

**Genus:** *Hemiandrus*

**Common name:** Ground weta





**Order:** Orthoptera  
**Family:** Anostostomatidae  
**Taxonomic Name:** *Hemiandrus* "Cromwell"  
**Common Names:** -  
**Synonyms:** -  
**M&D Category:** I High Priority  
**Conservancy Office:** OT  
**Area Office:** Central Otago

**Description:** A ground weta.

**Type Locality:** Not described.

**Specimen Holdings:** -

**Distribution:** Remnant populations may be widespread in Central Otago. It is common on the Cromwell Chafer Beetle Nature Reserve, and extant populations occur as far away as Alexandra, including one at the Flat Top Hill Conservation Area (Van Wyngaarden 1995).

**Habitat:** Inhabits stable sand-dunes which it burrows into (P. Johns pers. comm. 1992).

**Threats:** Not known. There is anecdotal evidence that weta numbers are decreasing, based on evidence from pitfall traps at Cromwell (B. McKinlay pers. comm. 1999). Current distribution is thought to be much reduced due to habitat loss from land development. Hedgehogs are probably the most significant predator (Van Wyngaarden 1995).

**Work Undertaken to Date:** Rabbits have been removed from the reserve and ground cover is increasing (B. McKinlay pers. comm. 1999). Peter Johns is currently working on a revision of *Hemiandrus* ground weta.

**Priority Research, Survey, and Monitoring:** 1) Clarify the taxonomy of this species. Is it a distinct species to the *Hemiandrus* sp. found at Tekapo, as believed?

2) Survey areas outside of the Cromwell Chafer Beetle Nature Reserve to determine the distribution and abundance of this species, and whether it is in need of conservation action.

**Management Needs:** 1) Maintain control of mammals within the Cromwell Chafer Beetle Nature Reserve, especially hedgehogs and rodents.

2) Avoid aerial sowing of grain based 1080 pellets in areas where these weta occur (Hutcheson 1989).

**Contacts:** Peter Johns.

**Order:** Orthoptera  
**Family:** Anostostomatidae  
**Taxonomic Name:** *Hemiandrus* "Longwood Range"  
**Common Names:** -  
**Synonyms:** -  
**M&D Category:** I

**Conservancy Office:** SL

**Area Office:** Murihiku

**Description:** A large bodied ground weta (P.Johns pers. comm. 1992).

**Type Locality:** Not described.

**Specimen Holdings:** NZAC (P.Johns pers. comm. 1992).

**Distribution:** Longwood Range (P.Johns pers. comm. 1992).

**Habitat:** Not known. Soil burrowing (P.Johns pers. comm. 1992).

**Threats:** Not known.

**Work Undertaken to Date:** Longwood Range is listed in the Southland Conservation Management Strategy to become a Conservation Park (E. Edwards pers. comm. 1999). Peter Johns is currently working on a revision of *Hemiandrus* ground weta.

**Priority Research, Survey, and Monitoring:** 1) Survey the Longwood Range area to determine the distribution and abundance of this species, and whether it is in need of conservation action.

**Management Needs:** 1) Avoid aerial sowing of grain based 1080 pellets in areas where these weta occur (Hutcheson 1989).

**Contacts:** Peter Johns.

**Order:** Orthoptera  
**Family:** Anostostomatidae  
**Taxonomic Name:** *Hemiandrus* "Moehau"  
**Common Names:** Moehau weta  
**Synonyms:** -  
**M&D Category:** I

**Conservancy Office:** WK

**Area Office:** Hauraki

**Description:** A large ground weta, 37 - 44 mm long (P.Johns pers. comm. 1992).

**Type Locality:** Not described.

**Specimen Holdings:** NZAC (P.Johns pers. comm. 1992).

**Distribution:** Mt Moehau, Coromandel (P.Johns pers. comm. 1992); Pahi (J. Roxburgh pers. comm. 1999).

**Habitat:** Mid-altitude bush comprising towai (*Weinmannia silvicola*), quintinia and rice grass (J. Roxburgh pers. comm. 1999).


