



NEW ZEALAND THREAT CLASSIFICATION SERIES 26

Conservation status of New Zealand Onychophora (‘peripatus’ or velvet worm), 2018

Steve Trewick, Rod Hitchmough, Jeremy Rolfe and Ian Stringer

Cover: *Peripatus indigo* at Kahurangi National Park. Photo: Steve Trewick.

New Zealand Threat Classification Series is a scientific monograph series presenting publications related to the New Zealand Threat Classification System (NZTCS). Most will be lists providing NZTCS status of members of a plant or animal group (e.g. algae, birds, spiders), each assessed once every 5 years. From time to time the manual that defines the categories, criteria and process for the NZTCS will be reviewed. Publications in this series are considered part of the formal international scientific literature.

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Abstract

The conservation status of 12 New Zealand onychophoran taxa (9 formally described and 3 undescribed entities) was assessed using the New Zealand Threat Classification System (NZTCS). A full list is presented, along with a statistical summary and brief notes on the most important changes. None are Threatened, 3 are At Risk (all Naturally Uncommon), 8 are Not Threatened and 1 is Data Deficient. This list replaces all previous NZTCS lists for Onychophora.

Keywords: New Zealand Threat Classification System, NZTCS, conservation status, Onychophora, Peripatopsidae, peripatus, velvet worm.

1. Summary

Only four New Zealand onychophoran ('peripatus' or velvet worm) species have been assessed previously using the New Zealand Threat Classification System (NZTCS) (Townsend et al. 2008; Hitchmough 2002; Hitchmough et al. 2007; Buckley et al. 2012), although two Not Threatened taxa were not reported in Buckley et al. (2012). In this report, the status of all 12 New Zealand Onychophora (family Peripatopsidae) is considered. All are endemic to New Zealand. Additional taxa may exist but available information is insufficient for assessment.

None are Threatened, 3 are At Risk (all Naturally Uncommon), 8 are Not Threatened and 1 is Data Deficient. None of the species assessed previously have had any change to their names. Species new to this list are itemised in Table 1, the numbers in each category in Buckley et al. (2012) and this assessment are summarised and compared in Table 2.

Only one species changed in status between the assessment of Buckley et al. (2012) and this one - *Peripatoides indigo* (Ruhberg, 1977) moved from Data Deficient to Naturally Uncommon, reflecting more knowledge about its distribution and abundance rather than a documented change. However, little is known about the influence of altitude and forest type on the distribution of *P. indigo* so it has been given the qualifiers Data Poor, Range restricted and Sparse.

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Table 1. Taxa added to the NZTCS list of New Zealand Onychophora in this document that were not in the previous assessment (Buckley et al. 2012).

NAME AND AUTHORITY
<i>Peripatoides aurorbis</i> Trewick, 1998
<i>Peripatoides kawekaensis</i> Trewick, 1998
<i>Peripatoides morgani</i> Trewick, 1998
<i>Peripatoides novaezealandiae</i> (Hutton, 1876)
<i>Peripatoides sympatrica</i> Trewick, 1998
<i>Peripatoides</i> “Catlins”
<i>Peripatoides</i> “Dunedin”
<i>Peripatoides</i> “Piano Flat”

Table 2. Statistical summary of the status of New Zealand Onychophora taxa assessed in 2010 (Buckley et al. 2012) and 2018 (this document).

CONSERVATION STATUS	2012	2018
Data Deficient	1	1
Naturally Uncommon	1	3
Not Threatened	2	8
Total	4	12

2. Conservation status of New Zealand Onychophora

Taxa are assessed according to the criteria of Townsend et al. (2008), grouped by conservation status, then alphabetically by scientific name.

The relevant assessment criteria, qualifiers and taxonomic status are also listed for each taxon. A summary of conservation status, criterion and qualifier definitions is provided (Table 3). See Townsend et al. (2008) for complete definitions and an explanation of the NZTCS assessment process.

Table 3. Conservation status of New Zealand Onychophora. All taxa are members of the family Peripatopsidae. They are known as ‘peripatus’ or velvet worms, and none have individual common names.

UMBRELLA CATEGORY	CONSERVATION STATUS	NAME AND AUTHORITY	CRITERIA	TAXONOMIC STATUS
Data Deficient	Data Deficient	<i>Peripatoides</i> “Piano Flat”		Indeterminate
At Risk	Naturally Uncommon	<i>Ooperipatellus nanus</i> Ruhberg, 1985	OL	Determinate
At Risk	Naturally Uncommon	<i>Peripatoides indigo</i> (Ruhberg, 1977)	DP, RR, Sp	Determinate
At Risk	Naturally Uncommon	<i>Peripatoides kawekaensis</i> Trewick, 1998		Determinate
Not Threatened	Not Threatened	<i>Ooperipatellus viridimaculatus</i> (Dendy, 1900)		Determinate
Not Threatened	Not Threatened	<i>Peripatoides</i> “Catlins”		Indeterminate
Not Threatened	Not Threatened	<i>Peripatoides</i> “Dunedin”		Indeterminate
Not Threatened	Not Threatened	<i>Peripatoides aurorbis</i> Trewick, 1998		Determinate
Not Threatened	Not Threatened	<i>Peripatoides morgani</i> Trewick, 1998		Determinate
Not Threatened	Not Threatened	<i>Peripatoides novaezealandiae</i> (Hutton, 1876)		Determinate
Not Threatened	Not Threatened	<i>Peripatoides suteri</i> (Dendy, 1894)		Determinate
Not Threatened	Not Threatened	<i>Peripatoides sympatrica</i> Trewick, 1998		Determinate

Categories and criteria:

Data Deficient

Taxa that are suspected to be threatened or, in some instances, possibly extinct but are not definitely known to belong to any particular category due to a lack of current information about their distribution and abundance. It is hoped that listing such taxa will stimulate research to find out the true category (for a fuller definition see Townsend et al. 2008).

Taxonomically determinate: 0
Taxonomically indeterminate: 1

At Risk

Naturally Uncommon

Taxa whose distribution is confined to a specific geographical area or which occur within naturally small and widely scattered populations, where this distribution is not the result of human disturbance.

Taxonomically determinate: 3
Taxonomically indeterminate: 0

Not Threatened

Resident native taxa that have large, stable populations.

Taxonomically determinate: 6
Taxonomically indeterminate: 2

Qualifiers:

See Townsend et al. (2008) for details of criteria and qualifiers, which are abbreviated as follows:

CD Conservation Dependent
De Designated
DP Data Poor
EF Extreme Fluctuations
EW Extinct in the Wild
IE Island Endemic
Inc Increasing
OL One Location
PD Partial Decline
RF Recruitment Failure
RR Range Restricted
SO Secure Overseas
Sp Sparse
St Stable
TO Threatened Overseas

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