Supplementary Table S1. Summary of studies of freshwater invertebrates showing performance was best at intermediate salinity levels.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Group** | **Species** | **Responses** | **Salinity (range) of best performance (mS/cm)** | **Source** |
| Gastropoda | *Physa acuta* | Growth | 1 | [1] |
|  | *Physa acuta* | Egg production | 0.1-1 | [1] |
| Odonata | *Ischnura heterosticta* | Growth, size of adult, duration of larval stage | 5-20 | [2] |
| Chironomidae (Diptera) | *Chironomus oppositus* | Size obtained | 2.5 | [3] |
|  | *Chironomus* sp. | Proportion emerged | 0.65-5 | [4] |
|  | *Chironomus* sp. | Growth | 5-10 | [4] |
| Rotifera | *Epiphanes macrourus* | Population growth | 1-2 | [5] |
| Cladocera | *Simocephalus* sp. | Fecundity | 3 | [5] |

[1] Kefford, B. J. & Nugegoda, D. 2005 No evidence for a critical salinity threshold for growth and reproduction of the freshwater snail *Physa acuta*. *Environmental Pollution* **54**, 755-765.

[2] Kefford, B. J., Zalizniak, L. & Nugegoda, D. 2006 Growth of the damselfly *Ischnura heterosticta* is better in saline water than freshwater. *Environmental Pollution* **141**, 409-419.

[3] Kefford, B. J., Reddy-Lopat, K., Clay, C., Hagen, T., Parkanyi, O. & Nugegoda, D. 2010 Size of anal papillae in chironomids: Does it indicate their salinity stress? *Limnologica* **41**, 96-106.

[4] Hassell, K. L., Kefford, B. J. & Nugegoda, D. 2006 Sub-lethal and chronic lethal salinity tolerance of three freshwater insects: *Cloeon* sp. and *Centroptilum* sp. (Ephemeroptera: Baetidae) and *Chironomus* sp. (Diptera: Chironomidae). *Journal of Experimental Biology* **209**, 4024-4032.

[5] Kefford, B. J., Fields, E. J., Nugegoda, D. & Clay, C. 2007 The salinity tolerance of riverine microinvertebrates from the southern Murray Darling Basin. *Marine and Freshwater Research* **58**, 1019–1031.