**Threats:** Not known.

**Work Undertaken to Date:** Peter Johns is currently working on a revision of *Hemiandrus* ground weta.

**Priority Research, Survey, and Monitoring:** 1) Survey Mt Moehau area to obtain an estimate of the distribution and abundance of this species, and whether it is in need of conservation action.

**Management Needs:** 1) Avoid aerial sowing of grain based 1080 pellets in areas where these weta occur (Hutcheson 1989).

**Contacts:** Peter Johns, Jason Roxburgh.



Body length: 44 mm

**Order:** Orthoptera  
**Family:** Anostostomatidae  
**Taxonomic Name:** *Hemiandrus* "Rocklands"  
**Common Names:** -  
**Synonyms:** -  
**M&D Category:** I

**Conservancy Office:** OT

**Area Office:** Coastal Otago

**Description:** A small ground weta.

**Type Locality:** Not described.

**Specimen Holdings:** -

**Distribution:** Behind Dunedin (P.Johns pers. comm. 1992).

**Habitat:** Not known.

**Threats:** Not known.

**Work Undertaken to Date:** Peter Johns is currently working on a revision of *Hemiandrus* ground weta.

**Priority Research, Survey, and Monitoring:** 1) Survey the Dunedin area to determine the distribution and abundance of this species, and whether it is in need of conservation action.

**Management Needs:** 1) Avoid aerial sowing of grain based 1080 pellets in areas where these weta occur (Hutcheson 1989).

**Contacts:** Peter Johns.

**Order:** Orthoptera  
**Family:** Anostostomatidae  
**Taxonomic Name:** *Hemiandrus* "Tapuaenuku"  
**Common Names:** -  
**Synonyms:** -  
**M&D Category:** I

**Conservancy Office:** NM

**Area Office:** South Marlborough

**Description:** A ground weta.

**Type Locality:** Not described.

**Specimen Holdings:** -

**Distribution:** Tapuae-O-Uenuku.

**Habitat:** Alpine.

**Threats:** Not known.

**Work Undertaken to Date:** Peter Johns is currently working on a revision of *Hemiandrus* ground weta.

**Priority Research, Survey, and Monitoring:** 1) Survey the Tapuae-O-Uenuku area to determine the distribution and abundance of this species, and whether it is in need of conservation action.

**Management Needs:** 1) Avoid aerial sowing of grain based 1080 pellets in areas where these weta occur (Hutcheson 1989).

**Contacts:** Peter Johns.

**Order:** Orthoptera  
**Family:** Anostostomatidae  
**Taxonomic Name:** *Hemiandrus* "Timaru"  
**Common Names:** -  
**Synonyms:** -  
**M&D Category:** I

**Conservancy Office:** CA

**Area Office:** Raukapuka

**Description:** A large bodied ground weta, 25 mm long (P.Johns pers. comm. 1992).

**Type Locality:** Not described.

**Specimen Holdings:** -

**Distribution:** Timaru township (P.Johns pers. comm.1999).

**Habitat:** Gardens and scrubland (P.Johns pers. comm.1999).

**Threats:** Not under any known threat. It is present in household gardens, and should be taken off the list (P.Johns pers. comm.1999).

**Work Undertaken to Date:** Peter Johns is currently working on a revision of *Hemiandrus* ground weta.

**Priority Research, Survey, and Monitoring:** -

**Management Needs:** 1) Recommend that this species is removed from the list based on current available information.

**Contacts:** Peter Johns.



Body length: 25 mm



**Genus:** *Hemideina*

**Common name:** Tree weta



**Order:** Orthoptera

**Family:** Anostostomatidae

**Taxonomic Name:** *Hemideina ricta* (Hutton, 1897)

**Common Names:** Banks Peninsula tree weta (Scott & Emberson 1999), Banks Peninsula weta, putangatanga (Ramsay 1979)

**Synonyms:** *Hemideina tibiata* (Salmon 1950)

**M&D Category:** B

**Conservancy Office:** CA

**Area Office:** North Canterbury

**Description:** A weta, which is morphologically similar to *Hemideina femorata*, but genetically distinct. There are two colour morphs, a uniform mahogany one, and one with coloured transverse stripes on the top of the abdomen. *Hemideina ricta* is usually a more uniform colour than *H.femorata*, and has a pronotum that is not pale in contrast to the head and body (Morgan-Richards & Townsend 1995). Also, *H.ricta* does not have retrolateral apical spines on the hind femora, which are sometimes present in *H.femorata*, and the femur markings are pale light-brown in *H.ricta*, but black in *H.femorata* (Morgan-Richards & Townsend 1995; J.A.Townsend pers. comm. 1999).

