



Family Synthemistidae

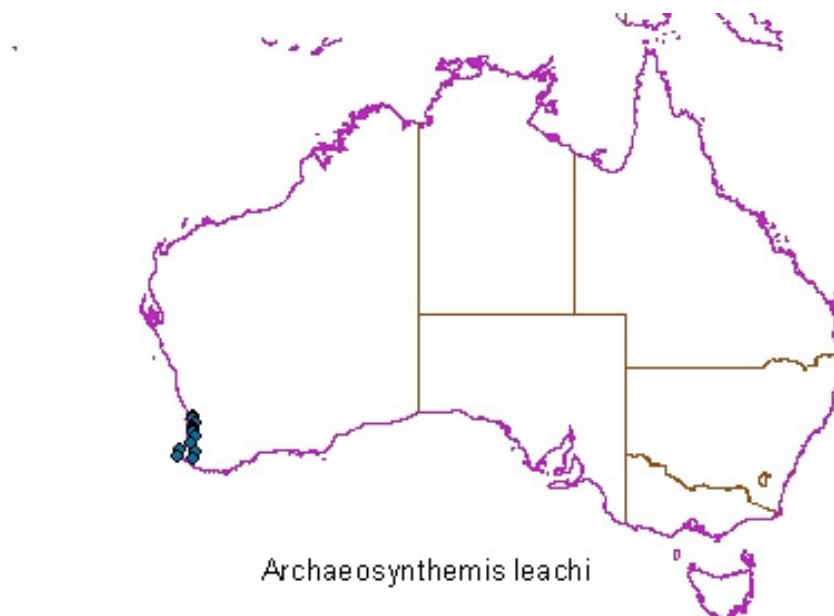
Habitat Profile for *Archaeosynthemis leachii* (Selys)

Archaeosynthemis leachi (Selys) is an endemic species from the south west coastal region of Western Australia (Sutcliffe 2003). Theischinger (2001) recorded that this species inhabits streams, boggy seepages and swamps. This species was only recorded from 15 samples from Perth to Albany in areas with >800mm of rainfall (Sutcliffe 2003).

A. leachi was found in channels and macrophytes. The rivers were at low altitude (<300m) (Chart a) and generally close to the stream source (Chart b), generally < 40km from the source. The substrate was dominated by sand and gravel with >20% detrital cover (Chart c). Stream width was variable from 2m to 20m (Chart d). The alkalinity was low usually <50mg/L (Chart e) and the conductivity was low <400µS/cm (Chart f).

The following generalities can be made about the other parameters listed in the Table: relatively low temperature (10.2-13.4 °C), pH was in range of 6.3-7.4 and very low turbidity (<2 NTU).

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

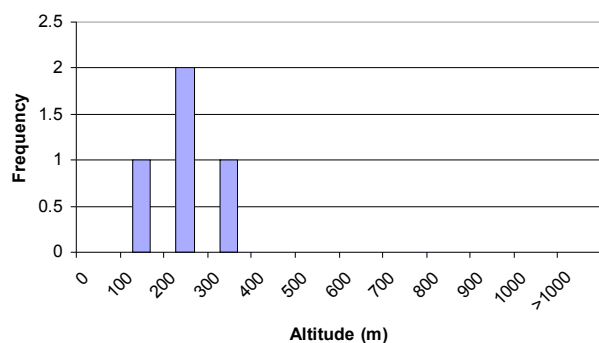


Distribution of *Archaeosynthemis leachii* in Australia.

