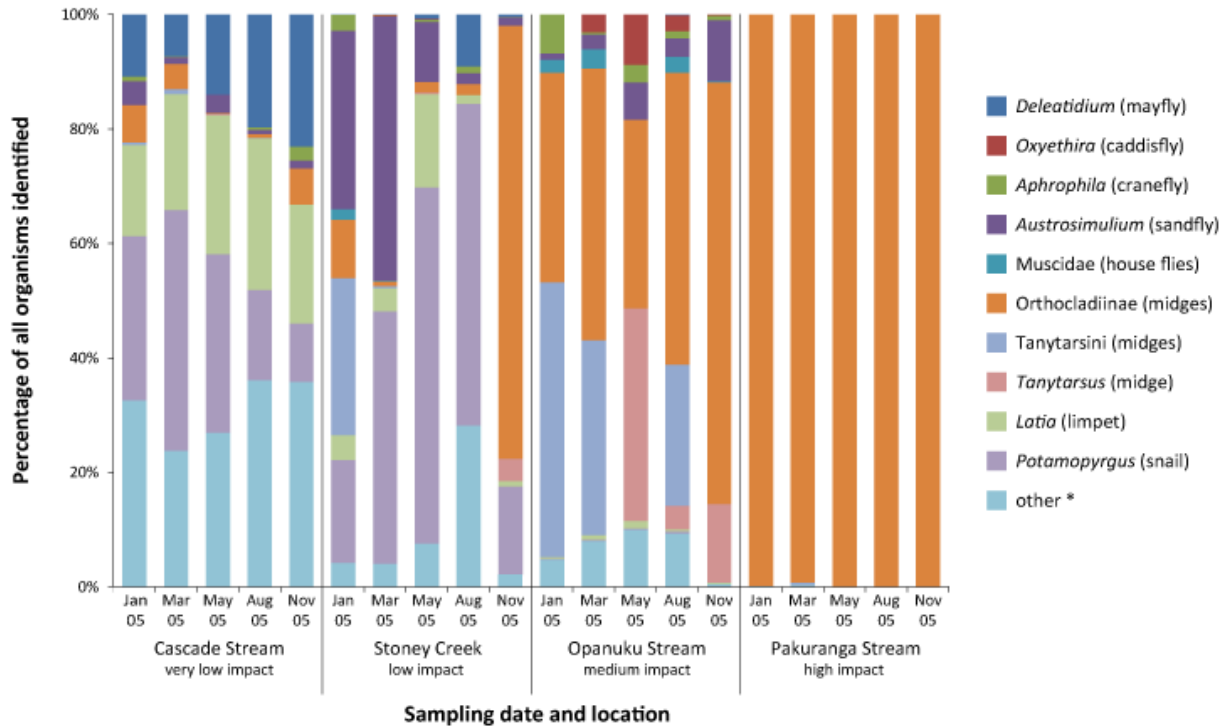
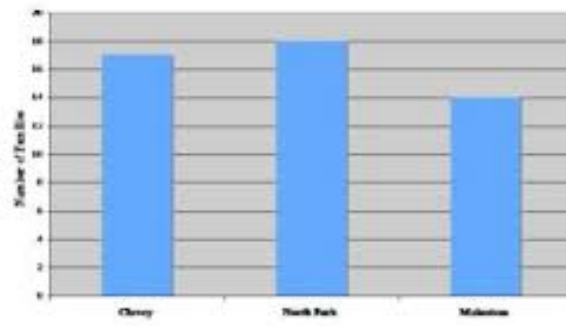