**Type Locality:** Banks Peninsula, Canterbury (Salmon 1950).

**Specimen Holdings:** -

**Distribution:** Restricted to an area of c. 200 km<sup>2</sup> on Banks Peninsula (Morgan-Richards & Townsend 1995), occurring east and north of Akaroa Harbour (Brown & Townsend 1994). It has been found off Long Bay Rd; Ellangowan Stream, Hickory Bay; roadside below Stony Bay Saddle; Narbey's Long Bay Rd; Lighthouse Rd; Paua Bay Rd; Le Bons Peak; Dalglishes Road Le Bons; Hinewai; Mt Pearce; Little Akaloa Rd; Summit Rd/Pigeon Bay Rd (edge of species' distribution); Starvation Gully Rd; Nikau Palm Gully; Takamatua Valley; Pigeon Bay; farmland below Brasenose Peak (Townsend, J.A. 1995); Mt Pearce north of translator on ridgeline; Repeater Rd opposite Piper Rd stock route; Ellangowan Reserve (J.A.Townsend pers. comm. 1999); Goughs Bay; Okains Peak (Morgan-Richards & Townsend 1995).

**Habitat:** During the day, these weta are usually found in gallery type crevices, or in splits, under bark, in rotten wood (Brown & Townsend 1994). Occasionally found

under rocks and in rock crevices (J.A.Townsend pers. comm. 1999). At night they spend much of their time on the ground and low shrubs (L. Field pers. comm. 2000). Kanuka trees (*Kunzea ericoides*) and totara (*Podocarpus totara*)/broadleaf logs are important habitats. These trees were found to house the most weta, but this reflects the large number of galleries present in those tree types, and therefore the higher search rate of them. (Brown & Townsend 1994). Quite a few have been found in exposed splits in fence posts (Townsend, J.A. 1995). They occur between 40-806 m altitude, but only in low numbers between 200-400 m (Townsend, J.A. 1995).

**Threats:** The distribution of *Hemideina ricta* probably diminished after the clearance of forest and shrubland for



Female.  
Photo: George Gibbs.

farming. Predation by rodents may also have been a significant factor in their decline. Current threats include loss of habitat through fire and land clearance, and rodent predation (Sherley 1998a). Feral cats are also a problem (L. Field pers. comm. 2000). There is a possibility that hybridisation with *H. femorata* may be a problem in small localised areas (Morgan-Richards & Townsend 1995).

**Work Undertaken to Date:** A survey of Banks Peninsula has been completed and the conservation status and biosystematics of the species has been clarified. Research on habitat use has been completed. Three adults (1 male and 2 females) have been held at Wellington Zoo and weta have also been held at Massey University Department of Ecology. No breeding has been reported from either location (Sherley 1998a). There are no longer any of those weta at Wellington Zoo or Massey University.

**Priority Research, Survey, and Monitoring:** 1) Assess the significance of hybridisation between *H. femorata* and *H. ricta*. Determine where it is occurring, whether it is a problem, and whether anything can be done about it (P. Barrett pers. comm. 2000).

**Management Needs:** 1) Determine whether habitat management or predator control is required to improve existing populations of *H. ricta* (based on Brown and Townsend 1994).

2) Locate suitable protected habitat for the long-term maintenance of new populations (Sherley 1998a).

3) Avoid aerial sowing of grain based 1080 pellets in areas where these weta occur (Hutcheson 1989).

**Contacts:** Barbara Brown, Euan Kennedy, Peter Johns, Paul Barrett, Ian Stringer, Jackie Townsend, Larry Field.

*See Plate 2, No. 14.*

**Genus:** *Motuweta*



**Order:** Orthoptera

**Family:** Anostostomatidae

**Taxonomic Name:** *Motuweta isolata* Johns, 1997

**Common Names:** Mercury Island tusked weta (Scott & Emberson 1999), Middle Island tusked weta, elephant weta, Middle Island monster (Foord 1990).

