



FAMILY HYDROPSYCHIDAE

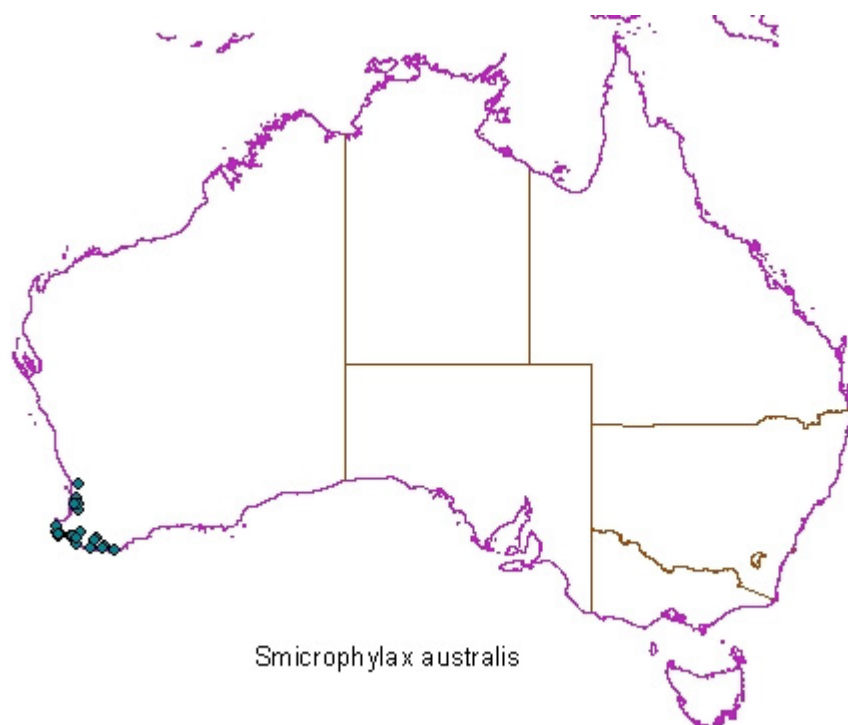
Habitat profile for *Smicrophylax australis* (Ulmer)

Smicrophylax australis Ulmer was recorded from 53 southern Western Australian localities in this study. It is restricted to the south-west of Australia (Sutcliffe 2003). The larva was described in a previous study by Dean and Bunn (1989) who stated that “the larvae were widespread and abundant in medium to fast currents in small perennial streams.”

S. australis was generally recorded in channel and riffle habitat samples from streams between 7-260 m altitude (Chart a), usually <12 km from the source (Chart b), and with predominantly sandy substrate with low (<5%) detritus cover (Chart c). streams were mostly small with width between 1-5 m (Chart d), alkalinity was low between 5-33 mg/L (Chart e) and conductivity generally ranging from 153-508 $\mu\text{S}/\text{cm}$ (Chart f).

The following generalities can be made about the other parameters listed in the Table: recorded water temperature between 9-19 °C, circum-neutral pH in the range of 6-7.8 and very low turbidity (<15 NTU).

Mean, median and range for selected physical and chemical parameters and habitat categories are given in the Table.



Distribution of *Smicrophylax australis* in Australia.

