NEW ZEALAND THREAT CLASSIFICATION SERIES 8

Conservation status of New Zealand freshwater invertebrates, 2013

Natasha Grainger, Kevin Collier, Rod Hitchmough, Jon Harding, Brian Smith and Darin Sutherland

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Cover: *Polyplectropus* sp. *Photo: Brian Smith, NIWA*.

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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Conservation status of New Zealand freshwater invertebrates, 2013

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Abstract

The conservation status of 644 freshwater invertebrate taxa, across five Phyla, 28 Orders and 75 Families, was assessed using the New Zealand Threat Classification System (NZTCS) criteria. Forty-six species were ranked Nationally Critical, 11 Nationally Endangered and 16 Nationally Vulnerable. One hundred and seventy-two taxa were listed as Data Deficient. A full list is presented, along with summaries and brief notes on the most important changes. This list replaces all previous NZTCS lists for freshwater invertebrates.

Keywords: New Zealand Threat Classification System, conservation status, freshwater invertebrates.

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1. Summary

The conservation status of freshwater invertebrates was assessed using the New Zealand Threat Classification System (NZTCS) criteria (Townsend et al. 2008). This is the first freshwater invertebrate list to be prepared under the Townsend et al. (2008) system. The previous freshwater invertebrate list was prepared in 2005 using the Molloy et al. (2002) New Zealand Threat Classification System and published in Hitchmough et al. (2007). Prior to this, 79 freshwater species were ranked in 2001 (Hitchmough 2002), and two species were assessed by Molloy & Davis (1992).

Hitchmough et al. (2007) assessed the conservation status of 143 freshwater invertebrate taxa while the 2013 panel expanded this by assessing the conservation status of 644 taxa, across five Phyla, 28 Orders and 75 Families. This is the first time a systematic approach has been taken to assess the conservation status of all native taxa in most of the Orders that have freshwater taxa within them, rather than just those that might be threatened. In some other Orders, not all of the taxa could be assessed, but possibly threatened taxa were. A more detailed analysis of the coverage of this process will be published elsewhere.

The 2005 list (Hitchmough et al. 2007) had two species listed that are now not considered valid species and they were removed from the list (Table 1), and another eight freshwater species that have subsequently been assessed by other expert panels (two Diptera in Andrew et al. (2012) and six Coleoptera in Leschen et al. (2012)) so they were omitted from this assessment (Table 2). One other species; the nematode *Michoncus rex*, also listed on the 2005 freshwater invertebrate list was re-ranked in 2012 by a terrestrial expert panel as Not Threatened (Yeates et al. 2012), but this ranking was not agreed by our panel. This poorly known aquatic species is only known from collections in 1904 from Lakes Manapouri and Wakatipu, and the panel felt it was more appropriately listed on the freshwater invertebrate list. Due to the lack of information about this nematode it has been listed as Data Deficient. This assessment of *Miconchus rex* replaces the assessment for it in Yeates et al. (2012).

Table 1. Freshwater invertebrate taxa considered Taxonomically Indistinct and not assessed.

NAME AND AUTHORITY	COMMON NAME	FAMILY
Latia climoi Starobogatov, 1986	Limpet	Latiidae
Cucumerunio websteri delli (Simpson, 1902)	Mussel	Hyriidae

Table 2. Freshwater invertebrate taxa ranked by other expert panels and excluded from this assessment. Beetles were assessed by Leschen et al. (2012) and net-winged midges (Blephariceridae) by Andrew et al. (2012).

NAME AND AUTHORITY	FAMILY	2005 RANKING	2012 RANKING
Beetles			
Rhantus plantaris Sharp, 1882	Dytiscidae	Nationally Critical	Naturally Uncommon
Rhantus schauinslandi Ordish, 1989	Dytiscidae	Nationally Critical	Nationally Critical
Gyrinus convexiusculus Macleay, 1871	Gyrinidae	Not ranked	Naturally Uncommon
Orchymontia dugdalei Ordish, 1984	Hydraenidae	Not ranked	Naturally Uncommon
Orchymontia laminifera Ordish, 1984	Hydraenidae	Not ranked	Naturally Uncommon
Horelophus walkeri d'Orchmont 1913	Hydrophilidae	Not ranked	Nationally Endangered
Net-winged midges			
Neocurupira chiltoni (Campbell, 1921)	Blephariceridae	Range Restricted	Naturally Uncommon
Nothohoraia micrognathia Craig, 1969	Blephariceridae	Data Deficient	Naturally Uncommon

Since Hitchmough et al. (2007), 70 species have been taxonomically revised (Table 3). Considerable work has been done by Ian Henderson, Kjell Johanson and John Ward on caddisflies and by Martin Hasse on snails, particularly Tateidae (formerly Hydrobiidae).

Table 3. Name changes affecting New Zealand freshwater invertebrates since the publication of Hitchmough et al. (2007).

NAME IN 2005 LIST	NAME IN THIS DOCUMENT	COMMON NAME
Phylum Arthropoda		
Alloecentrella species C	*Alloecentrella incisus* Henderson & Ward, 2007	Caddisfly
Edpercivalia sp. G	*Edpercivalia flintorum Ward 2005*	Caddisfly
Helicopsyche cuvieri Johanson	*Helicopsyche* (*Saetotricha*) *cuvieri* Johanson, 1999	Caddisfly
Helicopsyche haurapango Johanson	*Helicopsyche* (*Saetotricha*) *haurapango* Johanson, 1999	Caddisfly
Helicopsyche torino Johanson	*Helicopsyche* (*Saetotricha*) *torino* Johanson, 1999	Caddisfly
Oxyethira waipoua Wise, 1998	*Oxyethira* (*Trichoglene*) *waipoua* Wise, 1998	Caddisfly
Paroxyethira sp. B	*Paroxyethira zoae* Ward & Henderson 2004	Caddisfly
Paroxyethira sp. H	*Paroxyethira hughwilsoni* Ward & Henderson, 2004	Caddisfly
Paroxyethira sp. S	*Paroxyethira sarae* Ward & Henderson 2004	Caddisfly
Paroxyethira sp. W	*Paroxyethira manapouri* Ward & Henderson 2004	Caddisfly
Paroxyethira sp. WP	*Paroxyethira ramifera* Ward & Henderson 2004	Caddisfly
Deleatidium magnum	*Deleatidium* (*Deleatidium*) *magnum* Towns & Peters, 1996	Mayfly
Phylum Arthropoda, subphylum Crustacea		
Lepiduris viridus	*Lepidurus apus viridus* (Baird, 1850)	Tadpole shrimp
Phylum Mollusca		
Cucumerunio websteri websteri (Simpson, 1902)	*Echyridella aucklandica* (Gray, 1843)	Mussel
Hyridella menziesii (Gray, 1843)	*Echyridella menziesii* (Dieffenbach, 1843)	Mussel
Catapyrgus spelaeus Climo, 1973 & Hydrobiidae sp. 37 (M.174163)	*Catapyrgus spelaeus* Climo, 1973	Snail
Hydrobiidae sp. 1 (M.174057)	*Potamopyrgus kaitunuparaoa* Haase, 2008	Snail
Hydrobiidae sp. 2 (M.174060)	*Potamopyrgus acus* Haase, 2008	Snail
Hydrobiidae sp. 3 (M.174062)	*Potamopyrgus oppidanus* Haase, 2008	Snail
Hydrobiidae sp. 4 (M.174064)	*Potamopyrgus doci* Haase, 2008	Snail
Hydrobiidae sp. 6 (M.174075)	*Sororipyrgus raki* Haase, 2008	Snail
Hydrobiidae sp. 7 (M.174081)	*Sororipyrgus marshalli* Haase, 2008	Snail
Hydrobiidae sp. 8 (M.174083)	*Sororipyrgus kutukutu* Haase, 2008	Snail
Hydrobiidae sp. 9 (M.174091)	*Leptopyrgus melbourni* Haase, 2008	Snail
Hydrobiidae sp. 10 (M.174095)	*Leptopyrgus tainui* Haase, 2008	Snail
Hydrobiidae sp. 11 (M.174101)	*Opacuincola dulcinella* Haase, 2008	Snail
Hydrobiidae sp. 12 (M.174104)	*Opacuincola johanstraussi* Haase, 2008	Snail
Hydrobiidae sp. 13 (M.174115)	*Opacuincola eduardstraussi* Haase, 2008	Snail
Hydrobiidae sp. 14 (M.174117)	*Opacuincola josefstraussi* Haase, 2008	Snail
Hydrobiidae sp. 15 (M.174119)	*Opacuincola cervicesmadentes* Haase, 2008	Snail
Hydrobiidae sp. 16 (M.174121)	*Opacuincola ngatapuna* Haase, 2008	Snail
Hydrobiidae sp. 17 (M.174124)	*Opacuincola delira* Haase, 2008	Snail
Hydrobiidae sp. 18 (M.174131)	*Opacuincola terraelapsus* Haase, 2008	Snail
Hydrobiidae sp. 19 (M.174133)	*Opacuincola mete* Haase, 2008	Snail
Hydrobiidae sp. 20 (M.174135)	*Opacuincola permutata* Haase, 2008	Snail
Hydrobiidae sp. 21 (M.174139)	*Opacuincola takakaensis* Haase, 2008	Snail
Hydrobiidae sp. 22 (M.174051)	*Opacuincola lentesferens* Haase, 2008	Snail
Hydrobiidae sp. 23 (M.174140)	*Opacuincola ignorata* Haase, 2008	Snail

Continued on next page

Table 3—continued

NAME IN 2005 LIST	NAME IN THIS DOCUMENT	COMMON NAME
Hydrobiidae sp. 24 (M.174141)	*Opacuincola roscoe*i Haase, 2008	Snail
Hydrobiidae sp. 25 (M.174142)	*Opacuincola geometrica* Haase, 2008	Snail
Hydrobiidae sp. 26 (M.174143)	*Opacuincola turriformis* Haase, 2008	Snail
Hydrobiidae sp. 27 (M.174188)	*Opacuincola ovata* Haase, 2008	Snail
Hydrobiidae sp. 28 (M.174106)	*Opacuincola fruticis* Haase, 2008	Snail
Hydrobiidae sp. 29 (M.174146)	*Opacuincola abradeta* Haase, 2008	Snail
Hydrobiidae sp. 30 (M.174148)	*Opacuincola favus* Haase, 2008	Snail
Hydrobiidae sp. 31 (M.174150)	*Opacuincola piriformis* Haase, 2008	Snail
Hydrobiidae sp. 32 (M.174151)	*Opacuincola conosimilis* Haase, 2008	Snail
Hydrobiidae sp. 33 (M.174154)	*Hadopyrgus ngataana* Haase, 2008	Snail
Hydrobiidae sp. 34 (M.174193)	*Hadopyrgus rawhiti* Haase, 2008	Snail
Hydrobiidae sp. 35 (AK 69073)	*Hadopyrgus expositus* Haase, 2008	Snail
Hydrobiidae sp. 36 (M.174156)	*Hadopyrgus dubius* Haase, 2008	Snail
Hydrobiidae sp. 37 (M.174163) & *Catapyrgus spelaeus* Climo, 1973	*Catapyrgus spelaeus* Climo, 1973	Snail
Hydrobiidae sp. 38 (M.174165)	*Catapyrgus sororius* Haase, 2008	Snail
Hydrobiidae sp. 39 (M.174166)	*Catapyrgus matapango* Haase, 2008	Snail
Hydrobiidae sp. 40 (M.174174)	*Obtusopyrgus alpinus* Haase, 2008	Snail
Hydrobiidae sp. 41 (M.174175)	*Tongapyrgus kohitatea* Haase, 2008	Snail
Hydrobiidae sp. 42 (M.174202)	*Meridiopyrgus murihiku* Haase, 2008	Snail
Hydrobiidae sp. 43 (M.174181)	*Meridiopyrgus muaupoko* Haase, 2008	Snail
Hydrobiidae sp. 44 (M.174197)	*Meridiopyrgus pupiformis* Haase, 2008	Snail
Hydrobiidae sp. 45 (M.174184)	*Meridiopyrgus inanga* Haase, 2008	Snail
Hydrobiidae sp. 46 (AK48942)	*Rakiurapyrgus micula* Haase, 2008	Snail
Lymnaea tomentosa (Pfeiffer, 1855)	*Austropeplea tomentosa* (Pfeiffer, 1855)	Snail
Potamopyrgus cresswelli Climo, 1974	*Rakiurapyrgus cresswelli* (Climo, 1974)	Snail
Potamopyrgus gardneri Climo, 1974	*Rakipyrgus gardneri* (Climo, 1974)	Snail
Potamopyrgus manneringi Climo, 1974	*Leptopyrgus manneringi* (Climo, 1974)	Snail
Potamopyrgus pupoides Hutton, 1882	*Halopyrgus pupoides* (Hutton, 1882)	Snail
Potamopyrgus subterraneus (Suter, 1905)	*Tongapyrgus subterraneus* (Suter, 1905)	Snail
Saganoa inflata (Climo, 1974)	*Kuschelita inflata* Climo, 1974	Snail
Saganoa mica (Climo, 1974)	*Kuschelita mica* Climo, 1974	Snail