**Synonyms:** -

**M&D Category:** A

**Conservancy Office:** WK

**Area Office:** Hauraki

**Description:** A large-bodied red-brown weta, with a pale underside, and dark brown patches on the back. The juveniles are darker in colour than the adults. Males have an enlarged head with prominent ridged tusks projecting forward from the base of the mandible. The female lacks both the tusks and the large head of the male (Sherley 1998a). They weigh up to 26 g in the field (both sexes) and 28 g in captivity, and are 80 - 100 mm long (McIntyre pers. comm. in Sherley 1998a).

**Type Locality:** Middle Island, Mercury Island Group.

**Specimen Holdings:** MONZ (Johns 1997).

**Distribution:** Restricted to Middle Island (10 ha) in the Mercury Islands group (Sherley 1998a).

**Habitat:** These weta are mainly carnivorous (Winks & Ramsay 1998). They are nocturnal sheltering in underground burrows during the day. The burrows are sometimes located near the entrance of bird or tuatara burrows (Sherley 1998a). They appear to prefer to come out on dark moonless nights when conditions are moist and humid.

**Threats:** It is thought that this weta was present on all of the larger islands of the Mercury Islands group prior to human arrival in New Zealand. Middle Island is rodent free, and the introduction of rodents and other predators poses the greatest potential threat to this species (Sherley 1998a). Of native predators, lizards, tuatara, and giant centipedes (*Cormocephalus rubriceps*) prey upon them (McIntyre 1992b).

**Work Undertaken to Date:** Field research on their life history and behavioural ecology has been undertaken (M. McIntyre trip reports; April 1991, Jan. 1992, April 1992, Nov.

1992, April 1994 & 1995). Further work is currently underway looking into their ecology and possible translocation (I. Stringer pers. comm. 1999). Aldermen Island was searched for these weta around 1997 (8 person, 10 days) without locating this species (C. Smuts-Kennedy pers. comm. 2000). An investigation into aspects of the biology of this weta is being carried out by Landcare Research, Mt Albert, for the Department of Conservation, in order to develop a reliable captive rearing method. Initially proved difficult to rear in captivity. However several factors have been recognised causing poor breeding success and mortality of eggs, juveniles and adults. Modifications have been made to the rearing



Male.

Photo: B. Robertson, VUW photo.

Body length: 100 mm

method and these are now showing signs of success. During 1999, 180 weta hatchlings were produced. During May 2000, 94 juvenile (4th and 5th instar) captive reared Middle Island tusked weta were released on Double Island and Red Mercury Island, in the Mercury Islands group. A further 80 weta are still in captivity, at Landcare Mt Albert, the Auckland Zoo and Massey University. The majority of these weta will also eventually be released on the two islands, but some will be kept in captivity for breeding. The long term aim is to establish the weta on all of the larger islands of the Mercury Island group (C. Winks pers. comm. 2000).

**Priority Research, Survey, and Monitoring:** 1) Continue working towards establishing at least one other population of tusked weta on a kiore-free island in the Mercury Island group (Red Mercury or Double Island) and maintain the Middle Island population (Sherley 1998a). This would involve continued development of the captive breeding and re-introduction programme. This should include determination of the timing of female sexual receptivity after the final moult, time needed with a male for successful mating, and identification of preferred oviposition substrates (Winks & Ramsay 1998).

2) Confirm the absence of tusked weta on Green Island.

3) Investigate the feasibility of harvesting nymphs from Middle Island for translocation to other sites (approximately 30 per year for 4 years).

**Management Needs:** 1) Maintain island security.

**Contacts:** Mary McIntyre, George Gibbs, Chris Winks, Ian Stringer, Chris Smuts-Kennedy, Rob Chappell.

*See Plate 2, No. 12.*

**Family: Rhabdophoridae**

**Common name:** Cave weta, tokoriro (Ramsay 1979)



**Order:** Orthoptera  
**Family:** Rhaphidophoridae  
**Taxonomic Name:** *Gymnoplectron giganteum* Richards, 1962  
**Common Names:** Poor Knights cave weta (Ramsay 1979), giant cave weta (Foord 1990)  
**Synonyms:** -  
**M&D Category:** B  
**Conservancy Office:** NL  
**Area Office:** Whangarei

**Description:** A large cave weta, 450 mm in length from the tip of its antenna to the end of its rear legs, although the body is only about 50 mm long (Sherley 1998a). It has a mid-brown colouring with ochreous (yellow with a slight tinge of brown) borders on the body plates (Richards 1962). There are two large ochreous marks on the pronotum. The abdomen is irregularly mottled with light brown (Richards 1962).