Benthic invertebrates identified in Auckland streams

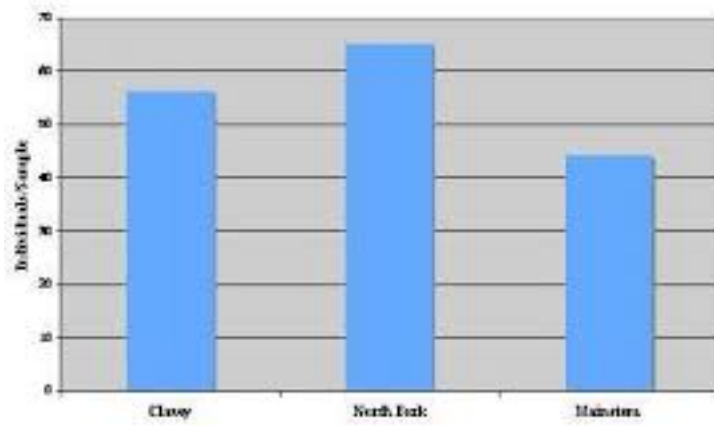


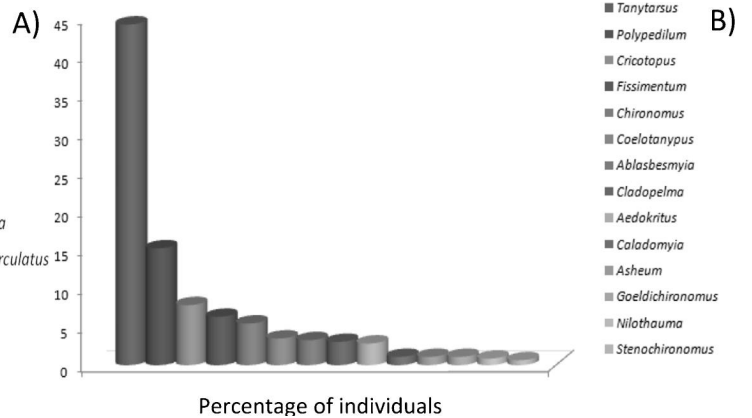
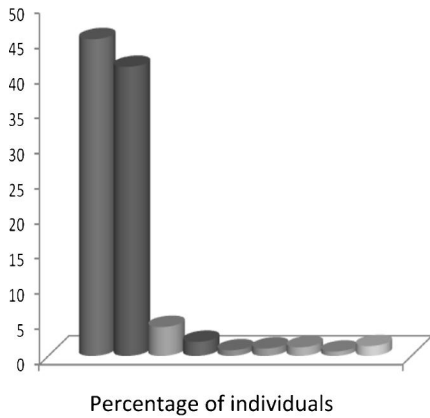
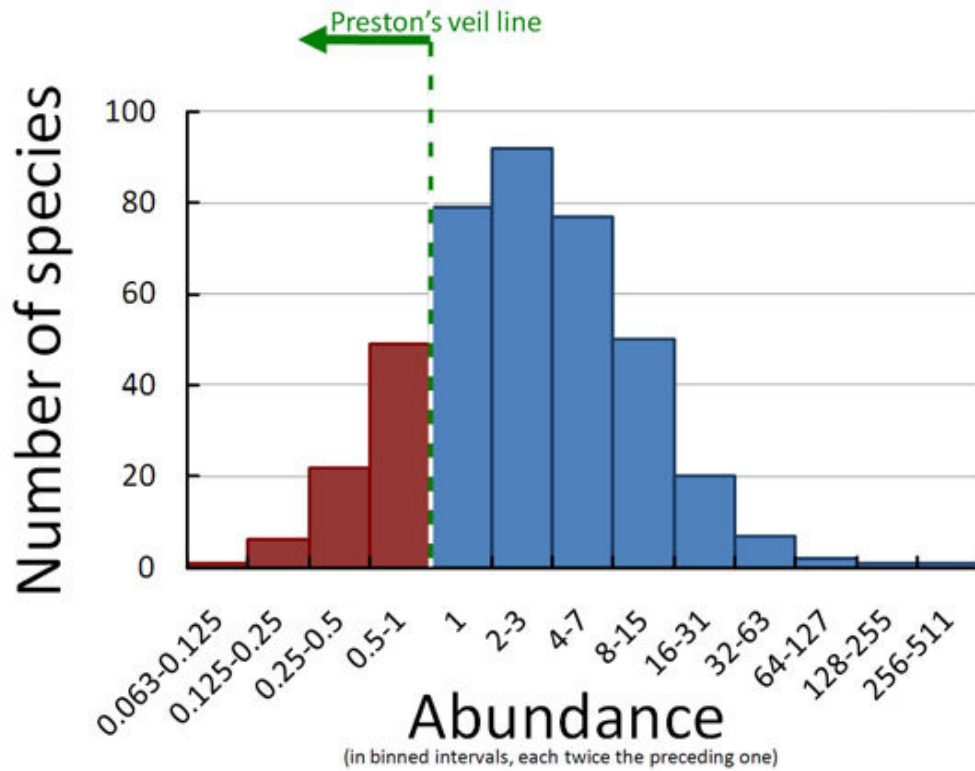
* The group 'other' contains mayflies (*Coloburiscus*, *Ichthybotus*, *Neozephlebia*, *Nesameletus* and *Zephlebia*), stoneflies (*Acroperla*, *Austroperla*, *Spaniocercoides*, *Stenoperla*, *Zelandobius*, *Zelandoperla*), dobsonflies (*Archichauloides*), backswimmers (*Anisops*), midges (*Harrisius*, family Tanyptodinae), crane-flies (*Limonia*, *Paralimnophila*, *Zelandotipula*, tribe Eriopterini), caddisflies (*Aoteapsyche*, *Beraeoptera*, *Confluens*, *Costachorema*, *Helicopsyche*, *Hudsonema*, *Hydrabiosis*, *Olinga*, *Paraxyethira*, *Polyplectropus*, *Psilochorema*, *Pycnocentrella*, *Pycnocentria*, *Pycnocentriodes*, *Tripletides*), shrimp (*Paratya*), snails (*Gyraulus*, *Physa*), beetles (families Elmidae and Hydrophilidae), mosquitoes (family Culicidae), flies (family Empididae), annelid worms (subclass Oligochaeta), flatworms (phylum Platyhelminthes), and *Hydra*.

