

## Establishment of the identity of *Costelytra zealandica* (White 1846) (Coleoptera: Scarabaeidae: Melolonthinae) a species commonly known as the New Zealand grass grub

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### ABSTRACT

White (1846) described *Rhisotrogus zealandicus* from two syntypes, however no lectotype has since been designated. When the genus *Costelytra* Given 1952 was described, with *Rhisotrogus zealandicus* White 1846 as its type species, Given's description of this species was based on 400 specimens collected at different localities in New Zealand as White's syntypes were not available to him. Later, Given (1960) examined one of the syntypes, stating that it was identical to specimens he used to describe *C. zealandica*, but a lectotype was not designated at this time. So, the aims of this paper are: (i) to provide a detailed description of the external morphology, mouthparts and male genitalia based on the syntypes of *R. zealandicus*; (ii) to compare these type specimens with the description by Given (1952); (iii) to compare the syntypes to establish if they are conspecific; (iv) to designate an appropriate lectotype and (v) to study a representative series of *C. zealandica* collected from throughout New Zealand to establish the status of the taxon currently known as *C. zealandica*. Differences between the syntype specimens, and Given's (1952) description of the New Zealand specimens were found. In addition, White's syntypes are not conspecific. As a result *Costelytra giveni* n. sp. is established and described to represent the species currently known as the 'New Zealand grass grub'.

<http://zoobank.org/urn:lsid:zoobank.org:pub:F6CB0129-5ACE-4DE1-B76C-95CEE3AFDEEC>

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### Introduction

The Melolonthinae is a very diverse subfamily of Scarabaeidae, with many pest species on all continents. Adult and larval feeding by Melolonthinae results in important economic losses, e.g. the native New Zealand grass grub from the genus *Costelytra*. *Costelytra* was described by Given (1952) after examining 400 adult specimens of grass grub, collected from different localities in New Zealand from Whangarei to Bluff, as well as the Chatham Islands. Given (1952) included six species in this genus: *Costelytra austrobrunnea* Given 1952; *Costelytra brunnea* (Broun 1880); *Costelytra macrobrunnea* Given 1952; *Costelytra piceobrunnea* Given 1952; *Costelytra pseudobrunnea* Given 1952, all incorrectly making gender agreement, and the type species *Costelytra zealandica* (White 1846). Currently *Costelytra* includes 11 species, with *C. zealandica* recognised as a serious

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