**Type Locality:** In cave, Tawhiti Rahi Island, Poor Knights Islands (Richards 1962).

**Specimen Holdings:** NZAC, AMNZ, MONZ.

**Distribution:** Occurs on Tawhiti Rahi Island (Richards 1962; Watt 1982b); western side of Puweto Valley, Aorangi Island (Parrish 1998), in the Poor Knights Islands group. Watt (1982) stated that it was not uncommon near the rockfall area on Tawhiti Rahi. More than 100 were seen over 11 days at Aorangi in 1998 (Parrish 1998 unpub.).

**Habitat:** These weta shelter in caves and rock piles during day, at night they are active on the ground and tree trunks (Brook 1999b). They have been found in deep crevices, a cave, on tree trunks at night (Watt 1982b), including pohutukawa (*Metrosideros excelsa*), ngaio (*Myoporum laetum*) (P. Barrett pers. comm. 2000), and in a hollow mahoe (*Melicytus ramiflorus*). A specimen has been seen feeding on a pohutukawa flower stamen (P. Barrett pers. comm. 2000), and they may also feed on lichens (Anon 1991).

**Threats:** None known at present. Introduced mammals could pose a threat if they established on the islands.

**Work Undertaken to Date:** Pigs eradicated from Aorangi in 1936 (Powell 1938 cited in Penniket 1981).

**Priority Research, Survey, and Monitoring:** 1) Survey to confirm the presence and abundance of this species on other islands in the Poor Knights Islands group (Sherley 1998a).

**Management Needs:** 1) Maintain island security.

**Contacts:** Richard Parrish, Andrea Booth, Paul Barrett, Mike Meads.

See Plate 2, No. 15.



Body length: 50 mm



Top: Photo: Richard Parrish.  
 Bottom: Male.

Permission: SIR Publishing, Richards 1962, Plate 1, Fig. 1.

**Order:** Orthoptera  
**Family:** Rhaphidophoridae  
**Taxonomic Name:** *Novoplectron serratum* (Hutton, 1904)  
**Common Names:** -  
**Synonyms:** *Pleiolectron serratum* (Richards 1958)  
**M&D Category:** I  
**Conservancy Office:** WL

**Area Office:** Chatham Islands

**Description:** A medium to dark, blackish weta, paler on the sides and head. The legs are yellow with a slight tinge of brown, and banded. The ovipositor is reddish-brown. The body is up to 26 mm long, 24 mm on average. The antennae are three times as long as the body (Richards 1958).

**Type Locality:** Pitt Island (Hutton 1904).

**Specimen Holdings:** CMNZ.

**Distribution:** Has been found on Pitt Island, Mangere Island, and South East Island, in the Chatham Islands group; The Sisters Islands (Richards 1958); Star Keys (Emberson 1998a).

**Habitat:** A diurnal weta (Craw 1986) found in petrel burrows and under stones (Richards 1958).

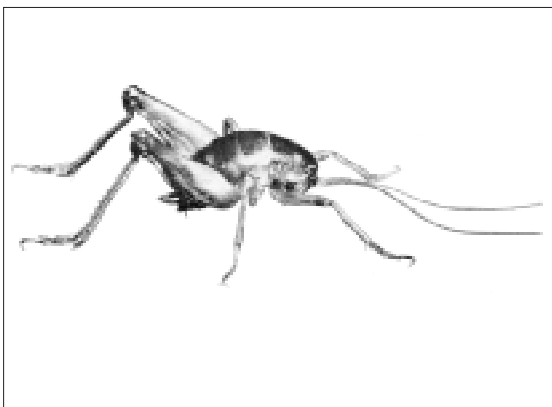
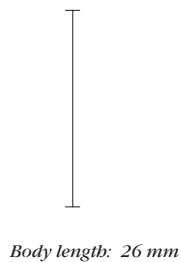
**Threats:** Disturbances to, and reduction in, the number of petrel burrows will affect population numbers (Meads 1990c).

