



Family Aeschnidae

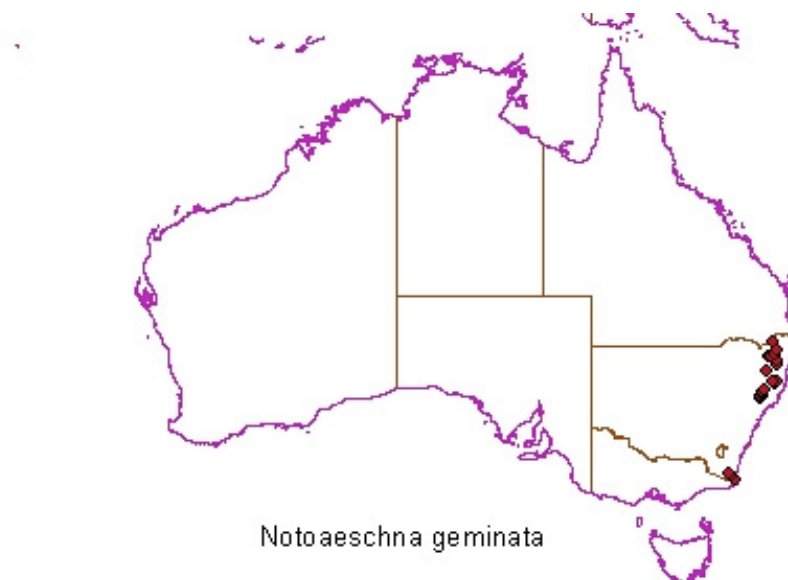
Habitat Profile for *Notoaeschna geminata* Theischinger

Notoaeschna geminata Theischinger is found in New South Wales and Queensland (Houston and Watson 1988; Theischinger 2002; Watson *et al.* 1991). In this study they were recorded from 37 samples from coastal northern New South Wales south to the Victorian border. Theischinger (2002) noted that the larvae of *N. geminata* cannot be distinguished from *N. sagittata* and that *N. geminata* was only found north of the Hunter River. Therefore it is possible that the records from near the Victorian border were not *N. geminata*, but *N. sagittata*.

Notoaeschna geminata was generally found in riffle habitats in upland streams generally below altitudes of 500m (Chart a), but <100km from the stream source (Chart b) with substrate dominated by boulder, cobble and bedrock with <10% detrital cover (Chart c). The streams were generally <0.5m deep (Chart e) and <20m wide (Chart d) with low alkalinity generally <100mg/L (Chart f) and with low conductivity < 300 μ S/cm (Chart g).

The following generalities can be made about the other parameters listed in the Table: water temperature between 13.6-25.0 °C, pH was circum-neutral in the range of 5.8-8.6 and low to moderate turbidity (1-49 NTU).