In 2005 (Hitchmough et al. 2007), 143 taxa were assessed; the panel increased this number fourfold to 644 (Table 4). The largest increases were seen in caddisflies, stoneflies and beetles. The increase in number of taxa reviewed was due to a more intensive review process, greater use of databases and wider consultation rather than through advances in taxonomy.

While the number and type of species assessed can be compared between listings, presenting summaries of the changes in threat status between lists for all taxa is problematic, as they have been compiled under different threat classification systems and because a large number of taxa (501) have been added in this assessment. However, a summary comparison of the threat status of the 143 taxa that were assessed in 2005 with their status in 2013 is presented in Table 4.

The number and proportion of taxa assigned to each category in 2005 and 2013 is presented in Table 5. In 2005, the majority of taxa classified were designated as Naturally Uncommon, whereas in 2013, Naturally Uncommon taxa declined and the number of Data Deficient taxa increased to 26.7% of the total taxa assessed.

Table 4. Summary of freshwater invertebrate taxa assessed in 2005 and the threat categories to which they have been assigned in 2013.

CONSERVATION STATUS 2005			CONSERVATION STATUS 2013								
		Total	Data Deficient	Nationally Critical	Nationally Endangered	Nationally Vulnerable	Declining	Naturally Uncommon	Not Threatened	Taxonomically Indistinct	Evaluated by other panel
Data Deficient		27	14		1	2		4	3	2	1
Acutely Threatened	Nationally critical	11	6	2				1			2
	Nationally vulnerable	1					1				
	Nationally endangered	2			1	1					
Chronically Threatened	Gradual decline	3					2		1		
At Risk	Range restricted	86*	39	18	5	4	1	16	1		1
	Sparse	11	2		1		1	4	3		
Not Threatened	Not threatened	2				1			1		
Total		143	61	20	8	8	5	25	9	2	4

* Note that in 2005 *Catapyrgus spelaeus* and Hydrobiidae sp. 37 were assessed as two separate species, but in 2013 they are considered the same Naturally Uncommon species. Therefore, the Conservation Status 2013 columns in the Range Restricted row sum to 85 not 86.

Table 5. Comparison of the status of New Zealand freshwater invertebrates assessed in 2005 (Hitchmough et al. 2007) and 2013 (this document).

Note: the 2005 categories (Molloy et al. 2002) are not directly comparable with the 2013 categories (Townsend et al. 2008), but they have been aligned with their nearest 2013 equivalent.

CATEGORY	TOTAL 2005	TOTAL 2013
Extinct	0	0
Data Deficient	27	172
Threatened—Nationally Critical	11	46
Threatened—Nationally Endangered	2	11
Threatened—Nationally Vulnerable	1	16
At Risk—Declining	3	9
At Risk—Recovering	0	0
At Risk—Relict	0	0
At Risk—Naturally Uncommon	97*	80
Non-resident native—Migrant	0	0
Non-resident native—Vagrant	0	1
Non-resident native—Coloniser	0	5
Not Threatened	2	296
Introduced and Naturalised	0	0
Evaluated by other expert panels	0	8
Total	**143**	**644**

* This figure includes 11 taxa listed as Sparse and 86 listed as Range Restricted according to the categories of Molloy et al. (2002).

Table 6 summarises the threat category distributions of the 644 taxa assessed in 2013 in comparison with those in 2005.

No freshwater invertebrate taxa have been listed as Extinct, although four species may be. To our knowledge, there have been no recent collections of these species, so two were assessed as Nationally Critical using available information (the caddisfly *Edpercivalia dugdalei* and the snail *Potamopyrgus acus*) and the other two were listed as Data Deficient (the caddisfly *Psilochorema spiniharpax* and the mayfly *Oniscigaster intermedius*). In addition, a number of other species are known from one specimen or have not been seen since they were described.

Four of the 11 freshwater invertebrate taxa listed as Nationally Critical in 2005 have remained in the Nationally Critical category while six have been re-classified as Data Deficient and one as Naturally Uncommon. The large number of taxa classified as Data Deficient (172) combined with taxa that have the qualifier Data Poor highlights the need for more distribution surveys to make informed assessments. Of the 27 taxa listed as Data Deficient in 2005, 14 remain Data Deficient, while the others have now been assigned to a threat category.

Taxa can change status between listings either as a result of better understanding of distribution and population trend, or genuine changes in abundance or range, or, with this being the first listing of freshwater invertebrates using the Townsend et al. (2008) criteria, as a result of changes to the categories and criteria themselves. A more detailed analysis of the changes between the two listings and the drivers of changes in status will be published elsewhere.

Table 6. Summary of status changes of freshwater invertebrate taxa between 2005 (Hitchmough et al. 2007) and 2013 (this document).

CONSERVATION STATUS 2013	CONSERVATION STATUS 2005	DETERMINATE	INDETERMINATE	TOTAL
DATA DEFICIENT		**145**	**27**	**172**
	Data Deficient	10	4	14
	Nationally Critical	6	0	6
	Range Restricted	39	0	39
	Sparse	2	0	2
	Not listed	88	23	111
THREATENED		**66**	**7**	**73**
Nationally Critical		**42**	**4**	**46**
	Nationally Critical	2	0	2
	Not listed	33	4	37
	Range Restricted	7	0	7
Nationally Endangered		**9**	**2**	**11**
	Not listed	6	2	8
	Range Restricted	3	0	3
Nationally Vulnerable		**15**	**1**	**16**
	Not listed	13	1	14
	Not Threatened	1	0	1
	Range Restricted	1	0	1
AT RISK		**82**	**7**	**89**
Declining		**8**	**1**	**9**
	Nationally Vulnerable	1	0	1
	Not listed	7	1	8
Naturally Uncommon		**74**	**6**	**80**
	Data Deficient	2	0	2
	Nationally Critical	1	0	1
	Not listed	64	6	70
	Range Restricted	5	0	5
	Sparse	2	0	2
NON-RESIDENT NATIVE		**6**	**0**	**6**
Vagrant		**1**	**0**	**1**
	Not listed	1	0	1
Coloniser		**5**	**0**	**5**
	Not listed	5	0	5
NOT THREATENED		**287**	**9**	**296**
	Not listed	284	9	293
	Not Threatened	1	0	1
	Sparse	2	0	2
EVALUATED BY OTHER PANEL		**8**	**0**	**8**
	Data Deficient	1	0	1
	Nationally Critical	2	0	2
	Range Restriced	1	0	1
	Not listed	4	0	4
TOTAL		**594**	**50**	**644**

2. Conservation status of New Zealand freshwater invertebrates

The revised threat ranking for freshwater invertebrate taxa is provided in this section and replaces all previous NZTCS lists for freshwater invertebrates.

Taxa were assessed according to the criteria of Townsend et al. (2008). They have first been grouped by conservation status, then alphabetically by Phyla, then alphabetically by common name, then alphabetically by family and scientific name so that the large variety of invertebrates can be quickly located in the tables. Categories are ordered by degree of loss, with Extinct at the top of the list and Not Threatened at the bottom. The Data Deficient table is inserted between Extinct and Threatened categories. Although the true status of Data Deficient taxa will span the entire range of available categories, taxa are often included because they are very seldom collected, so many are likely to end up being considered threatened and some may even already be extinct. Therefore, the Data Deficient list is likely to include many of the most threatened species in New Zealand. The Non-resident Native categories (Migrant, Vagrant and Coloniser) are listed below the At Risk and above the Not Threatened categories.

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

2.1 Taxonomically determinate

Extinct (0)

Taxa for which there is no reasonable doubt—following repeated surveys in known or expected habitats at appropriate times (diurnal, seasonal and annual) and throughout the taxon's historic range—that the last individual has died.

No freshwater invertebrate taxa were ranked as Extinct.

Data Deficient (145)

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

NAME AND AUTHORITY	COMMON NAME	FAMILY	QUALIFIERS
Phylum Annelida			
Scolecolepides freemani Mitchell & Edwards, 1988	Polychaete worm	Spionidae	
Phylum Arthropoda			
Antiporus femoralis (Boheman, 1858)	Beetle	Dytiscidae	
Exocelina australis (Clark, 1863)	Beetle	Dytiscidae	
Hyphydrus (*Apriophorus*) *elegans* (Montrouzier, 1860)	Beetle	Dytiscidae	
Kuschelydrus phreaticus Ordish, 1976	Beetle	Dytiscidae	RR
Phreatodessus hades Ordish, 1976	Beetle	Dytiscidae	RR
Phreatodessus pluto Ordish, 1991	Beetle	Dytiscidae	RR
Hydora angusticollis (Pascoe, 1877)	Beetle	Elmidae	
Hydora lanigera Broun, 1914	Beetle	Elmidae	
Hydora nitida Broun, 1885	Beetle	Elmidae	
Hydora obsoleta Broun, 1885	Beetle	Elmidae	
Hydora picea (Broun, 1881)	Beetle	Elmidae	
Hydora subaenea Broun, 1914	Beetle	Elmidae	
Homalaena acuta Ordish, 1984	Beetle	Hydraenidae	
Homalaena carinata Ordish, 1984	Beetle	Hydraenidae	
Homalaena dilatata Ordish, 1984	Beetle	Hydraenidae	
Homalaena dispersa Ordish, 1984	Beetle	Hydraenidae	
Homalaena nelsonensis Ordish, 1984	Beetle	Hydraenidae	
Homalaena setosa Ordish, 1984	Beetle	Hydraenidae	
Homalaena spatulata Ordish, 1984	Beetle	Hydraenidae	
Hydraena (*Hydraena*) *ordishi* Delgado & Palma, 1997	Beetle	Hydraenidae	
Hydraena (*Hydraena*) *zealandica* Ordish, 1984	Beetle	Hydraenidae	
Orchymontia bidentata Ordish, 1984	Beetle	Hydraenidae	
Orchymontia calcarata Ordish, 1984	Beetle	Hydraenidae	
Orchymontia ciliata Ordish, 1984	Beetle	Hydraenidae	
Orchymontia crassifemur Ordish, 1984	Beetle	Hydraenidae	
Orchymontia curvipes Ordish, 1984	Beetle	Hydraenidae	
Orchymontia dilatata Ordish, 1984	Beetle	Hydraenidae	
Orchymontia latispina Ordish, 1984	Beetle	Hydraenidae	
Orchymontia nunni Delgado & Palma, 2000	Beetle	Hydraenidae	RR
Orchymontia otagensis Ordish, 1984	Beetle	Hydraenidae	
Orchymontia spinipennis Broun, 1919	Beetle	Hydraenidae	
Orchymontia vulgaris Ordish, 1984	Beetle	Hydraenidae	
Podaena glabriventris Ordish, 1984	Beetle	Hydraenidae	
Podaena mariae Delgado & Palma, 2010	Beetle	Hydraenidae	
Cylomissus glabratus Broun, 1903	Beetle	Hydraenidae	
Enochrus (*Methydrus*) *abditus* Sharp, 1884	Beetle	Hydraenidae	
Laccobius (*Platylaccobius*) *arrowi* d'Orchymont, 1925	Beetle	Hydraenidae	
Limnoxenus zealandicus (Broun, 1880)	Beetle	Hydraenidae	
Olinga christinae Ward & McKenzie, 1998	Caddisfly	Conoesucidae	
Helicopsyche (*Saetotricha*) *cuvieri* Johanson, 1999	Caddisfly	Helicopsychidae	IE, OL
Helicopsyche (*Saetotricha*) *haurapango* Johanson, 1999	Caddisfly	Helicopsychidae	
Edpercivalia flintorum Ward, 2005	Caddisfly	Hydrobiosidae	OL
Erichorema basale Ward, Leschen, Smith & Dean, 2004	Caddisfly	Hydrobiosidae	OL
Hydrobiosis taumata Ward, 1997	Caddisfly	Hydrobiosidae	RR
Neurochorema pilosum McFarlane, 1964	Caddisfly	Hydrobiosidae	
Psilochorema folioharpax McFarlane, 1956	Caddisfly	Hydrobiosidae	Sp
Psilochorema spiniharpax Ward, 1995	Caddisfly	Hydrobiosidae	OL

