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Conservation status of New Zealand stick insects, 2014

Thomas R. Buckley, Rod Hitchmough, Jeremy Rolfe and Ian Stringer

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Department of Conservation
Te Papa Atawhai

Cover: *Pseudoclitarchus sentus*, Three Kings Islands, 2008. *Photo: Thomas Buckley*

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). There are currently 23 groups, each assessed once every 3 years. After each three-year cycle there will be a report analysing and summarising trends across all groups for that listing cycle. 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 all known New Zealand stick insects (Phasmatodea: Phasmidae) (25 taxa and undescribed entities) was reassessed 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. This list replaces all previous NZTCS lists for stick insects.

Keywords: New Zealand Threat Classification System, NZTCS, conservation status, stick insects, Phasmatodea, Phasmidae, *Acanthoxyla*, *Argosatchus*, *Asteliaphasma*, *Clitarchus*, *Micrarchus*, *Niveaphasma*, *Pseudoclitarchus*, *Spinotectarchus*, *Tectarchus*, *Tepakiphasma*.

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1. Summary

The conservation status of all known New Zealand stick insects (Phasmatodea: Phasmidae) was assessed. The list previously included only five endemic species (Buckley et al. 2012). A further 20 endemic taxa and undescribed entities have been added to complete the assessment of the total known stick insect fauna of New Zealand (Table 1).

The threat status of each species included previously was reassessed but there were no changes. All 20 new additions were assessed as Not Threatened (Table 2).

Table 1. Taxa included in this document that were not listed in Buckley et al. (2012).

NAME AND AUTHORITY	NAME AND AUTHORITY
Acanthoxyla fasciata (Hutton, 1899)	*Asteliaphasma naomi* (Salmon, 1991)
Acanthoxyla geisovii (Kaup, 1866)	*Clitarchus hookeri* (White, 1846)
Acanthoxyla huttoni Salmon, 1955	*Micrarchus hystriculeus* Westwood, 1859
Acanthoxyla inermis Salmon, 1955	*Micrarchus* nov. sp. 1 (NZAC03000433)
Acanthoxyla intermedia Salmon, 1955	*Micrarchus* nov. sp. 2 (NZAC03009458)
Acanthoxyla prasina (Westwood, 1859)	*Niveaphasma annulatum* (Hutton, 1898)
Acanthoxyla speciosa Salmon, 1955	*Spinotectarchus acornutus* (Hutton, 1899)
Acanthoxyla suteri (Hutton, 1899)	*Tectarchus huttoni* (Brunner, 1907)
Argosarchus horridus (White, 1846)	*Tectarchus ovobessus* Salmon, 1954
Asteliaphasma jucundum (Salmon, 1991)	*Tectarchus salebrosus* (Hutton, 1899)

Table 2. Statistical summary of the status of New Zealand stick insect (Phasmatodea: Phasmidae) taxa and undescribed entities assessed in 2009 (Buckley et al. (2012) and 2014 (this document).

CATEGORY	BUCKLEY ET AL. (2012)	THIS DOCUMENT (2014)
Data Deficient	1	1
Threatened—Nationally Critical	1	1
At Risk—Naturally Uncommon	3	3
Not Threatened	0	20
Total	5	25

2. Conservation status of all known New Zealand stick insects (Phasmatodea: Phasmidae)

Table 3 lists all known New Zealand stick insects. Taxa are assessed according to the criteria of Townsend et al. (2008) and arranged alphabetically by scientific name.

Table 3. Conservation status of all known New Zealand stick insects (Phasmatodea: Phasmidae). Taxa are assessed according to the criteria of Townsend et al. (2008) and arranged alphabetically by scientific name.

NAME AND AUTHORITY	CATEGORY	CRITERIA	QUALIFIERS	TAXONOMIC STATUS
Acanthoxyla fasciata (Hutton, 1899)	Not Threatened			Determinate
Acanthoxyla geisovii (Kaup, 1866)	Not Threatened			Determinate
Acanthoxyla huttoni Salmon, 1955	Not Threatened			Determinate
Acanthoxyla inermis Salmon, 1955	Not Threatened			Determinate

Continued on next page

Table 3 continued

NAME AND AUTHORITY	CATEGORY	CRITERIA	QUALIFIERS	TAXONOMIC STATUS
Acanthoxyla intermedia Salmon, 1955	Not Threatened			Determinate
Acanthoxyla prasina (Westwood, 1859)	Not Threatened			Determinate
Acanthoxyla speciosa Salmon, 1955	Not Threatened			Determinate
Acanthoxyla suteri (Hutton, 1899)	Not Threatened			Determinate
Argosarchus horridus (White, 1846)	Not Threatened			Determinate
Asteliaphasma jucundum (Salmon, 1991)	Not Threatened			Determinate
Asteliaphasma naomi (Salmon, 1991)	Not Threatened			Determinate
Clitarchus hookeri (White, 1846)	Not Threatened			Determinate
Clitarchus tepaki Buckley, Myers & Bradler, sp. nov	Naturally Uncommon		RR	Determinate
Clitarchus rakauwhakanekeneke Buckley, Myers & Bradler, 2014	Naturally Uncommon		IE, RR	Determinate
Micrarchus nov. sp. 3 (NZAC03000053)	Data Deficient		IE, OL	Indeterminate
Micrarchus hystriculeus Westwood, 1859	Not Threatened			Determinate
Micrarchus nov. sp. 1 (NZAC03000433)	Not Threatened			Determinate
Micrarchus nov. sp. 2 (NZAC03009458)	Not Threatened			Determinate
Niveaphasma annulatum (Hutton, 1898)	Not Threatened			Determinate
Pseudoclitarchus sentus (Salmon, 1948)	Naturally Uncommon		IE, RR	Determinate
Spinotectarchus acornutus (Hutton, 1899)	Not Threatened			Determinate
Tectarchus huttoni (Brunner, 1907)	Not Threatened			Determinate
Tectarchus ovobessus Salmon, 1954	Not Threatened			Determinate
Tectarchus salebrosus (Hutton, 1899)	Not Threatened			Determinate
Tepakiphasma ngatikuri Buckley & Bradler, 2010	Nationally Critical	A (3)	CD, OL	Determinate

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

CD	Conservation Dependent
IE	Island Endemic
OL	One Location
RR	Range Restricted

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).

Threatened
Taxa that meet the criteria specified by Townsend et al. (2008) for the categories Nationally Critical, Nationally Endangered and Nationally Vulnerable.

Nationally Critical
Criteria for Nationally Critical:

A—very small population (natural or unnatural)
A(3) Total area of occupancy ≤1 ha (0.01 km^2)

At Risk
Taxa that meet the criteria specified by Townsend et al. (2008) for Declining, Recovering, Relict and Naturally Uncommon.

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.

Not Threatened
Resident native taxa that have large, stable populations.

3. References

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