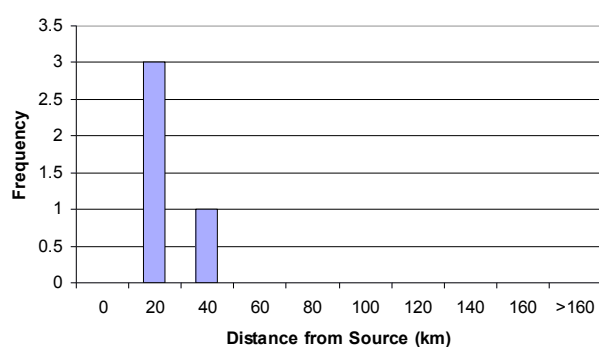


Charts for *Archaeosynthemis leachi*

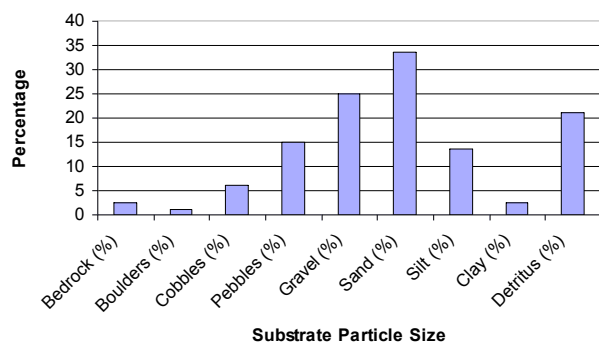
a) Altitude



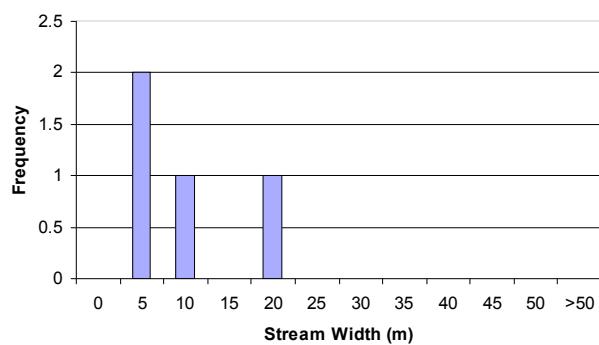
b) Distance from source



c) Substrate Particle Size

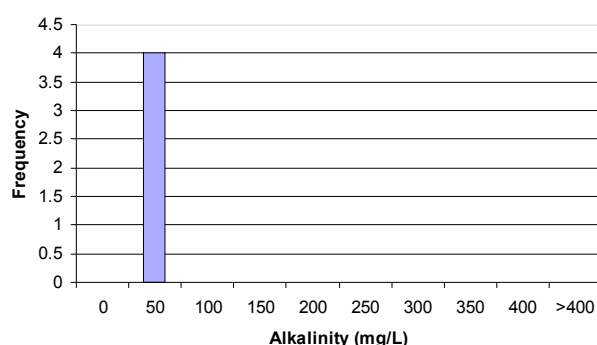


d) Stream Width





e) Alkalinity



f) Conductivity

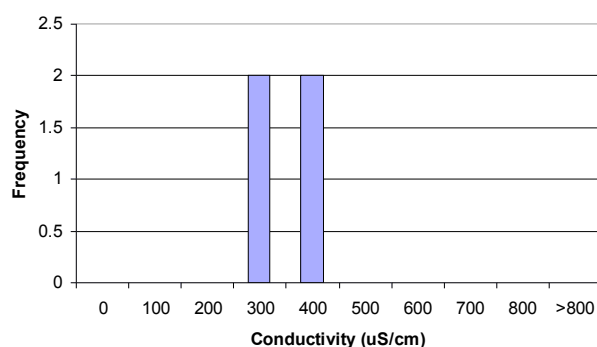


Table. Mean, median and range for selected physical and chemical parameters and habitat categories for *Archaeosynthemis leachi* (N= number of records).

	Mean	Median	Range	N
Altitude (m)	171	175	95-240	4
Distance from source (km)	11.8	9.8	6-22	4
Width (m)	9.0	6.9	2.2-20	4
Depth (m)				
Water Temperature	11.6	11.3	10.2-13.4	4
Conductivity (uS/cm)	289	279	222-377	4
pH	6.8	6.8	6.3-7.4	4
Turbidity (NTU)	0.98	0.75	0.4-2.0	4
Oxidised Nitrogen (mg/L)	0.228	0.030	0-0.01-0.84	4
Total N (mg/L)	0.378	0.145	0.12-1.100	4
Total P (mg/L)	0.009	0.005	0.005-0.020	4
Alkalinity (mg/L)	14.5	10	5-33	4

References

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

Theischinger G (2001) 'Preliminary keys for the identification of larvae of the Australian Synthemistidae, Gomphomacromiidae, Pseudocorduliidae, Macromiidae and Austrocorduliidae.' (Cooperative Research Centre for Freshwater Ecology: Albury)