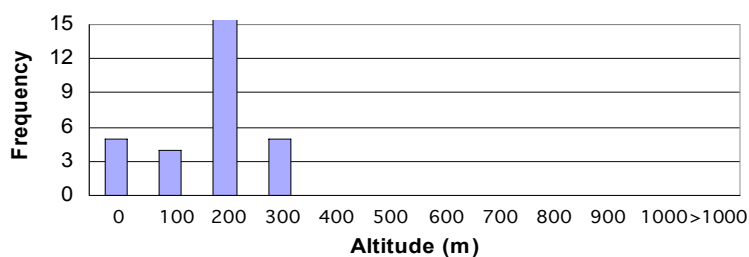


Smicrophylax australis, larva

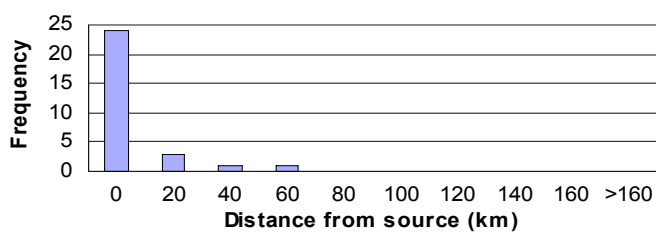


Charts for *Smicrophylax australis*

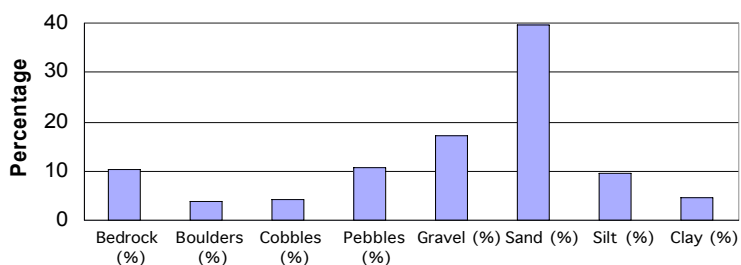
a) Altitude



b) Distance from source

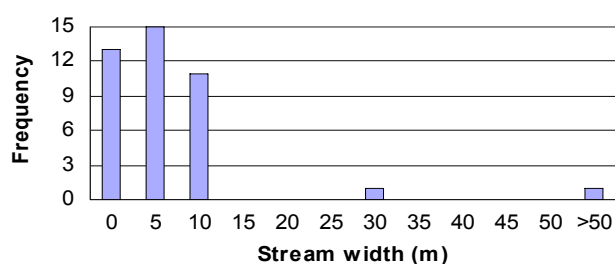


c) Substrate Particle Size

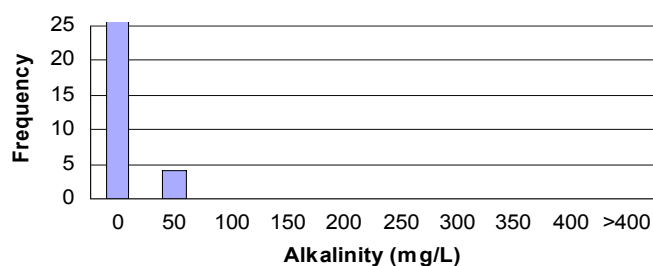




d) Stream Width



e) Alkalinity



f) Conductivity

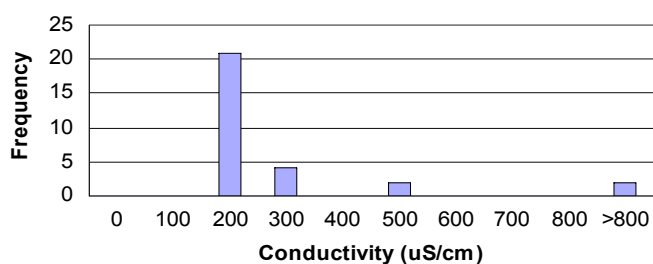


Table. Mean, median and range for selected physical and chemical parameters and habitat categories for *S. australis* (N= number of records).

	Mean	Median	Range	N
Altitude (m)	180	230	7-260	30
Distance from source (km)	15	6	2-204	30
Stream width (m)	6.3	2.9	1-83	30
Stream depth (m)				
Water temperature (°C)	13.4	12.4	8-19.3	30
Conductivity (µS/cm)	403	207	153-4380	30
pH	6.4	6.5	4.2-7.9	30
Alkalinity (mg/L)	13.1	9.5	1-68	30
Turbidity (NTU)	2.2	1.0	0.3-14	30
Total N (mg/L)	0.3	0.13	0-1.20	30
NO ₃ -N (mg/L)	0.055	0.025	0-0.40	30
Total P (mg/L)	0.06	0.01	0.005-1.0	30
P SR (mg/L)	0.007	0.005	0.005-0.05	30



References

Dean JC, Bunn SE (1989) Larval descriptions of the Hydrobiosidae, Philopotamidae, Hydropsychidae, and some Ecnomidae (Trichoptera) from south-western Australia, with notes on biology. *Australian Journal of Marine and Freshwater Research* **40**, 631-643.

Sutcliffe K (2003) The conservation status of aquatic insects in south-western Australia. Doctor of Philosophy thesis, Murdoch University.