Continued on next page

Data Deficient—continued

NAME AND AUTHORITY	COMMON NAME	FAMILY	QUALIFIERS
Tiphobiosis kuscheli Wise, 1972	Caddisfly	Hydrobiosidae	IE, OL
Tiphobiosis quadrifurca Ward, 1997	Caddisfly	Hydrobiosidae	OL
Tiphobiosis salmoni McFarlane, 1981	Caddisfly	Hydrobiosidae	RR
Tiphobiosis schmidi Ward, 1998	Caddisfly	Hydrobiosidae	OL
Oxyethira (*Trichoglene*) *kirikiriroa* Smith, 2008	Caddisfly	Hydroptilidae	OL
Oxyethira (*Trichoglene*) *waipoua* Wise, 1998	Caddisfly	Hydroptilidae	RR, Sp
Paroxyethira hughwilsoni Ward & Henderson, 2004	Caddisfly	Hydroptilidae	Sp
Paroxyethira kimminsi Leader, 1972	Caddisfly	Hydroptilidae	Sp
Paroxyethira manapouri Ward & Henderson, 2004	Caddisfly	Hydroptilidae	OL
Paroxyethira ramifera Ward & Henderson, 2004	Caddisfly	Hydroptilidae	RR, Sp
Paroxyethira sarae Ward & Henderson, 2004	Caddisfly	Hydroptilidae	
Paroxyethira zoae Ward & Henderson, 2004	Caddisfly	Hydroptilidae	RR
Xuthotrichia aotea Ward & Henderson, 2004	Caddisfly	Hydroptilidae	Sp
Pseudoeconesus geraldinae Ward, 1997	Caddisfly	Oeconesidae	OL
Pseudoeconesus haasti Ward, 1997	Caddisfly	Oeconesidae	OL
Philorheithrus litoralis Henderson & Ward, 2006	Caddisfly	Philorheithridae	RR
Zephlebia tuberculata Towns & Peters, 1996	Mayfly	Leptophlebiidae	
Oniscigaster intermedius Eaton, 1899	Mayfly	Oniscigastridae	
Acroperla christinae McLellan, 1998	Stonefly	Gripopterygidae	
Vesicaperla eylesi McLellan, 1977	Stonefly	Gripopterygidae	OL
Vesicaperla kuscheli McLellan, 1977	Stonefly	Gripopterygidae	OL
Vesicaperla townsendi McLellan, 1977	Stonefly	Gripopterygidae	OL
Zelandobius auratus McLellan, 1993	Stonefly	Gripopterygidae	RR
Zelandobius brevicauda McLellan, 1977	Stonefly	Gripopterygidae	RR
Zelandobius dugdalei McLellan, 1993	Stonefly	Gripopterygidae	RR, Sp
Zelandobius edensis Gray, 2009	Stonefly	Gripopterygidae	Sp
Zelandobius inversus McLellan, 1993	Stonefly	Gripopterygidae	
Zelandobius jacksoni McLellan, 1993	Stonefly	Gripopterygidae	RR
Zelandobius macburneyi McLellan, 1993	Stonefly	Gripopterygidae	
Zelandobius montanus McLellan, 1993	Stonefly	Gripopterygidae	RR
Zelandobius ngaire McLellan, 1993	Stonefly	Gripopterygidae	RR
Zelandobius peglegensis McLellan, 1993	Stonefly	Gripopterygidae	
Zelandobius takahe McLellan, 1993	Stonefly	Gripopterygidae	
Zelandobius uniramus McLellan, 1993	Stonefly	Gripopterygidae	
Notonemoura hendersoni McLellan, 2000	Stonefly	Notonemouridae	RR
Notonemoura spinosa McLellan, 1991	Stonefly	Notonemouridae	OL
Otehiwi sagittarius McLellan, 2003	Stonefly	Notonemouridae	OL
Spaniocerca hamishi McLellan, 2000	Stonefly	Notonemouridae	RR
Spaniocercoides jacksoni McLellan, 1991	Stonefly	Notonemouridae	OL
Spaniocercoides watti McLellan, 1984	Stonefly	Notonemouridae	
Phylum Arthropoda, subphylum Crustacea			
Allorchestes compressus (Bousfield, 1964)	Amphipod	Hyalidae	
Paracalliope karitane Barnard, 1972	Amphipod	Paracalliopiidae	RR
Paracrangonyx compactus (Chilton, 1882)	Amphipod	Paracrangonyctidae	
Paracrangonyx winterbourni Fenwick, 2001	Amphipod	Paracrangonyctidae	
Paraleptamphopus caeruleus (Thomson, 1885)	Amphipod	Paraleptamphopidae	
Paraleptamphopus subterraneus (Chilton, 1882)	Amphipod	Paraleptamphopidae	
Ringanui koonuiroa Fenwick, 2006	Amphipod	Paraleptamphopidae	
Ringanui toonuiiti Fenwick, 2006	Amphipod	Paraleptamphopidae	
Phreatogammarus fragilis (Chilton, 1882)	Amphipod	Phreatogammaridae	
Phreatogammarus waipoua Chapman, 2003	Amphipod	Phreatogammaridae	RR, Sp

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Data Deficient—continued

NAME AND AUTHORITY	COMMON NAME	FAMILY	QUALIFIERS
Austridotea annectens Nicholls, 1938	Isopod	Idoteidae	
Neophreatoicus assimilis (Chilton, 1894)	Isopod	Phreatoicidae	
Phreatoicus orarii Nicholls, 1944	Isopod	Phreatoicidae	
Phreatoicus typicus Chilton, 1883	Isopod	Phreatoicidae	
Makarasphaera amnicosa Bruce, 2005	Isopod	Sphaeromatidae	Sp
Phyllum Mollusca			
Latia lateralis (Gould, 1852)	Limpet	Latiidae	
Austropeplea tomentosa (Pfeiffer, 1855)	Snail	Lymnaeidae	
Glyptophysa variabilis (Gray, 1843)	Snail	Planorbidae	PD
Gyraulus kahuica (Finlay & Laws, 1931)	Snail	Planorbidae	
Hadopyrgus anops Climo, 1974	Snail	Tateidae	RR
Hadopyrgus brevis Climo, 1974	Snail	Tateidae	RR
Hadopyrgus dubius Haase, 2008	Snail	Tateidae	OL
Kuschelita inflata (Climo, 1974)	Snail	Tateidae	OL
Kuschelita mica Climo, 1974	Snail	Tateidae	OL, RR
Leptopyrgus melbourni Haase, 2008	Snail	Tateidae	RR
Meridiopyrgus inanga Haase, 2008	Snail	Tateidae	OL
Meridiopyrgus murihiku Haase, 2008	Snail	Tateidae	Sp
Meridiopyrgus pupiformis Haase, 2008	Snail	Tateidae	OL
Obtusopyrgus alpinus Haase, 2008	Snail	Tateidae	Sp
Opacuincola abradeta Haase, 2008	Snail	Tateidae	OL
Opacuincola conosimilis Haase, 2008	Snail	Tateidae	OL
Opacuincola favus Haase, 2008	Snail	Tateidae	RR
Opacuincola fruticis Haase, 2008	Snail	Tateidae	OL
Opacuincola geometrica Haase, 2008	Snail	Tateidae	OL
Opacuincola ignorata Haase, 2008	Snail	Tateidae	RR
Opacuincola johanstraussi Haase, 2008	Snail	Tateidae	RR
Opacuincola josefstraussi Haase, 2008	Snail	Tateidae	RR
Opacuincola kuscheli Climo, 1974	Snail	Tateidae	RR
Opacuincola lentesferens Haase, 2008	Snail	Tateidae	OL
Opacuincola mete Haase, 2008	Snail	Tateidae	OL
Opacuincola ngatapuna Haase, 2008	Snail	Tateidae	RR
Opacuincola ovata Haase, 2008	Snail	Tateidae	OL
Opacuincola permutata Haase, 2008	Snail	Tateidae	OL
Opacuincola piriformis Haase, 2008	Snail	Tateidae	OL
Opacuincola roscoei Haase, 2008	Snail	Tateidae	RR
Opacuincola takakaensis Haase, 2008	Snail	Tateidae	OL, RR
Opacuincola terraelapsus Haase, 2008	Snail	Tateidae	RR
Opacuincola turriformis Haase, 2008	Snail	Tateidae	RR
Platypyrgus nelsonensis (Climo, 1977)	Snail	Tateidae	RR
Potamopyrgus kaitunuparaoa Haase, 2008	Snail	Tateidae	RR
Rakiurapyrgus micula Haase, 2008	Snail	Tateidae	OL
Tongapyrgus kohitatea Haase, 2008	Snail	Tateidae	Sp
Tongapyrgus subterraneus (Suter, 1905)	Snail	Tateidae	
Phylum Nemotoda			
Miconchus rex (Cobb, 1904) Andrassy, 1958	Nematode	Anatonchidae	
Phylum Platyhelminthes			
Chonostomum crenulatum Schmarda, 1859	Flatworm	Dalyellidae	
Spathula fontinalis Nurse, 1950	Flatworm	Dalyellidae	RR
Spathula limicola Nurse, 1950	Flatworm	Dalyellidae	

Threatened (66)

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

Nationally Critical (42)

Criteria for Nationally Critical:

A—very small population (natural or unnatural)

A(1) <250 mature individuals, regardless of cause
A(2) ≤2 subpopulations, ≤200 mature individuals in the larger subpopulation
A(3) Total area of occupancy ≤1 ha (0.01 km^2)

B—small population (natural or unnatural) with a high ongoing or predicted decline

B(1/1) 250–1000 mature individuals, predicted decline 50–70%
B(2/1) ≤5 subpopulations, ≤300 mature individuals in the largest subpopulation, predicted decline 50–70%
B(3/1) Total area of occupancy ≤10 ha (0.1 km^2), predicted decline 50–70%

C—population (irrespective of size or number of sub-populations) with a very high ongoing or predicted decline (>70%).

