

Costelytra zealandica (White, 1846)

Taxonomy

Sub family: Melolonthinae / Tribe: Liparetini / Genus: *Costelytra*

Distinguishing Features

Small to medium sized, shiny beetles, body length 9-13mm. Body colour pale brown, sometimes with areas of brownish black on the distal half of the elytra. Commonly darkened along elytral suture, line of punctations directly adjacent to elytral suture and around scutellum. Antennae 8-segmented, with 3-segmented elongated club. Clypeus with apex subquadrate to truncate, margin not sinuated, surface gently concave, coarsely punctate and pubescent. Prominent clypeal suture present and strongly sinuate. Labrum located below clypeus and separated by a suture. Ocular canthus fused to clypeus. Pronotum irregularly punctate, with long setae present on the anterior and lateral margins. Scutellum impunctate. Elytra lacking setae except for along lateral margins, striated, with interstriae punctations. Propygidium and penultimate ventrite separated by a suture on each side. Tarsal claws simple.

Related and Similar Species

Costelytra zealandica is a member of the tribe Liparetini which share the following features: Body colour not metallic. Apical spurs on the hind tibia widely separated, so that the tarsi can pass between them. Claws simple, lacking teeth. Labrum located below clypeus, clearly separate. Mesosternum without a forwardly projecting process. Abdominal ventrites lacking longitudinal ridges. Tibia strongly expanded at their apices, lateral profile of hind tibia concave between the transverse spinose ridge and the apex.

C. zealandica can be separated from similar looking Liparetini by the deeply sinuated clypeal suture, and having a scutellum that is impunctate.

A key to distinguishing the species of *Costelytra* in New Zealand is provided by Given (1966).

Biological Data

Costelytra zealandica, also known in New Zealand as the Grass-grub beetle, is a significant pest of pastures and turf. The larvae are soil dwellers, feeding on the roots of grasses and other plants. Adult beetles can also cause significant defoliation of many plant types, including fruit trees and plantation pine trees. Beetles are active at dusk and can be attracted to lights at night. A full lifecycle usually takes a year with adults emerging, and occasionally swarming, in spring and early summer.

Distribution

Costelytra zealandica is only present in New Zealand. It is known to occur all across the country (apart from alpine areas), in suitable grassed habitats.

Useful Links

AgResearch NZ AgPest information page including biology, impacts and control:

<http://agpest.co.nz/?pesttypes=grass-grub-brown-beetle-adult>

PaDIL species page: <http://www.padil.gov.au/pests-and-diseases/pest/main/135987>

References

Coca-Abia, M. M., Romero-Samper, J. 2016. Establishment of the identity of *Costelytra zealandica* (White 1846) (Coleoptera: Scarabeidae: Melolonthinae) a species commonly known as the New Zealand grass grub, *New Zealand Entomologist*, 39:2, 129-146, DOI: 10.1080/00779962.2016.1230254

Given, B.B. 1966. The Genus *Costelytra* Given (Melolonthinae: Coleoptera) including descriptions of four new species. *New Zealand Journal of Science* 9(2): 373-390.



Costelytra zealandica dorsal view

Photographer:

Pia Scanlon



Costelytra zealandica lateral view

Photographer:

Pia Scanlon



Costelytra zealandica ventral view

Photographer:

Pia Scanlon



Costelytra zealandica clypeus

Photographer:

Pia Scanlon



Costelytra zealandica apex of hind tibia and tarsal claws

Photographer:

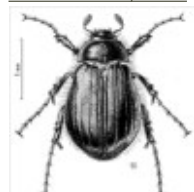
Pia Scanlon



Costelytra zealandica line drawing. By Des Helmore 1981 / Manaaki Whenua – Landcare Research

Photographer:

Des Helmore, 1981



Costelytra zealandica dorsal line drawing. By Des Helmore 1981 / Manaaki Whenua

– Landcare Research

Photographer:

Des Helmore, 1981



Costelytra zealandica head front

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