

8.7 Macroinvertebrates

Tolerance of macroinvertebrate taxa to increases in salinity
(O'Brien & Kefford March 1997)

Sensitive: likely to decrease in abundance as a result of an increase in salinity.

- Ephemeroptera (mayflies)
- Plecoptera (stoneflies), however this order is usually relatively rare in lowland streams, wetlands and lakes where salinity is likely to be a problem.
- Simuliidae, Tipulidae (Diptera, true flies).
- Gastropods (snails) without an operculum, it should be noted that this is not a taxonomic grouping.
- Sphaeriidae (Bivalvia)
- Copepods, although some exceptions, including: *Calamoecia elitellata*, *C. salina* and *Boeckella triarticulata*
- Tricoptera (Caddisflies), although some exceptions, including: *Hellyethira Hydroptila*, *Oecetes australis* and *Notalina*
- Cladocera (water fleas), with some exceptions, including: *Daphniopsis pusilla*
- *Paratya australiensis* (see Williams 1977) and Parastacidae (Decapods, shrimps and crabs)
- *Micronecta* (Hemiptera, true bugs)
- *Hydra* sp. (Cnidaria)
- Naididae and Lumbridae (Annelid, worms)

Moderately tolerant: less likely for abundance to decrease as a result of increased salinity, except if salinity is already moderate to high.

- Odonata (dragon flies and damsel flies) notwithstanding earlier suggestions (Hart *et al.* 1991) members of this order would seem to be fairly tolerant (Kefford and Robley 1996; Kefford 1996), although there some Odonata that are sensitive.
- *Sigara* and *Agraptocorixa* (Hemiptera, true bugs)
- *Necterosoma pencillatus*, Chrysomelidae, Haliplidae (Coleoptera, beetles)
- *Hellyethira Hydroptila*, *Oecetes australis* and *Notalina* (Tricoptera, Caddisflies)
- *Calamoecia elitellata*, *C. salina* and *Boeckella triarticulata* (Copepods)
- Hymeruomatidae (Decapoda, shrimps and craps)

Tolerant taxa: likely to increase in abundance in response to large increase in salinity.

- *Lancetes lanceolatus* and *Rhantus pulverosus* (Coleoptera, beetles)
- *Tanytarsus barbitarsis* (Diptera, true flies)
- *Coxiella stiata* (Gastropoda, snails)
- some species of Ostracods (seed shrimps)
- some species of Isopods
- some species of Amphipods

Poor indicators because found over a wide range of salinities.

- *Cherax destructor* (yabbie, Decapoda)
- *Potamopyrgus antipodarum* (Gastropoda, snails)
- most Amphipods, including Cienidae, Gammaridae and Eusiridae
- Chirominae (Diptera, true flies) although identification of this family to lower taxonomic levels may prove to provide good indicator taxa.
- Hydrophilidae (Coleoptera, beetles)