C Predicted decline >70%

NAME AND AUTHORITY	COMMON NAME	FAMILY	CRITERIA	QUALIFIERS
Phylum Arthropoda				
Edpercivalia dugdalei Ward, 1998	Caddisfly	Hydrobiosidae	A(1)	DP, RR
Edpercivalia smithi Ward, 2005	Caddisfly	Hydrobiosidae	A(1)	OL
Tiphobiosis childella Ward, 1995	Caddisfly	Hydrobiosidae	A(1)	OL, RR
Tiphobiosis hinewai Ward, 1995	Caddisfly	Hydrobiosidae	A(1)	OL, RR
Oeconesus angustus Ward, 1997	Caddisfly	Oeconesidae	A(3)	DP, OL
Hydrobiosella aorere Henderson, 1983	Caddisfly	Philopotamidae	A(2)	DP, RR, Sp
Xanthocnemis sinclairi Rowe, 1987	Damselfly	Coenagrionidae	A(2)	DP, OL
Aupouriella pohei Winterbourn, 2009	Mayfly	Leptophlebiidae	A(3)	OL
Apteryoperla lakiula McLellan, 2003	Stonefly	Gripopterygidae	A(3)	DP, OL
Apteryoperla monticola Wisely, 1953	Stonefly	Gripopterygidae	A(3)	DP, OL
Apteryoperla nancyae McLellan, 1977	Stonefly	Gripopterygidae	A(3)	DP, OL
Apteryoperla ramsayi McLellan, 1977	Stonefly	Gripopterygidae	A(3)	DP, OL
Nesoperla johnsi McLellan, 1977	Stonefly	Gripopterygidae	A(3)	IE, OL
Nesoperla patricki McLellan, 2003	Stonefly	Gripopterygidae	A(3)	DP, RR
Taraperla johnsi McLellan, 2003	Stonefly	Gripopterygidae	A(3)	DP, RR
Vesicaperla dugdalei McLellan, 1977	Stonefly	Gripopterygidae	A(3)	DP, RR
Vesicaperla substirpes McLellan, 1967	Stonefly	Gripopterygidae	A(3)	DP, RR
Vesicaperla trilinea McLellan, 2003	Stonefly	Gripopterygidae	A(3)	DP, OL
Zelandobius crawfordi McLellan, 2008	Stonefly	Gripopterygidae	A(3)	DP, OL
Zealandobius edwardsi McLellan, 2008	Stonefly	Gripopterygidae	A(3)	DP, RR
Zelandobius mariae McLellan, 1993	Stonefly	Gripopterygidae	A(2)	DP, RR
Omanuperla hollowayae McLellan, 1991	Stonefly	Notonemouridae	A(2)	RR, DP
Phylum Arthropoda, subphylum Crustacea				
Chiltonia rivertonensis Hurley, 1954	Amphipod	Ceinidae	A(3)	DP, RR
Eulimnadia marplesi Timms & McLay, 2005	Clam shrimp	Limnadiidae	A(3)	OL
Bilistra millari Sket & Bruce, 2003	Isopod	Sphaeromatidae	A(3)	DP, RR
Phylum Mollusca				
Catapyrgus sororius Haase, 2008	Snail	Tateidae	A(3)	OL, DP

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Nationally Critical—continued

NAME AND AUTHORITY	COMMON NAME	FAMILY	CRITERIA	QUALIFIERS
Hadopyrgus ngataana Haase, 2008	Snail	Tateidae	A(3)	OL
Hadopyrgus rawhiti Haase, 2008	Snail	Tateidae	A(3)	OL
Leptopyrgus manneringi (Climo, 1974)	Snail	Tateidae	A(3)	DP, RR
Opacuincola caeca Ponder, 1966	Snail	Tateidae	A(3)	DP, OL
Opacuincola cervicesmadentes Haase, 2008	Snail	Tateidae	A(3)	DP, OL
Opacuincola dulcinella Haase, 2008	Snail	Tateidae	A(3)	DP, OL
Opacuincola eduardstraussi Haase, 2008	Snail	Tateidae	A(3)	DP, OL
Potamopyrgus acus Haase, 2008	Snail	Tateidae	A(3)	OL
Potamopyrgus dawbini Powell, 1955	Snail	Tateidae	A(3)	IE, OL
Potamopyrgus doci Haase, 2008	Snail	Tateidae	A(3)	OL
Potamopyrgus oppidanus Haase, 2008	Snail	Tateidae	A(3)	OL
Potamopyrgus troglodytes (Climo, 1974)	Snail	Tateidae	A(3)	RR
Sororipyrgus marshalli Haase, 2008	Snail	Tateidae	A(3)	DP, OL
Phylum Platyhelminthes				
Cura fortis Sluys & Kawakatsu, 2001	Flatworm	Dugesiidae	A(3)	DP, OL
Spathula alba Allison, 1997	Flatworm	Dugesiidae	A(3)	DP, OL
Spathula neara Ball, 1977	Flatworm	Dugesiidae	A(3)	DP, OL

Nationally Endangered (9)

Criteria for Nationally Endangered:

A—small population (natural or unnatural) that has a low to high ongoing or predicted decline

A(1/1) 250–1000 mature individuals, predicted decline 10–50%
A(2/1) ≤5 subpopulations, ≤300 mature individuals in the largest subpopulation, predicted decline 10–50%
A(3/1) Total area of occupancy ≤10 ha (0.1 km^2), predicted decline 10–50%

B—small stable population (unnatural)

B(1/1) 250–1000 mature individuals, stable population
B(2/1) ≤5 subpopulations, ≤300 mature individuals in the largest subpopulation, stable population
B(3/1) Total area of occupancy ≤10 ha (0.1 km^2), stable population

C—moderate population and high ongoing or predicted decline.

C(1/1) 1000–5000 mature individuals, predicted decline 50–70%
C(2/1) ≤15 subpopulations, ≤500 mature individuals in the largest subpopulation, predicted decline 50–70%
C(3/1) Total area of occupancy ≤100 ha (1 km^2), predicted decline 50–70%

NAME AND AUTHORITY	COMMON NAME	FAMILY	CRITERIA	QUALIFIERS
Phylum Arthropoda				
Orchymontia banksiana Ordish, 1984	Beetle	Hydraenidae	A(3/1)	RR
Olinga fumosa Wise, 1958	Caddisfly	Conoesucidae	B(2/1)	DP, Sp
Edpercivalia banksiensis (McFarlane, 1939)	Caddisfly	Hydrobiosidae	B(3/1)	RR, Sp
Pseudoeconesus paludis Ward, 1997	Caddisfly	Oeconesidae	B(2/1)	RR, Sp
Cryptobiosella furcata Henderson, 1983	Caddisfly	Philopotamidae	B(2/1)	DP, RR, Sp
Cryptobiosella spinosa Henderson, 1983	Caddisfly	Philopotamidae	B(2/1)	DP, RR, Sp

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Nationally Endangered—continued

NAME AND AUTHORITY	COMMON NAME	FAMILY	CRITERIA	QUALIFIERS
Neobiosella irrorata Wise, 1958	Caddisfly	Philopotamidae	B(2/1)	DP, RR, Sp
Deleatidium (*Penniketellum*) *insolitum* (Towns & Peters, 1979b)	Mayfly	Leptophlebiidae	B(2/1)	DP, Sp
Phylum Mollusca				
Hadopyrgus expositus Haase, 2008	Snail	Tateidae	A(3)	RR, DP

Nationally Vulnerable (15)

Criteria for Nationally Vulnerable:

A—small, increasing population (unnatural)

A(1/1) 250–1000 mature individuals, predicted increase >10%
A(2/1) ≤5 subpopulations, ≤300 mature individuals in the largest subpopulation, predicted increase > 10%
A(3/1) Total area of occupancy ≤10 ha (0.1 km^2), predicted increase >10%

B—moderate, stable population (unnatural)

B(1/1) 1000–5000 mature individuals, stable population
B(2/1) ≤15 subpopulations, ≤500 mature individuals in the largest subpopulation, stable population
B(3/1) Total area of occupancy ≤100 ha (1 km^2), stable population

C—moderate population, with population trend that is declining

C(1/1) 1000–5000 mature individuals, predicted decline 10–50%
C(2/1) ≤15 subpopulations, ≤500 mature individuals in the largest subpopulation, predicted decline 10–50%
C(3/1) Total area of occupancy ≤100 ha (1 km^2), predicted decline 10–50%

D—moderate to large population, and moderate to high ongoing or predicted decline.

D(1/1) 5000–20 000 mature individuals, predicted decline 30–70%
D(2/1) ≤15 subpopulations and ≤1000 mature individuals in the largest subpopulation, predicted decline 30–70%
D(3/1) Total area of occupancy ≤1000 ha (10 km^2), predicted decline 30–70%

E—large population, and high ongoing or predicted decline.

E(1/1) 20 000–100 000 mature individuals, predicted decline 50–70%
E(2/1) Total area of occupancy ≤10 000 ha (100 km^2), predicted decline 50–70%

NAME AND AUTHORITY	COMMON NAME	FAMILY	CRITERIA	QUALIFIERS
Phylum Arthropoda				
Pycnocentria mordax Ward, 1997	Caddisfly	Conoesucidae	B(2/1)	
Alloecentrella cirratus Henderson & Ward, 2007	Caddisfly	Helicophidae	B(2/1)	
Helicopsyche (*Saetotricha*) *torino* Johanson, 1999	Caddisfly	Helicopsychidae	B(2/1)	Sp
Atrachorema mangu McFarlane, 1964	Caddisfly	Hydrobiosidae	B(2/1)	Sp
Costachorema peninsulae Ward, 1995	Caddisfly	Hydrobiosidae	B(2/1)	RR
Edpercivalia borealis (McFarlane, 1951b)	Caddisfly	Hydrobiosidae	B(2/1)	DP
Edpercivalia tahatika Ward, 2005	Caddisfly	Hydrobiosidae	C(2/1)	DP
Hydrobiosis styx McFarlane, 1951b	Caddisfly	Hydrobiosidae	B(2/1)	RR, Sp

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Nationally Vulnerable—continued

NAME AND AUTHORITY	COMMON NAME	FAMILY	CRITERIA	QUALIFIERS
Tiphobiosis kleinpastei Ward, 1998	Caddisfly	Hydrobiosidae	B(2/1)	RR
Cryptobiosella tridens Henderson, 1983	Caddisfly	Philopotamidae	B(2/1)	
Xenobiosella motueka Henderson, 1983	Caddisfly	Philopotamidae	B(2/1)	Sp
Nesameletus vulcanus Hitchings & Staniczek, 2003	Mayfly	Nesameletidae	B(2/1)	
Siphlaenigma janae Penniket, 1962	Mayfly	Siphlaenigmatidae	C(2/1)	Sp
Phylum Mollusca				
Echyridella aucklandica (Gray, 1843)	Hyriidae	Mussel	C(2/1)	RF, Sp
Paxillostium nanum Gardner, 1970	Tateidae	Snail	C(3/1)	DP, RR

At Risk (82)

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

Declining (8)

Taxa that do not qualify as 'Threatened' because they are buffered by large population size and/or a slower rate of decline than the trigger points.