Macroinvertebrate Family-Level Richness



Relative Macroinvertebrate Abundance





- B)**
- Tanytarsus
 - Polypedilum
 - Cricotopus
 - Fissimentum
 - Chironomus
 - Coelatanypus
 - Ablasbesmyia
 - Cladapelma
 - Aedokritus
 - Caladomyia
 - Asheum
 - Goeldichironomus
 - Nilothauma
 - Stenochironomus

Table 1. Interpretation of MCI-sb, QMCI-sb and SQMCI-sb values from stony riffles (after Boothroyd & Stark 2000).

Interpretation	MCI	QMCI & SQMCI
Clean water	> 120	> 6.00
Doubtful quality of possible mild pollution	100–119	5.00–5.99
Probable moderate pollution	80–99	4.00–4.99
Probable severe pollution	< 80	< 4.00

Table 2. Abundance classes, count ranges and coded abundance used for the calculation of SQMCI-sb scores. Abundance class may be converted to coded abundance for the purposes of analysis. (Reproduced from Stark 1998.)

Abundance class	Counts	Coded abundance
R—rare	1–4	1
C—common	5–19	5
A—abundant	20–99	20
VA—very abundant	100–499	100
VVA—very very abundant	500+	500

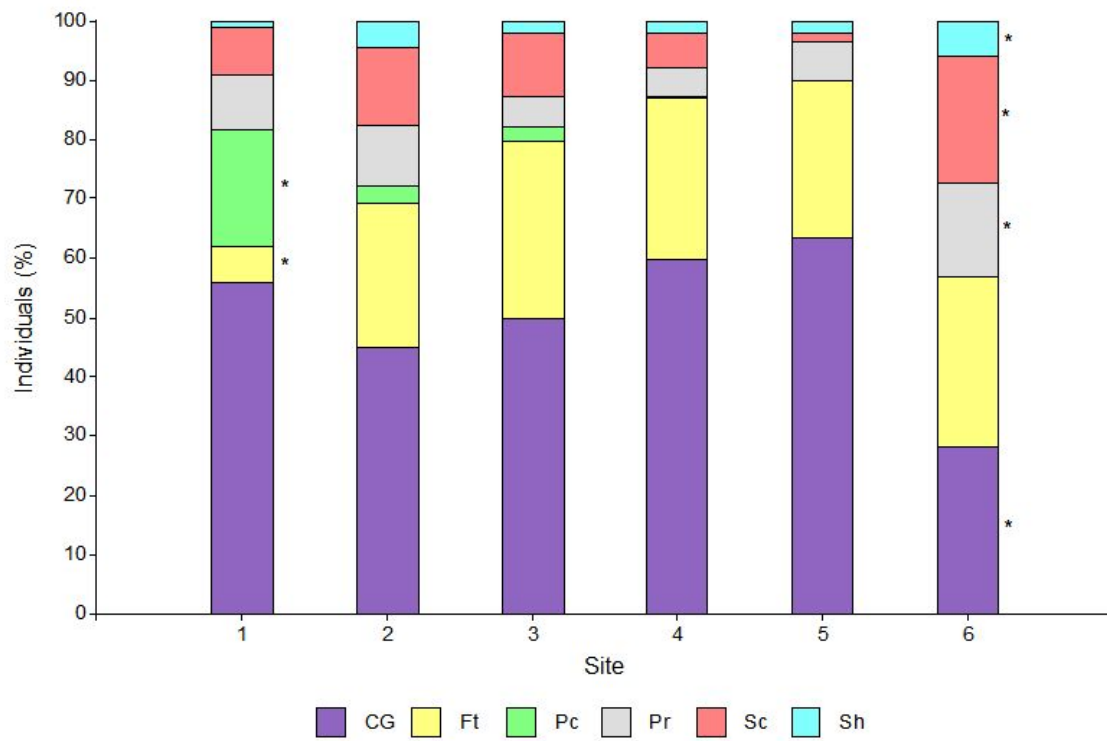


Figure 4. Percentage of different macroinvertebrate groups collected from inorganic substrates at four lowland stream sites.

On macrophytes there were some similarities between invertebrate communities but also some marked differences (Fig. 5). The Ōhinemuri and Kāniwhaniwha stream macrophyte dwelling invertebrate communities were similarly dominated by *P. antipodarum*. However, in the Waitoa Stream, Diptera replaced *P. antipodarum* as the most common taxa. In the Waihou Stream, invertebrates on macrophytes were composed of > 50% EPT taxa, some Diptera, and the ubiquitous snail *P. antipodarum*.