

Memo

From	Brian Smith
To	Corinne Watts WattsC@landcareresearch.co.nz
Date	10 April 2018
Subject	Adult aquatic insect recorded from Mt Messenger Malaise nets
Project No.	SCJ182GOV/Landcare.BS

Background

NIWA was contracted by Manaaki Whenua - Landcare Research to provide additional aquatic biodiversity information for the proposed realignment of State Highway 3 over Mt Messenger, Taranaki.

Methods

Ten Malaise net samples (labelled Plot 1–10) were examined by NIWA for the winged adult stage of the aquatic insects, mayflies (Ephemeroptera), stoneflies (Plecoptera) and caddisflies (Trichoptera) to complement existing benthic survey data. These aquatic insects are collectively referred as EPT.

Each Malaise net sample was emptied into a Bogorov counting tray and systematically examined for EPT using a binocular microscope with a transmitted light base capable of 50x magnification (Leica MZ7.5). All EPT specimens were identified to species. Mayflies were identified using the keys of Towns and Peters (1996), stoneflies using McLellan (1991, 1998) and caddisflies using Henderson and Ward (2007) and Smith (2014). Grainger et al. (2014) was used to assess the conservation threat status of each species recorded.

Results and discussion

Table 1 presents the number of EPT species recorded from each Malaise net and their conservation threat status. Twenty-six EPT representing 11 species were recovered from five malaise nets (Plots 1, 5, 6, 9 and 10). Twenty-four species are listed as 'Not Threatened' by Grainger et al. (2014) due to large stable populations.

A single specimen of *Alloecentrella incisus*, a small Helicophidae caddisfly with a central North Island distribution (Henderson & Ward 2007) was recorded from Plot 5. Although *A. incisus* is considered 'Range Restricted' (Grainger et al. 2014) it was however, collected within the known distribution of the species.

The Notonemouridae stonefly, *Spaniocercoides watti*, recorded from Plot 1 was previously known only from eight females from two North Island locations; five from Waipoua State Forest (Northland; see McLellan 1991) and three from the Kiripaka Stream (Waikato; B. Smith, unpublished data). The additional four specimens recorded are also female and represent the southern-most distribution record for this species. Due to an overall lack of information on the distribution and abundance of *S. watti*, this species is classified as 'Data Deficient' by Grainger et al. (2014).

Table 1: Adult aquatic insects recovered from Malaise nets. Stoneflies (Plecoptera), Mayflies (Ephemeroptera), Caddisflies (Trichoptera). Threat ranking from Grainger et al. (2014).

Plot number	Taxa (order, species)	Number recorded	Threat ranking
1	Stoneflies <i>Spaniocercooides watti</i>	4	Data Deficient
5	Mayflies <i>Neozephlebia scita</i>	1	Not Threatened
	Caddisflies <i>Alloecentrella incisus</i>	1	Range Restricted
	<i>Oxyethira albiceps</i>	4	Not Threatened
6	Caddisflies <i>Diplectrona bulla</i>	1	Not Threatened
	<i>Oxyethira albiceps</i>	4	Not Threatened
	<i>Polypsectropus impluvii</i>	1	Not Threatened
9	Mayflies <i>Tepakia caligata</i>	1	Not Threatened
	Stoneflies <i>Acroperla trivacuata</i>	2	Not Threatened
	Caddisflies <i>Diplectrona bulla</i>	1	Not Threatened
	<i>Oxyethira albiceps</i>	2	Not Threatened
	<i>Pseudoeconesus bistirpis</i>	1	Not Threatened
	<i>Zepsyche acinaces</i>	1	Not Threatened
10	Caddisflies <i>Diplectrona bulla</i>	1	Not Threatened
	<i>Polypsectropus aurifusca</i>	1	Not Threatened

If you have any questions or require further information regarding the identification of any of the specimens, please do not hesitate to contact me.

Yours sincerely



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References

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