Criteria for Declining:

A—moderate to large population and low ongoing or predicted decline

A(1/1) 5000–20 000 mature individuals, predicted decline 10–30%
A(2/1) Total area of occupancy ≤1000 ha (10 km^2), predicted decline 10–30%

B—large population and low to moderate ongoing or predicted decline

B(1/1) 20 000–100 000 mature individuals, predicted decline 10–50%
B(2/1) Total area of occupancy ≤10 000 ha (100 km^2), predicted decline 10–50%

C—very large population and low to high ongoing or predicted decline.

C(1/1) >100 000 mature individuals, predicted decline 10–70%
C(2/1) Total area of occupancy >10 000 ha (100 km^2), predicted decline 10–70%

NAME AND AUTHORITY	COMMON NAME	FAMILY	CRITERIA	QUALIFIERS
Phylum Arthropoda				
Kokiria miharo McFarlane, 1964	Caddisfly	Kokiriidae	A(2/1)	RR, Sp
Austronella planulata (Towns, 1983)	Mayfly	Leptophlebiidae	A(2/1)	DP, RR
Isothraulus abditus Towns & Peters, 1979	Mayfly	Leptophlebiidae	A(2/1)	DP, RR
Oniscigaster wakefieldi McLachlan, 1873	Mayfly	Oniscigastridae	A(2/1)	DP, RR
Phylum Arthropoda, subphylum Crustacea				
Paranephrops zealandicus (White, 1847)	Crayfish/koura	Parastacidae	C(1/1)	PD
Daphnia carinata King, 1852	Waterflea	Daphniidae	C(1/1)	
Phylum Mollusca				
Echyridella menziesii (Dieffenbach, 1843)	Mussel	Hyriidae	C(2/1)	
Phylum Platyhelminthes				
Porhynchus haswelli Steinboeck & Reisinger, 1924	Flatworm	Prorhynchidae	A(2/1)	DP, OL

Recovering (0)

Taxa that have undergone a documented decline within the last 1000 years and now have an ongoing or predicted increase of >10% in the total population or area of occupancy, taken over the next 10 years or three generations, whichever is longer. Note that such taxa that are increasing but have a population size of <1000 mature individuals (or total area of occupancy of <10 ha) are listed in one of the Threatened categories, depending on their population size (for more details see Townsend et al. (2008)).

Criteria for Recovering:

A 1000–5000 mature individuals or total area of occupancy ≤100 ha (1 km^2), and predicted increase >10%

B 5000–20 000 mature individuals or total area of occupancy ≤1000 ha (10 km^2), and predicted increase >10%

No freshwater invertebrate taxa were ranked as Recovering.

Relict (0)

Taxa that have undergone a documented decline within the last 1000 years, and now occupy <10% of their former range and meet one of the following criteria:

Criteria for Relict:

A 5000–20 000 mature individuals; population stable (±10%)

B >20 000 mature individuals; population stable or increasing at >10%. The range of a relictual taxon takes into account the area currently occupied as a ratio of its former extent. Relict can also include taxa that exist as reintroduced and self-sustaining populations within or outside their former known range (for more details see Townsend et al. (2008)).

No freshwater invertebrate taxa were ranked as Relict.

Naturally Uncommon (74)

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

NAME AND AUTHORITY	COMMON NAME	FAMILY	QUALIFIERS
Phylum Arthropoda			
Podaena aotea Delgado & Palma, 2010	Beetle	Hydraenidae	IE
Podaena hauturu Delgado & Palma, 2010	Beetle	Hydraenidae	IE
Podaena kuscheli Ordish, 1984	Beetle	Hydraenidae	RR
Podaena moanaiti Delgado & Palma, 2010	Beetle	Hydraenidae	RR
Chathamia brevipennis Tillyard, 1925	Caddisfly	Chathamiidae	IE, RR
Philanisus fasciatus Riek, 1976	Caddisfly	Chathamiidae	IE, RR
Philanisus mataua Ward, 1995	Caddisfly	Chathamiidae	
Pycnocentria patricki Ward, 1995	Caddisfly	Conoesucidae	RR
Ecnomina zealandica Wise, 1958	Caddisfly	Ecnomidae	Sp
Alloecentrella incisus Henderson & Ward, 2007	Caddisfly	Helicophidae	RR
Costachorema brachypterum McFarlane, 1939	Caddisfly	Hydrobiosidae	RR
Costachorema hebdomon McFarlane, 1981	Caddisfly	Hydrobiosidae	Sp
Costachorema notopterum Wise, 1972	Caddisfly	Hydrobiosidae	IE, RR
Edpercivalia harrisoni Wise, 1982	Caddisfly	Hydrobiosidae	DP, Sp
Edpercivalia morrisi Ward, 1998	Caddisfly	Hydrobiosidae	RR
Edpercivalia oriens Ward, 1997	Caddisfly	Hydrobiosidae	RR, Sp

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NAME AND AUTHORITY	COMMON NAME	FAMILY	QUALIFIERS
Hydrobiosis falcis Wise, 1958	Caddisfly	Hydrobiosidae	RR
Hydrobiosis lindsayi Tillyard, 1925	Caddisfly	Hydrobiosidae	IE, RR
Hydrochorema lyfordi Ward, 1997	Caddisfly	Hydrobiosidae	DP, RR
Tiphobiosis cataractae Ward, 1995	Caddisfly	Hydrobiosidae	
Tiphobiosis trifurca McFarlane, 1981	Caddisfly	Hydrobiosidae	RR, Sp
Traillochorema rakiura McFarlane, 1981	Caddisfly	Hydrobiosidae	IE, RR
Traillochorema wardorum Henderson, 2008	Caddisfly	Hydrobiosidae	RR
Oxyethira (*Trichoglene*) *ahipara* Wise, 1998	Caddisfly	Hydroptilidae	RR, Sp
Paroxyethira hintoni Leader, 1972	Caddisfly	Hydroptilidae	Sp
Paroxyethira pounamu Ward & Henderson, 2004	Caddisfly	Hydroptilidae	Sp
Paroxyethira takitimu Ward & Henderson, 2004	Caddisfly	Hydroptilidae	Sp
Oecetis chathamensis Tillyard, 1925	Caddisfly	Leptoceridae	IE, RR
Oecetis iti McFarlane, 1964	Caddisfly	Leptoceridae	Sp
Pseudoeconesus hendersoni Ward, 1997	Caddisfly	Oeconesidae	
Cryptobiosella hastata Henderson, 1983	Caddisfly	Philopotamidae	Sp
Philorheithrus harunae Henderson & Ward, 2006	Caddisfly	Philorheithridae	RR
Philorheithrus latentis Henderson & Ward, 2006	Caddisfly	Philorheithridae	RR, Sp
Antipodochlora braueri (Selys, 1871)	Dragonfly	Corduliidae	Sp
Cryophlebia aucklandensis (Peters, 1971)	Mayfly	Leptophlebiidae	IE, RR
Deleatidium (*Deleatidium*) *branchiola* Hitchings, 2009	Mayfly	Leptophlebiidae	DP, RR
Deleatidium (*Deleatidium*) kiwa Hitchings, 2010	Mayfly	Leptophlebiidae	DP, RR
Deleatidium (*Deleatidium*) *magnum* Towns & Peters, 1996	Mayfly	Leptophlebiidae	DP, RR
Mauiulus aquilus Towns & Peters, 1996	Mayfly	Leptophlebiidae	Sp
Zephlebia nebulosa Towns & Peters, 1996	Mayfly	Leptophlebiidae	DP, RR
Nesameletus murihiku Hitchings & Staniczek, 2003	Mayfly	Nesameletidae	DP, RR
Stenoperla helsoni McLellan, 1996	Stonefly	Eustheniidae	RR
Apteryoperla illiesi McLellan, 1977	Stonefly	Gripopterygidae	DP, RR
Apteryoperla tillyardi McLellan, 1977	Stonefly	Gripopterygidae	DP, RR
Aucklandobius complementarius Enderlein, 1909	Stonefly	Gripopterygidae	IE, RR
Aucklandobius gressitti Illies, 1974	Stonefly	Gripopterygidae	IE, RR
Aucklandobius kuscheli (Illies, 1974)	Stonefly	Gripopterygidae	DP, IE, OL
Aucklandobius turbotti (Illies, 1963)	Stonefly	Gripopterygidae	IE, RR
Megaleptoperla grandis (Hudson, 1913)	Stonefly	Gripopterygidae	Sp
Rakiuraperla nudipes McLellan, 1977	Stonefly	Gripopterygidae	DP, IE, RR
Rungaperla campbelli (Illies, 1963)	Stonefly	Gripopterygidae	DP, IE, OL
Rungaperla longicauda (Illies, 1963)	Stonefly	Gripopterygidae	DP, IE, RR
Vesicaperla celmisia McLellan, 2003	Stonefly	Gripopterygidae	DP, RR
Zelandobius wardi McLellan, 1993	Stonefly	Gripopterygidae	RR, Sp
Phylum Arthropoda, subphylum Crustacea			
Chiltonia enderbyensis Hurley, 1954	Amphipod	Ceinidae	RR
Chiltonia mihiwaka (Chilton, 1898)	Amphipod	Ceinidae	DP
Phreatogammarus propinquus Chilton, 1907	Amphipod	Phreatogammaridae	RR, Sp
Amarinus lacustris (Chilton, 1882)	Crab	Hymenosomatidae	SO, Sp
Austridotea benhami Nicholls, 1938	Isopod	Idoteidae	DP, RR
Bilistra mollicopulans Sket & Bruce, 2003	Isopod	Sphaeromatidae	OL
Bilistra cavernicola Sket & Bruce, 2003	Isopod	Sphaeromatidae	RR
Lepidurus apus viridus (Baird, 1850)	Tadpole shrimp	Triopsidae	RR, SO, Sp
Phyllum Mollusca			
Echyridella onekaka Fenwick & Marshall, 2006	Mussel	Hyriidae	DP, RR

Continued on next page

Naturally Uncommon—continued

NAME AND AUTHORITY	COMMON NAME	FAMILY	QUALIFIERS
Catapyrgus fraterculus Haase, 2008	Snail	Tateidae	RR
Catapyrgus matapango Haase, 2008	Snail	Tateidae	RR
Catapyrgus spelaeus Climo, 1974	Snail	Tateidae	RR
Leptopyrgus tainui Haase, 2008	Snail	Tateidae	RR
Meridiopyrgus muaupoko Haase, 2008	Snail	Tateidae	Sp
Opacuincola delira Haase, 2008	Snail	Tateidae	RR
Rakiurapyrgus cresswelli (Climo, 1974)	Snail	Tateidae	RR
Rakipyrgus gardneri (Climo, 1974)	Snail	Tateidae	RR
Sororipyrgus kutukutu Haase, 2008	Snail	Tateidae	RR
Sororipyrgus raki Haase, 2008	Snail	Tateidae	RR
Phylum Annelida			
Namanereis tiriteae (Winterbourn, 1969)	Polychaete worm	Nereididae	RR, SO

Non-resident Native (6)

Taxa that periodically and cyclically visit New Zealand as part of their normal life cycle but do not breed here (Migrant) or taxa whose natural presence in New Zealand is either sporadic or temporary (Vagrant) or taxa that have succeeded in recently (< 50 years) establishing themselves beyond their point of introduction (Coloniser).

Migrant (0)

No freshwater invertebrate taxa were ranked as Migrant.

Vagrant (1)

Taxa whose occurrences, though natural, are sporadic and typically transitory.

NAME AND AUTHORITY	COMMON NAME	FAMILY	QUALIFIERS	IUCN STATUS
Phylum Arthropoda				
Pantala flavescens (Fabricius, 1798)	Dragonfly	Libellulidae		Least concern

Coloniser (5)

Taxa that otherwise meet the criteria for Threatened categories because of small population size, but have arrived in New Zealand without direct or indirect help from humans and have been successfully reproducing in the wild only since 1950.

