Berry, pers. comm.). *Urophorus humeralis* was recorded (as *Carpophilus*) from New Zealand by Baker (1985), on strawberries from Kerikeri, and nectarines from Gisborne. However, the absence of *U. humeralis* specimens of New Zealand origin in the New Zealand Arthropod Collection led to its being excluded from the checklist of Leschen and Carlton (2007)

Results

Urophorus humeralis is a cosmopolitan species, found on all major continents and throughout the islands of the Pacific. It is a member of the nitidulid subfamily Carpophilinae, whose members are notorious for being difficult to identify. Though first described as a subgenus of the very speciose *Carpophilus* Stephens, *Urophorus* Murray is considered by Gillogly (1962) and Audisio (1993) to be a valid genus. However in the applied entomological literature, *U. humeralis* is frequently published as a species of *Carpophilus*. *Urophorus humeralis* is easily distinguished from other New Zealand representatives of the Carpophilinae by having three abdominal tergites exposed, and by having a thickened anterior portion of the lateral pronotal margin. It is black, heavily punctuated, and has a red spot on the elytral humeral angles (Figure 1). A redescription of the species has been provided by Gillogly (1962)



Figure 1. *Urophorus humeralis* dorsal view.

While *U. humeralis* can be found in high numbers in orchards, it is considered to be primarily a scavenger and tends to feed on rotting fruit at

ground level (Hossain and Williams, 2003). This tendency has made it a nuisance pest in overseas ground crops such as pineapples and cassava, however, it is not thought to cause significantly decreased yields or diminished commercial value of stone fruit (Hossain and Williams, 2003).

Correspondence with Geoff Hancock at the Hunterian Museum in Glasgow, Scotland, has revealed three specimens of *Carpophilus bakewelli* Murray (Figure 2), an Australian species hitherto unknown from New Zealand. These specimens were collected from Whangarei in October 1926 and March 1927 by A. E. Brookes. They were identified by Ronald Dobson through dissection of the male genitalia. This species has not been collected since and may not have become established in New Zealand. It is distinguished from other species of *Carpophilus* in New Zealand by having



Figure 2: *Carpophilus bakewelli* specimens. Left: dorsal view. Right: ventral view showing non-carinate mesosternum.

the integument wholly black and clothed with black setae, though with some silver hairs on the pronotum and underside of the thorax and abdomen. *Carpophilus bakewelli* can be distinguished from *C. obsoletus*

Erichson, the only other wholly dark species of *Carpophilus* possibly present in New Zealand, by the latter possessing oblique carinae on the mesosternum (Leschen and Marris, 2005). *Carpophilus bakewelli* has coarse punctures on the mesosternum, but lacks carinae (Figure 2). Little is known about the habits of this species, though Australian specimens seen by the author have been collected in orchards where it is rare in relation to other species of *Carpophilus*. Further collecting in and around orchards in Northland is required to determine if this species still exists in this country.

Another introduced nitidulid, *Aethina concolor* (Macleay), is here recorded from Hamilton, with two specimens being found by the author in a malvaceous flower in the Hamilton Botanic Gardens, January 2010. Previously, this species has only been known from the Auckland and Northland region, where it is apparently common (Kirejtshuk and Lawrence, 1999; Clunie, 2004; R. A. B. Leschen pers. comm.).

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