**Work Undertaken to Date:** -

**Priority Research, Survey, and Monitoring:** 1) Maintain rodent quarantine procedures on islands.

**Management Needs:** -

**Contacts:** -



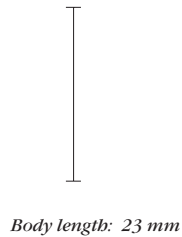
Male.

Permission: SIR Publishing, Richards 1958, Plate 24, fig. 3.

**Order:** Orthoptera  
**Family:** Rhaphidophoridae  
**Taxonomic Name:** *Talitropsis crassicuris* Hutton, 1897  
**Common Names:** -  
**Synonyms:** *Gammaroparnops crassicuris* (Richards 1958).  
**M&D Category:** I  
**Conservancy Office:** WL, CA

**Area Office:** Chatham Islands, North Canterbury

**Description:** A mid-brown weta, marbled with deep ochrous (yellow with a slight tinge of brown). The abdominal segments have a deeper brown band at the hind margin. The front two pairs of legs are pale ochrous, with transverse bands of deep ochrous. The hind femora are ochrous with narrow bands of brown, the rest of the hind legs are a deep reddish brown, as is the ovipositor. The hind tibiae are dilated and flattened above. The body is 23 mm long, and the antennae are 3.5 times as long as the body (Richards 1958).



**Type Locality:** Banks Peninsula (Richards 1958). Hutton's holotype apparently originated from Banks Peninsula, but has not been found there since. The holotype is severely damaged, and a neotype male has been designated from The Sisters (Trewick 1999b).

**Specimen Holdings:** CMNZ.

**Distribution:** Historically found at Banks Peninsula (Hutton 1897); The Sisters; Waitangi, Chatham Island; Kaingaroa (Richards 1958). Now only known from; Whangamarino, Taiko Camp, Henga Scenic Reserve on Chatham Island; The Sisters (neotype, only record of *Talitropsis* from The Sisters) (Trewick 1999a). NB records from South East Island (Rangatira) near Glory Bay, Pitt Island; Ouwenga, Mangere Island (Richards 1958), are now attributed to *Talitropsis megatibia*. The record from Banks Peninsula is dubious, the specimen is in such a bad state that it cannot be distinguished from the widespread New Zealand species *Talitropsis sedilloti*. No specimens of *T. crassicuris* have been collected from Banks Peninsula since, but *T. sedilloti* does occur in the region (S. Trewick pers. comm. 1999).

**Habitat:** Occurs on trees and shrubs at night. Have been extracted from narrow holes in living and dead wood by day (Trewick 1999a).

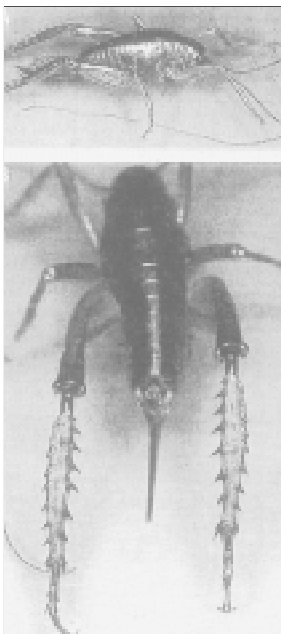
**Threats:** Habitat reduction due to burning, clearing, and general farming practices is suspected (Meads 1990c).

**Work Undertaken to Date:** *Talitropsis crassicuris* has been split into two species, *T. crassicuris* and *T. megatibia* (Trewick 1999a), since its inclusion and ranking in Molloy & Davis (1994).

**Priority Research, Survey, and Monitoring:** 1) Determine distribution and abundance of this species.

**Management Needs:** -

**Contacts:** Steve Trewick.



Top: Female, lateral view.  
 Middle: Female, rear view.  
 Bottom: Male.

Permission: SIR Publishing, Trewick 1999a, p 169, Figs. 3A, B.

Photo: Steve Trewick.

See Plate 2, No. 16.