NAME AND AUTHORITY	COMMON NAME	FAMILY	QUALIFIERS	IUCN STATUS
Phylum Arthropoda				
Ischnura aurora (Brauer, 1865)	Damselfly	Coenagrionidae		Least concern
Hemianax papuensis (Burmeister, 1839)	Dragonfly	Aeshnidae		Least concern
Hemicordulia australiae Rambur, 1842	Dragonfly	Corduliidae		Least concern
Tramea loewii Kaup in Brauer, 1866	Dragonfly	Libellulidae	RR	Least concern
Tramea transmarina Braeur, 1867	Dragonfly	Libellulidae		Least concern

Not Threatened (287)

Resident native taxa that have large stable populations.

NAME AND AUTHORITY	COMMON NAME	FAMILY	QUALIFIERS
Phylum Arthropoda			
Antiporus uncifer Sharp, 1882	Beetle	Dytiscidae	
Huxelhydrus syntheticus Sharp, 1882	Beetle	Dytiscidae	
Lancetes lanceolatus (Clark, 1863)	Beetle	Dytiscidae	
Liodessus deflectus Ordish, 1966	Beetle	Dytiscidae	
Liodessus plicatus (Sharp, 1882)	Beetle	Dytiscidae	
Onychohydrus hookeri (White, 1846)	Beetle	Dytiscidae	
Rhantus suturalis (Macleay, 1825)	Beetle	Dytiscidae	
Podaena dentipalpis Ordish, 1984	Beetle	Hydraenidae	
Podaena latipalpis Ordish, 1984	Beetle	Hydraenidae	
Podaena maclellani (Zwick, 1975)	Beetle	Hydraenidae	
Podaena obscura Ordish, 1984	Beetle	Hydraenidae	
Podaena trochanteralis Ordish, 1984	Beetle	Hydraenidae	
Berosus (*Phelerosus*) *pallidipennis* (Sharp, 1884)	Beetle	Hydrophilidae	
Enochrus (*Methydrus*) *maculiceps* (MacLeay, 1871)	Beetle	Hydrophilidae	
Paracymus pygmaeus (Macleay, 1871)	Beetle	Hydrophilidae	
Pycnocentrella eruensis Mosely, 1953	Caddisfly	Calocidae	
Chathamia integripennis Riek, 1976	Caddisfly	Chathamiidae	
Philanisus plebeius Walker, 1852	Caddisfly	Chathamiidae	SO
Beraeoptera roria Mosely, 1953	Caddisfly	Conoesucidae	
Confluens hamiltoni (Tillyard, 1924)	Caddisfly	Conoesucidae	
Confluens olingoides (Tillyard, 1924)	Caddisfly	Conoesucidae	
Olinga feredayi (McLachlan, 1868)	Caddisfly	Conoesucidae	
Olinga jeanae McFarlane, 1966	Caddisfly	Conoesucidae	
Periwinkla childi McFarlane, 1973	Caddisfly	Conoesucidae	
Pycnocentria evecta McLachlan, 1868	Caddisfly	Conoesucidae	
Pycnocentria forcipata Mosely, 1953	Caddisfly	Conoesucidae	
Pycnocentria funerea McLachlan, 1866	Caddisfly	Conoesucidae	
Pycnocentria gunni (McFarlane, 1956)	Caddisfly	Conoesucidae	
Pycnocentria hawdonia McFarlane, 1956	Caddisfly	Conoesucidae	
Pycnocentria sylvestris McFarlane, 1973	Caddisfly	Conoesucidae	
Pycnocentrodes aeris Wise, 1958	Caddisfly	Conoesucidae	
Pycnocentrodes aureolus (McLachlan, 1868)	Caddisfly	Conoesucidae	
Zelandoptila moselyi Tillyard, 1924	Caddisfly	Ecnomidae	
Alloecentrella linearis Henderson & Ward, 2007	Caddisfly	Helicophidae	
Alloecentrella magnicornis Wise, 1958	Caddisfly	Helicophidae	
Zelolessica cheira McFarlane, 1956	Caddisfly	Helicophidae	
Zelolessica meizon McFarlane, 1981	Caddisfly	Helicophidae	
Helicopsyche (*Saetotricha*) *albescens* Tillyard, 1924	Caddisfly	Helicopsychidae	
Helicopsyche (*Saetotricha*) *howesi* Tillyard, 1924	Caddisfly	Helicopsychidae	
Helicopsyche (*Saetotricha*) *poutini* McFarlane, 1964	Caddisfly	Helicopsychidae	
Helicopsyche (*Saetotricha*) *zealandica* Hudson, 1904	Caddisfly	Helicopsychidae	
Rakiura vernale McFarlane, 1973	Caddisfly	Helicopsychidae	
Atrachorema macfarlanei Ward, 1991	Caddisfly	Hydrobiosidae	
Atrachorema tuarua McFarlane, 1966	Caddisfly	Hydrobiosidae	
Costachorema callistum McFarlane, 1939	Caddisfly	Hydrobiosidae	
Costachorema hecton McFarlane, 1981	Caddisfly	Hydrobiosidae	

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NAME AND AUTHORITY	COMMON NAME	FAMILY	QUALIFIERS
Costachorema psaropterum McFarlane, 1939	Caddisfly	Hydrobiosidae	
Costachorema xanthopterum McFarlane, 1939	Caddisfly	Hydrobiosidae	
Edpercivalia cassicola (McFarlane, 1939)	Caddisfly	Hydrobiosidae	
Edpercivalia fusca (McFarlane, 1939)	Caddisfly	Hydrobiosidae	
Edpercivalia maxima (McFarlane, 1939)	Caddisfly	Hydrobiosidae	
Edpercivalia schistaria Ward, 2005	Caddisfly	Hydrobiosidae	
Edpercivalia shandi (McFarlane, 1951b)	Caddisfly	Hydrobiosidae	
Edpercivalia spaini McFarlane, 1973	Caddisfly	Hydrobiosidae	
Edpercivalia thomasoni (McFarlane, 1960)	Caddisfly	Hydrobiosidae	
Hydrobiosis budgei McFarlane, 1960	Caddisfly	Hydrobiosidae	
Hydrobiosis centralis Ward, 1997	Caddisfly	Hydrobiosidae	
Hydrobiosis chalcodes McFarlane, 1981	Caddisfly	Hydrobiosidae	
Hydrobiosis charadraea McFarlane, 1951b	Caddisfly	Hydrobiosidae	
Hydrobiosis clavigera McFarlane, 1951b	Caddisfly	Hydrobiosidae	
Hydrobiosis copis McFarlane, 1960	Caddisfly	Hydrobiosidae	
Hydrobiosis frater McLachlan, 1868	Caddisfly	Hydrobiosidae	
Hydrobiosis gollanis Mosely, 1953	Caddisfly	Hydrobiosidae	
Hydrobiosis harpidiosa McFarlane, 1951b	Caddisfly	Hydrobiosidae	
Hydrobiosis johnsi McFarlane, 1981	Caddisfly	Hydrobiosidae	
Hydrobiosis kiddi McFarlane, 1951b	Caddisfly	Hydrobiosidae	
Hydrobiosis neadelphus Ward, 1997	Caddisfly	Hydrobiosidae	
Hydrobiosis parumbripennis McFarlane, 1951b	Caddisfly	Hydrobiosidae	
Hydrobiosis sherleyi Ward, 1998	Caddisfly	Hydrobiosidae	
Hydrobiosis silvicola McFarlane, 1951b	Caddisfly	Hydrobiosidae	
Hydrobiosis soror Mosely, 1953	Caddisfly	Hydrobiosidae	
Hydrobiosis spatulata McFarlane, 1951b	Caddisfly	Hydrobiosidae	
Hydrobiosis styracine McFarlane, 1960	Caddisfly	Hydrobiosidae	
Hydrobiosis torrentis Ward, 1995	Caddisfly	Hydrobiosidae	
Hydrobiosis umbripennis McLachlan, 1868	Caddisfly	Hydrobiosidae	
Hydrochorema crassicaudatum Tillyard, 1924	Caddisfly	Hydrobiosidae	
Hydrochorema tenuicaudatum Tillyard, 1924	Caddisfly	Hydrobiosidae	
Neurochorema armstrongi McFarlane, 1951a	Caddisfly	Hydrobiosidae	
Neurochorema confusum (McLachlan, 1868)	Caddisfly	Hydrobiosidae	
Neurochorema forsteri McFarlane, 1964	Caddisfly	Hydrobiosidae	
Psilochorema acheir McFarlane, 1981	Caddisfly	Hydrobiosidae	
Psilochorema bidens McFarlane, 1951b	Caddisfly	Hydrobiosidae	
Psilochorema cheirodes McFarlane, 1981	Caddisfly	Hydrobiosidae	
Psilochorema donaldsoni McFarlane, 1960	Caddisfly	Hydrobiosidae	
Psilochorema embersoni Wise, 1982	Caddisfly	Hydrobiosidae	
Psilochorema leptoharpax McFarlane, 1951b	Caddisfly	Hydrobiosidae	
Psilochorema macroharpax McFarlane, 1951b	Caddisfly	Hydrobiosidae	
Psilochorema mataura McFarlane, 1956	Caddisfly	Hydrobiosidae	
Psilochorema mimicum McLachlan, 1866	Caddisfly	Hydrobiosidae	
Psilochorema nemorale McFarlane, 1951b	Caddisfly	Hydrobiosidae	
Psilochorema tautoru McFarlane, 1964	Caddisfly	Hydrobiosidae	
Psilochorema vomerharpax McFarlane, 1964	Caddisfly	Hydrobiosidae	
Synchorema tillyardi McFarlane, 1964	Caddisfly	Hydrobiosidae	
Synchorema zygoneurum Tillyard, 1924	Caddisfly	Hydrobiosidae	
Tiphobiosis childi McFarlane, 1981	Caddisfly	Hydrobiosidae	Sp
Tiphobiosis cowiei Ward, 1991	Caddisfly	Hydrobiosidae	

