



Family Gomphidae

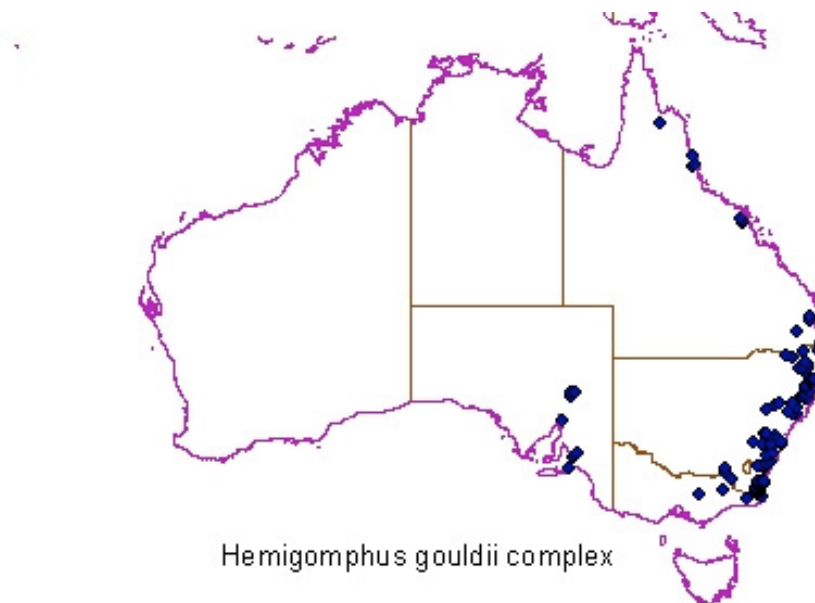
Habitat Profile for *Hemigomphus gouldii* (Selys)

Hemigomphus gouldii (Selys) is a widespread species found in the eastern states of Australia (Watson *et al.* 1991). In the larval forms it is difficult to distinguish between *H. gouldii*, *H. heteroclytus*, *H. commitatus* and *H. theischingeri* (Theischinger 2000) and so the distribution given here is a complex of species, and may include any or all of these species. Larvae were recorded from 217 samples from northern Queensland to Victoria and South Australia in this study.

Hemigomphus gouldii was generally found in riffle samples in lowland streams generally below altitudes of 300m (Chart a), but <40km from the stream source (Chart b) with substrate dominated by cobbles and boulders with <10% detrital cover (Chart c). The streams were generally <0.3m deep (Chart e) and <20m wide (Chart d) with low alkalinity generally <100mg/L (Chart f) and with low conductivity generally below 100mg/L but ranging from 16 to 15000 μ S/cm (Chart g).

The following generalities can be made about the other parameters listed in the Table: water temperature between 6.2-28.1 °C, pH was in range of 5.2-9.3 and low to very high turbidity (0-2050 NTU).

