

Resolving taxonomy of *Mecodema* (Carabidae: Broscini) populations in the greater Auckland area

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Mecodema are medium to large (10-45 mm) carabids that are nocturnal, polyphagous, olfactory and tactile predators or scavengers. They are associated with a wide range of habitats that correlate to vegetation assemblages, microclimates and habitat heterogeneity. Currently, the greater Auckland area (Wellsford to the Franklin District) has four described *Mecodema* species from three different species groups: '*curvidens* species group', '*ducale* species group' and '*spiniferum* species group'. I am focussing on resolving the taxonomy of populations of the *spiniferum* group, of which *M. spiniferum* is the only described species and is found throughout the Waitakere and Hunua Ranges. Pinned specimens were obtained from a number of institutes and museums, including NZAC, Auckland Museum, Lincoln University and Te Papa. Fresh specimens were collected using pitfall traps set during September 2013 to April 2014, these specimens were used for molecular analyses and dissection. Taxonomically, the greater Auckland area encompasses the Coromandel Peninsula as species there are closely related to northern Auckland species. *Mecodema spiniferum* is the species found throughout the Waitakere Ranges, plus there are a number of new species in the following localities: northwest Hunua Range; Mt Auckland; and two sister taxa are found in almost all of the small forest fragments in the Rodney District, including Logue's Bush S.R. in Wellsford.