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NAME AND AUTHORITY	COMMON NAME	FAMILY	QUALIFIERS
Tiphobiosis intermedia Mosely, 1953	Caddisfly	Hydrobiosidae	
Tiphobiosis montana Tillyard, 1924	Caddisfly	Hydrobiosidae	Sp
Tiphobiosis plicosta McFarlane, 1960	Caddisfly	Hydrobiosidae	
Tiphobiosis veniflex McFarlane, 1960	Caddisfly	Hydrobiosidae	
Hydropsyche catherinae McFarlane, 1960	Caddisfly	Hydropsychidae	
Hydropsyche colonica McLachlan, 1871	Caddisfly	Hydropsychidae	
Hydropsyche fimbriata McLachlan, 1862	Caddisfly	Hydropsychidae	
Hydropsyche philpotti Tillyard, 1924	Caddisfly	Hydropsychidae	
Hydropsyche rarururu McFarlane, 1973	Caddisfly	Hydropsychidae	
Hydropsyche tepoka (Mosely, 1953)	Caddisfly	Hydropsychidae	
Hydropsyche thomasi Wise, 1962	Caddisfly	Hydropsychidae	Sp
Hydropsyche tipua McFarlane, 1964	Caddisfly	Hydropsychidae	
Hydropsyche winterbourni (Smith, 2008)	Caddisfly	Hydropsychidae	
Diplectrona bulla Wise, 1958	Caddisfly	Hydropsychidae	
Diplectrona zealandensis Mosely, 1953	Caddisfly	Hydropsychidae	
Oxyethira (*Trichoglene*) *albiceps* (McLachlan, 1862)	Caddisfly	Hydroptilidae	
Paroxyethira auldorum Ward & Henderson, 2004	Caddisfly	Hydroptilidae	
Paroxyethira dunedensis Ward & Henderson, 2004	Caddisfly	Hydroptilidae	
Paroxyethira eatoni Mosely, 1924	Caddisfly	Hydroptilidae	
Paroxyethira hendersoni Mosely, 1924	Caddisfly	Hydroptilidae	
Paroxyethira teika Ward & Henderson, 2004	Caddisfly	Hydroptilidae	
Paroxyethira tillyardi Mosely, 1924	Caddisfly	Hydroptilidae	
Hudsonema alienum (McLachlan, 1868)	Caddisfly	Leptoceridae	
Hudsonema amabile (McLachlan, 1868)	Caddisfly	Leptoceridae	
Oecetis unicolor (McLachlan, 1868)	Caddisfly	Leptoceridae	
Triplectides cephalotes (Walker, 1852)	Caddisfly	Leptoceridae	
Triplectides dolichos McFarlane, 1981	Caddisfly	Leptoceridae	
Triplectides obsoletus (McLachlan, 1862)	Caddisfly	Leptoceridae	
Triplectidina moselyi McFarlane & Ward, 1990	Caddisfly	Leptoceridae	
Triplectidina oreolimnetes (Tillyard, 1924)	Caddisfly	Leptoceridae	
Oeconesus incisus Mosely, 1953	Caddisfly	Oeconesidae	
Oeconesus maori McLachlan, 1862	Caddisfly	Oeconesidae	
Oeconesus similis Mosely, 1953	Caddisfly	Oeconesidae	
Pseudoeconesus bistirpis Wise, 1958	Caddisfly	Oeconesidae	
Pseudoeconesus hudsoni Mosely, 1953	Caddisfly	Oeconesidae	
Pseudoeconesus mimus McLachlan, 1894	Caddisfly	Oeconesidae	
Pseudoeconesus squamosus Mosely, 1953	Caddisfly	Oeconesidae	
Pseudoeconesus stramineus McLachlan, 1894	Caddisfly	Oeconesidae	
Tarapsyche olis McFarlane, 1960	Caddisfly	Oeconesidae	
Zelandopsyche ingens Tillyard, 1921	Caddisfly	Oeconesidae	
Zelandopsyche maclellani McFarlane, 1981	Caddisfly	Oeconesidae	
Zepsyche acinaces McFarlane, 1960	Caddisfly	Oeconesidae	
Hydrobiosella mixta (Cowley, 1976)	Caddisfly	Philopotamidae	
Hydrobiosella stenocerca Tillyard, 1924	Caddisfly	Philopotamidae	
Hydrobiosella tonela (Mosely, 1953)	Caddisfly	Philopotamidae	
Philorheithrus agilis (Hudson, 1904)	Caddisfly	Philorheithridae	
Philorheithrus aliciae Henderson & Ward, 2006	Caddisfly	Philorheithridae	
Philorheithrus lacustris Tillyard, 1924	Caddisfly	Philorheithridae	
Plectrocnemia maclachlani Mosely, 1953	Caddisfly	Polycentropodidae	
Plectrocnemia tuhuae Ward, 1995	Caddisfly	Polycentropodidae	

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Not Threatened—continued

NAME AND AUTHORITY	COMMON NAME	FAMILY	QUALIFIERS
Polyplectropus altera McFarlane, 1981	Caddisfly	Polycentropodidae	
Polyplectropus aurifusca McFarlane, 1956	Caddisfly	Polycentropodidae	
Polyplectropus impluvii Wise, 1962	Caddisfly	Polycentropodidae	
Polyplectropus puerilis (McLachlan, 1868)	Caddisfly	Polycentropodidae	
Xanthocnemis sobrina (McLachlan, 1873)	Damselfly	Coenagrionidae	
Xanthocnemis tuanuii Rowe, 1981	Damselfly	Coenagrionidae	IE
Xanthocnemis zealandica (McLachlan, 1873)	Damselfly	Coenagrionidae	
Austrolestes colensonis (White, 1846)	Damselfly	Lestidae	
Archichauliodes diversus (Walker, 1853)	Dobsonfly	Corydalidae	
Aeshna brevistyla (Rambur, 1842)	Dragonfly	Aeshnidae	
Procordulia grayi (Selys, 1871)	Dragonfly	Corduliidae	
Procordulia smithii (White, 1846)	Dragonfly	Corduliidae	
Diplacodes bipunctata (Brauer, 1865)	Dragonfly	Libellulidae	
Uropetala carovei (White, 1843)	Dragonfly	Petaluridae	
Uropetala chiltoni Tillyard, 1921	Dragonfly	Petaluridae	
Ameletopsis perscitus (Eaton, 1899)	Mayfly	Ameletopsidae	
Coloburiscus humeralis (Walker, 1853)	Mayfly	Coloburiscidae	
Ichthybotus bicolor Tillyard, 1923	Mayfly	Ephemeridae	
Ichthybotus hudsoni (McLachlan, 1894)	Mayfly	Ephemeridae	
Acanthophlebia cruentata (Hudson, 1904)	Mayfly	Leptophlebiidae	
Arachnocolus phillipsi Towns & Peters, 1979	Mayfly	Leptophlebiidae	
Atalophlebioides cromwelli (Phillips, 1930)	Mayfly	Leptophlebiidae	
Austroclima jollyae Towns & Peters, 1979	Mayfly	Leptophlebiidae	
Austroclima sepia (Phillips, 1930)	Mayfly	Leptophlebiidae	
Deleatidium (*Deleatidium*) *angustum* Towns & Peters, 1996	Mayfly	Leptophlebiidae	
Deleatidium (*Deleatidium*) *atricolor* Hitchings, 2009	Mayfly	Leptophlebiidae	
Deleatidium (*Deleatidium*) *autumnale* Phillips, 1930	Mayfly	Leptophlebiidae	
Deleatidium (*Deleatidium*) *cerinum* Phillips, 1930	Mayfly	Leptophlebiidae	
Deleatidium (*Deleatidium*) *fumosum* Phillips, 1930	Mayfly	Leptophlebiidae	
Deleatidium (*Deleatidium*) *lillii* Eaton, 1899	Mayfly	Leptophlebiidae	
Deleatidium (*Deleatidium*) *myzobranchia* Phillips, 1930	Mayfly	Leptophlebiidae	
Deleatidium (*Deleatidium*) *townsi* Hitchings, 2009	Mayfly	Leptophlebiidae	
Deleatidium (*Deleatidium*) *vernale* Phillips, 1930	Mayfly	Leptophlebiidae	
Deleatidium (*Deleatidium*) *wardorum* Hitchings, 2010	Mayfly	Leptophlebiidae	
Deleatidium (*Penniketellum*) *cornutum* Towns & Peters, 1996	Mayfly	Leptophlebiidae	
Deleatidium (*Penniketellum*) *patricki* Hitchings, 2008	Mayfly	Leptophlebiidae	
Mauiulus luma Towns & Peters, 1979	Mayfly	Leptophlebiidae	
Neozephlebia scita (Walker, 1853)	Mayfly	Leptophlebiidae	
Tepakia caligata Towns & Peters, 1996	Mayfly	Leptophlebiidae	
Zephlebia borealis (Phillips, 1930)	Mayfly	Leptophlebiidae	
Zephlebia dentata (Eaton, 1871)	Mayfly	Leptophlebiidae	
Zephlebia inconspicua Towns, 1983	Mayfly	Leptophlebiidae	
Zephlebia pirongia Towns & Peters, 1996	Mayfly	Leptophlebiidae	
Zephlebia spectabilis Towns, 1983	Mayfly	Leptophlebiidae	
Zephlebia versicolor (Eaton, 1899)	Mayfly	Leptophlebiidae	
Nesameletus austrinus Hitchings & Staniczek, 2003	Mayfly	Nesameletidae	
Nesameletus flavitinctus (Tillyard, 1923)	Mayfly	Nesameletidae	
Nesameletus ornatus (Eaton, 1883)	Mayfly	Nesameletidae	
Oniscigaster distans Eaton, 1899	Mayfly	Oniscigastridae	
Rallidens mcfarlanei Penniket, 1966	Mayfly	Rallidentidae	

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NAME AND AUTHORITY	COMMON NAME	FAMILY	QUALIFIERS
Hygraula nitens (Butler, 1880)	Moth	Crambidae	
Nannochorista philpotti (Tillyard, 1917)	Scorpionfly	Nannochoristidae	
Austroperla cyrene (Newman, 1845)	Stonefly	Austroperlidae	
Stenoperla hendersoni McLellan, 1996	Stonefly	Eustheniidae	
Stenoperla maclellani Zwick, 1979	Stonefly	Eustheniidae	
Stenoperla prasina (Newman, 1845)	Stonefly	Eustheniidae	
Acroperla flavescens (Kimmins, 1938)	Stonefly	Gripopterygidae	
Acroperla samueli McLellan, 1977	Stonefly	Gripopterygidae	
Acroperla trivacuata (Tillyard, 1923)	Stonefly	Gripopterygidae	
Holcoperla angularis (Wisely, 1953)	Stonefly	Gripopterygidae	Sp
Holcoperla jacksoni McLellan, 1977	Stonefly	Gripopterygidae	DP
Holcoperla magna McLellan, 1983	Stonefly	Gripopterygidae	Sp
Megaleptoperla diminuta Kimmins, 1938	Stonefly	Gripopterygidae	
Nesoperla fulvescens Tillyard, 1923	Stonefly	Gripopterygidae	
Taraperla ancilis (Harding & Chadderton, 1995)	Stonefly	Gripopterygidae	Sp
Taraperla howesi (Tillyard, 1923)	Stonefly	Gripopterygidae	
Taraperla pseudocyrene McLellan, 1998	Stonefly	Gripopterygidae	
Zelandobius alatus McLellan, 1993	Stonefly	Gripopterygidae	
Zelandobius albofasciatus McLellan, 1993	Stonefly	Gripopterygidae	Sp
Zelandobius childi McLellan, 1993	Stonefly	Gripopterygidae	
Zelandobius confusus (Hare, 1910)	Stonefly	Gripopterygidae	
Zelandobius cordatus McLellan, 1993	Stonefly	Gripopterygidae	
Zelandobius foxi McLellan, 1993	Stonefly	Gripopterygidae	
Zelandobius furcillatus Tillyard, 1923	Stonefly	Gripopterygidae	
Zelandobius gibbsi McLellan, 1993	Stonefly	Gripopterygidae	
Zelandobius illiesi McLellan, 1969	Stonefly	Gripopterygidae	
Zelandobius kuscheli McLellan, 1993	Stonefly	Gripopterygidae	
Zelandobius patricki McLellan, 1993	Stonefly	Gripopterygidae	
Zelandobius pilosus Death, 1990	Stonefly	Gripopterygidae	
Zelandobius truncus McLellan, 1993	Stonefly	Gripopterygidae	
Zelandobius unicolor Tillyard, 1923	Stonefly	Gripopterygidae	
Zelandoperla agnetis McLellan, 1967	Stonefly	Gripopterygidae	
Zelandoperla decorata Tillyard, 1923	Stonefly	Gripopterygidae	
Zelandoperla denticulata McLellan, 1967	Stonefly	Gripopterygidae	
Zelandoperla fenestrata Tillyard, 1923	Stonefly	Gripopterygidae	
Zelandoperla pennulata McLellan, 1967	Stonefly	Gripopterygidae	
Zelandoperla tillyardi McLellan, 1999	Stonefly	Gripopterygidae	
Cristaperla eylesi McLellan, 1991	Stonefly	Notonemouridae	Sp
Cristaperla fimbria (Winterbourn, 1965)	Stonefly	Notonemouridae	
Cristaperla waharoa McLellan, 1991	Stonefly	Notonemouridae	
Halticoperla gibbsi McLellan, 1991	Stonefly	Notonemouridae	
Halticoperla tara McLellan, 1991	Stonefly	Notonemouridae	
Halticoperla viridans McLellan & Winterbourn, 1968	Stonefly	Notonemouridae	
Notonemoura alisteri McLellan, 1968	Stonefly	Notonemouridae	
Notonemoura latipennis Tillyard, 1923	Stonefly	Notonemouridae	
Notonemoura winstanleyi McLellan, 1991	Stonefly	Notonemouridae	DP
Omanuperla bruningi McLellan, 1972	Stonefly	Notonemouridae	
Spaniocerca acuta McLellan, 1991	Stonefly	Notonemouridae	DP
Spaniocerca bicornuta McLellan, 1987	Stonefly	Notonemouridae	
Spaniocerca longicauda McLellan, 1977	Stonefly	Notonemouridae	