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



Distribution of *Hemigomphus gouldii* complex in Australia

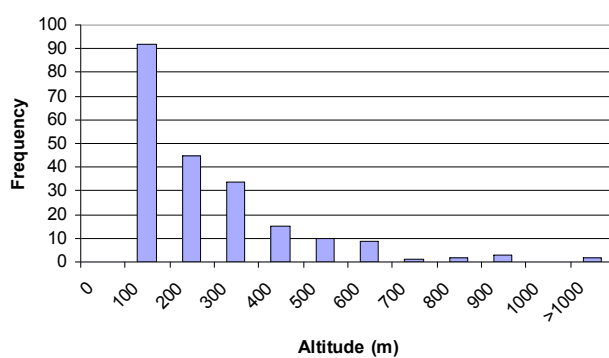


Hemigomphus gouldii, nymph and typical habitat

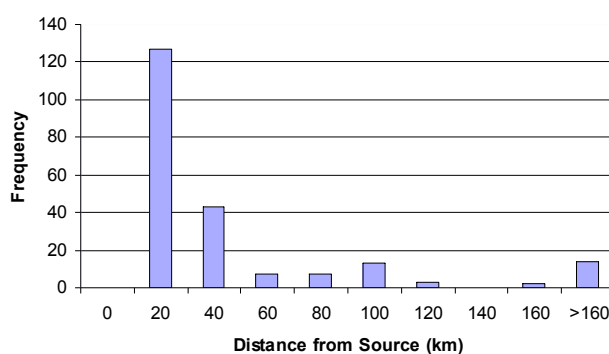


Charts for *Hemigomphus gouldii*

a) Altitude

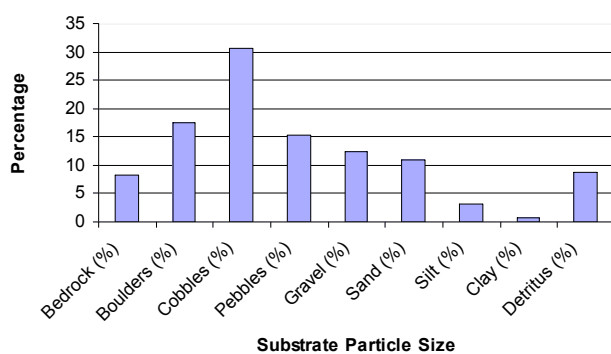


b) Distance from source

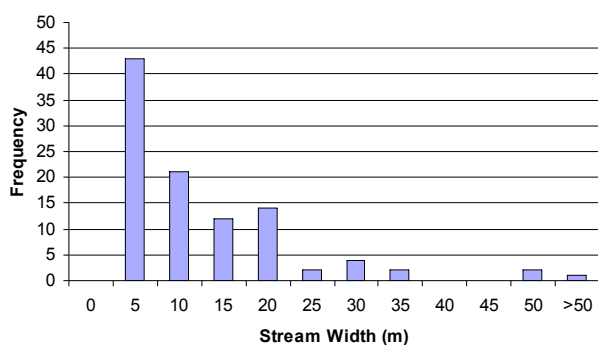




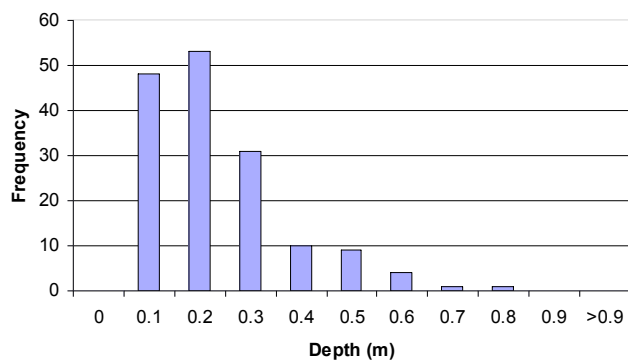
c) Substrate Particle Size



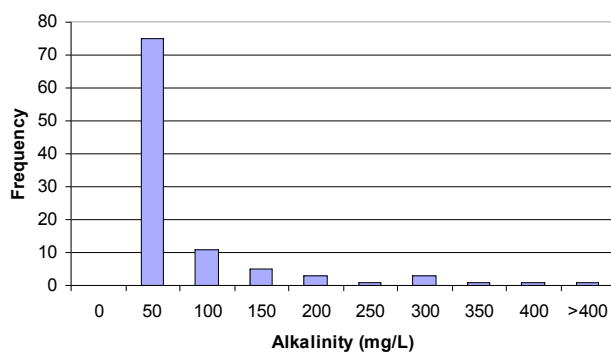
d) Stream Width



e) Depth



f) Alkalinity





g) Conductivity

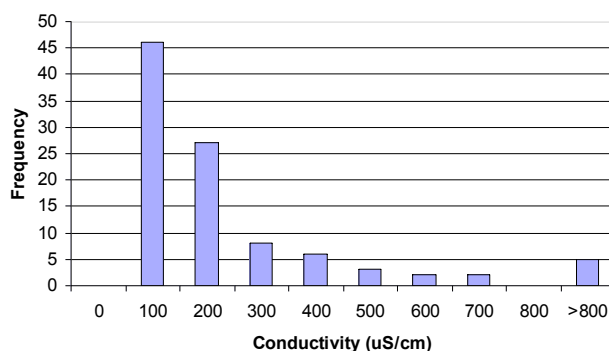


Table. Mean, median and range for selected physical and chemical parameters and habitat categories for *Hemigomphus gouldii* (N= number of records).

	Mean	Median	Range	N
Altitude (m)	195	130	5-1100	213
Distance from source (km)	37.7	15.5	0.6-285	216
Width (m)	11.4	8.0	1.5-54	100
Depth (m)	0.22	0.20	0.05-0.80	157
Water temperature (°C)	18.3	18.1	6.2-28.1	99
Conductivity (µS/cm)	480	106	16-14950	99
pH	7.5	7.5	5.2-9.3	99
Turbidity (NTU)	26.2	1.0	0-2050	93
Oxidised Nitrogen (mg/L)	0.041	0.010	0.002-0.746	76
Total N (mg/L)	0.681	0.410	0.160-3.190	34
Total P (mg/L)	0.045	0.012	0.005-1.840	93
Alkalinity (mg/L)	60.2	30.0	4.1-482	101

References

Theischinger G (2000) 'Preliminary key for the identification of larvae of the Australian Gomphidae.' (Cooperative Research Centre for Freshwater Ecology: Albury)

Watson JAL, Theischinger G, Abbey HM (1991) 'The Australian Dragonflies. A guide to the identification, distributions and habitats of Australian Odonata.' (CSIRO: Canberra and Melbourne)