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Not Threatened—continued

NAME AND AUTHORITY	COMMON NAME	FAMILY	QUALIFIERS
Spaniocerca minor Kimmins, 1938	Stonefly	Notonemouridae	
Spaniocerca zelandica Tillyard, 1923	Stonefly	Notonemouridae	
Spaniocerca zwicki McLellan, 1991	Stonefly	Notonemouridae	
Spaniocercoides cowleyi (Winterbourn, 1965)	Stonefly	Notonemouridae	
Spaniocercoides foxi McLellan, 1984	Stonefly	Notonemouridae	
Spaniocercoides howesi McLellan, 1984	Stonefly	Notonemouridae	
Spaniocercoides hudsoni Kimmins, 1938	Stonefly	Notonemouridae	
Spaniocercoides philpotti Winterbourn, 1965	Stonefly	Notonemouridae	
Spaniocercoides townsendi McLellan, 1984	Stonefly	Notonemouridae	
Phylum Arthropoda, subphylum Crustacea			
Chiltonia minuta Bousfield, 1964	Amphipod	Ceinidae	IE
Paracorophium excavatum (Thomson, 1884)	Amphipod	Corophiidae	
Paracorophium lucasi (Hurley, 1954)	Amphipod	Corophiidae	
Paracalliope fluviatilis (Thomson, 1879)	Amphipod	Paracalliopiidae	
Phreatogammarus helmsi Chilton, 1918	Amphipod	Phreatogammaridae	
Paranephrops planifrons White, 1842	Crayfish/koura	Parastacidae	
Austridotea lacustris (Thompson, 1879)	Isopod	Idoteidae	
Notamphisopus benhami Nicholls, 1944	Isopod	Phreatoicidae	
Notamphisopus dunedinensis (Chilton, 1906)	Isopod	Phreatoicidae	
Gastrosaccus australis Tattersall, 1923	Mysid shrimp	Mysidae	
Tenagomysis chiltoni Tattersall, 1923	Mysid shrimp	Mysidae	
Tenagomysis novaezealandiae Thomson, 1900	Mysid shrimp	Mysidae	
Paratya curvirostris (Heller, 1862)	Shrimp	Caridea	
Phylum Mollusca			
Afropisidium hodgkini (Suter, 1905)	Clam	Sphaeriidae	
Cyclocalyx novaezelandiae (Prime, 1862)	Clam	Sphaeriidae	
Sphaerium (*Sphaerinova*) *novaezelandiae* Deshayes, 1853	Clam	Sphaeriidae	
Latia neritoides (Gray, 1850)	Limpet	Latiidae	
Ferrissia dohrnianus (Clessin, 1882)	Limpet	Planorbidae	
Ferrissia neozelanicus (Suter, 1905)	Limpet	Planorbidae	
Zemelanopsis trifasciata (Gray, 1834)	Snail	Melanopsidae	
Gyraulus corinna (Gray, 1850)	Snail	Planorbidae	
Halopyrgus pagodulus Haase, 2008	Snail	Tateidae	
Halopyrgus pupoides (Hutton, 1882)	Snail	Tateidae	
Potamopyrgus antipodarum (Gray, 1843)	Snail	Tateidae	
Potamopyrgus estuarinus Winterbourn, 1970	Snail	Tateidae	
Phylum Platyhelminthes			
Cura pinguis (Weiss, 1909)	Flatworm	Dugesiidae	SO
Neppia montana (Nurse, 1950)	Flatworm	Dugesiidae	
Spathula schauinslandi Neppi, 1904	Flatworm	Dugesiidae	
Prorhynchus putealis Haswell, 1898	Flatworm	Prorhynchidae	
Didymorchis paranephropis Haswell, 1900	Flatworm	Temnocephalidae	DP
Temnohaswellia novaezelandiae (Haswell, 1888)	Flatworm	Temnocephalidae	DP
Mesostoma ehrenbergii (Focke, 1836)	Flatworm	Typhloplanidae	

Introduced and Naturalised (0)

No freshwater invertebrate taxa were ranked as Introduced and Naturalised, as the panel focused on assessing native species.

2.2 Taxonomically Indeterminate

This section includes described taxa whose taxonomic status is uncertain and requires further investigation, and also possibly distinct invertebrates whose taxonomic status has yet to be determined. Definitions of threat categories follow those given in the Taxonomically Determinate section above.

Extinct (0)

No taxonomically indeterminate freshwater invertebrates were ranked as Extinct.

Data Deficient (27)

NAME AND AUTHORITY	COMMON NAME	FAMILY	QUALIFIERS
Phylum Arthropoda			
Hydora n. sp.	Beetle	Elmidae	
Coloburiscus tonnori Lestage, 1935	Caddisfly	Coloburiscidae	
Pycnocentria n. sp. F	Caddisfly	Conoesucidae	
Pycnocentrodes modestus Cowley, 1976	Caddisfly	Conoesucidae	
Hydrochorema n. sp. B	Caddisfly	Hydrobiosidae	OL
Tiphobiosis n. sp. B	Caddisfly	Hydrobiosidae	RR
Tiphobiosis n. sp. C	Caddisfly	Hydrobiosidae	RR
Tiphobiosis n. sp. D	Caddisfly	Hydrobiosidae	RR
Tiphobiosis n. sp. P	Caddisfly	Hydrobiosidae	OL
Tiphobiosis n. sp. W	Caddisfly	Hydrobiosidae	OL
Hydropsyche n. sp. Q	Caddisfly	Hydropsychidae	OL
Paroxyethira n. sp. C	Caddisfly	Hydroptilidae	Sp
Paroxyethira n. sp. L	Caddisfly	Hydroptilidae	OL
*Hudsonem*a n. sp. X	Caddisfly	Leptoceridae	
Pseudoeconesus n. sp. A	Caddisfly	Oeconesidae	OL
Pseudoeconesus n. sp. D	Caddisfly	Oeconesidae	OL
Pseudoeconesus n. sp. P	Caddisfly	Oeconesidae	OL
Pseudoeconesus n. sp. S	Caddisfly	Oeconesidae	OL
Cryptobiosella "Mokihinui"	Caddisfly	Philopotamidae	OL
Phylum Arthropoda, subphylum Crustacea			
Paraleptamphopus sp.	Amphipod	Paraleptamphopidae	OL
Makawe spp.	Amphipod	Talitridae	
Notamphisopus flavius Nicholls, 1944	Isopod	Phreatoicidae	
Notamphisopus kirkii (Chilton, 1906)	Isopod	Phreatoicidae	IE, RR
Notamphisopus littoralis Nicholls, 1944	Isopod	Phreatoicidae	
Notamphisopus percevali Nicholls, 1944	Isopod	Phreatoicidae	
Daphnia sp. nova	Waterflea	Daphniidae	
Phylum Platyhelminthes			
Undescribed	Flatworm	Dalyellidae	

Threatened (7)

Nationally Critical (4)

NAME AND AUTHORITY	COMMON NAME	FAMILY	CRITERIA	QUALIFIERS
Phylum Arthropoda				
Hydrobiosis n. sp. L	Caddisfly	Hydrobiosidae	A(2)	OL
Pseudoeconesus n. sp. G	Caddisfly	Oeconesidae	A(2)	DP
Phylum Arthropoda, subphylum Crustacea				
Paramoera sp.	Amphipod	Eusiridae	A(3)	DP, IE, OL
Paraleptamphopus sp. "pounamu"	Amphipod	Paraleptamphopidae	A(3)	OL

Nationally Endangered (2)

NAME AND AUTHORITY	COMMON NAME	FAMILY	CRITERIA	QUALIFIERS
Phylum Arthropoda				
Hydrochorema n. sp. W	Caddisfly	Hydrobiosidae	A(2/1)	DP, RR
Neurochorema n. sp. A	Caddisfly	Hydrobiosidae	A(3/1)	Sp

Nationally Vulnerable (1)

NAME AND AUTHORITY	COMMON NAME	FAMILY	CRITERIA	QUALIFIERS
Phylum Arthropoda				
Pseudoeconesus n. sp. T	Caddisfly	Oeconesidae	B(2/1)	

At Risk (7)

Declining (1)

NAME AND AUTHORITY	COMMON NAME	FAMILY	CRITERIA	QUALIFIERS
Phylum Arthropoda				
Rallidens n. sp.	Mayfly	Rallidentidae	A(2/1)	DP, RR

Recovering (0)

No taxonomically indeterminate freshwater invertebrates were ranked as Recovering.

Relict (0)

No taxonomically indeterminate freshwater invertebrates were ranked as Relict.

Naturally Uncommon (6)

NAME AND AUTHORITY	COMMON NAME	FAMILY	QUALIFIERS
Phylum Arthropoda			
Pycnocentria n. sp. B	Caddisfly	Conoesucidae	
Phylum Arthropoda, subphylum Crustacea			
Paraleptamphopus sp. "lobatus"	Amphipod	Paraleptamphopidae	
Paraleptamphopus sp. "maniatoto"	Amphipod	Paraleptamphopidae	

Continued on next page

Naturally Uncommon—continued

NAME AND AUTHORITY	COMMON NAME	FAMILY	QUALIFIERS
Paraleptamphopus sp. "moto"	Amphipod	Paraleptamphopidae	
Paraleptamphopus sp. "murihiku"	Amphipod	Paraleptamphopidae	OL
Paraleptamphopus sp. "whakahirahira"	Amphipod	Paraleptamphopidae	

Non-resident Native (0)

No taxonomically indeterminate freshwater invertebrates were listed as Migrant, Vagrant or Coloniser.

Not Threatened (9)

NAME AND AUTHORITY	COMMON NAME	FAMILY	QUALIFIERS
Enochrus (*Methydrus*) *tritus* (Broun, 1880)	Beetle	Hydrophilidae	
Pycnocentria n. sp. A	Caddisfly	Conoesucidae	
Pycnocentria n. sp. C	Caddisfly	Conoesucidae	
Hydrochorema n. sp. C	Caddisfly	Hydrobiosidae	
Tiphobiosis n. sp. A	Caddisfly	Hydrobiosidae	Sp
Tiphobiosis n. sp. E	Caddisfly	Hydrobiosidae	Sp
Hudsonema n. sp. BP	Caddisfly	Leptoceridae	
Paraleptamphopus sp. "academicus"	Amphipod	Paraleptamphopidae	
Paranephrops sp.	Crayfish/koura	Parastacidae	

Introduced and naturalised (0)

No taxonomically indeterminate freshwater invertebrates were listed as Introduced and Naturalised, as the panel focused on assessing native species.

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