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



Distribution of *Notoaeschna geminata* in Australia

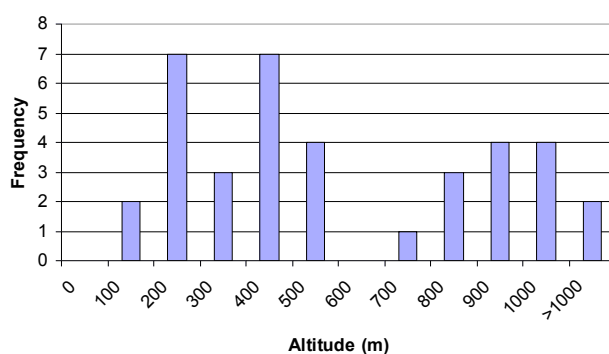


Notoaeschna geminata nymph

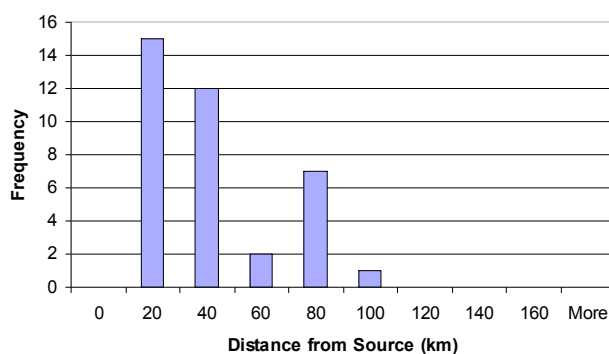


Charts for *Notoaeschna geminata*

a) Altitude

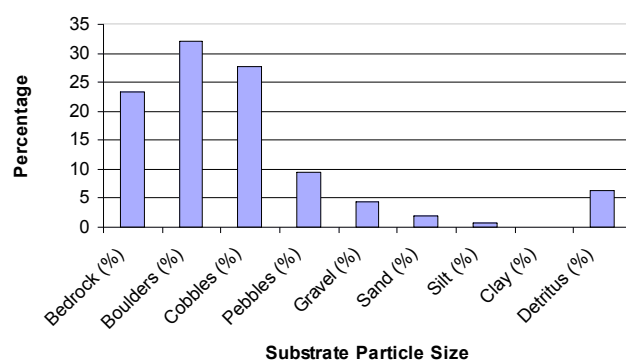


b) Distance from source

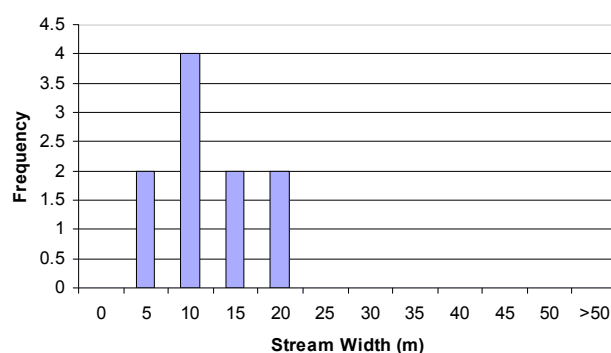




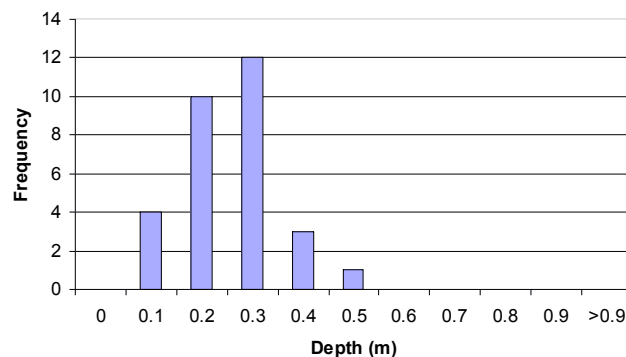
c) Substrate Particle Size



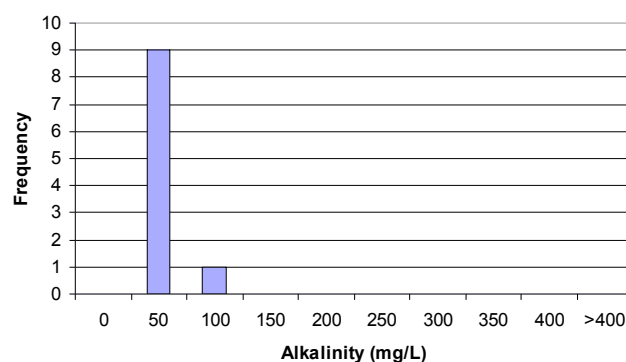
d) Stream Width



e) Depth



f) Alkalinity





g) Conductivity

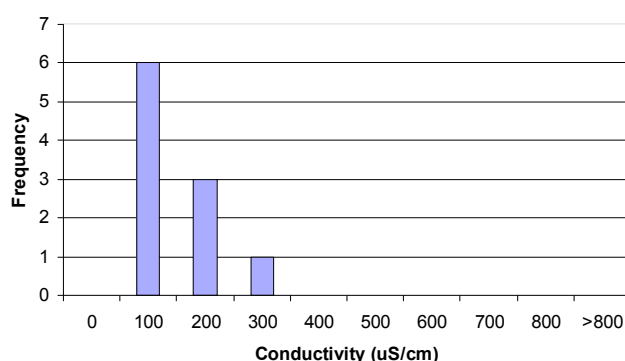


Table. Mean, median and range for selected physical and chemical parameters and habitat categories for *Notoaeschna geminata* (N= number of records).

| | Mean | Median | Range | N |
|---------------------------|-------|--------|-------------|----|
| Altitude (m) | 497 | 370 | 30-1010 | 37 |
| Distance from source (km) | 34.8 | 22.6 | 7.0-97.0 | 37 |
| Width (m) | 10.5 | 8.5 | 4-20 | 10 |
| Depth (m) | 0.25 | 0.25 | 0.1-0.5 | 30 |
| Water temperature (°C) | 16.8 | 15.7 | 13.6-25.0 | 10 |
| Conductivity (µS/cm) | 82.6 | 59 | 9-258 | 10 |
| pH | 7.5 | 7.5 | 5.8-8.6 | 9 |
| Turbidity (NTU) | 19.1 | 10.0 | 1-49 | 5 |
| Oxidised Nitrogen (mg/L) | 0.037 | 0.015 | 0.010-0.190 | 10 |
| Total N (mg/L) | 0.485 | 0.385 | 0.300-0.870 | 4 |
| Total P (mg/L) | 0.023 | 0.015 | 0.010-0.096 | 10 |
| Alkalinity (mg/L) | 32 | 20 | 10-100 | 10 |

References

Houston WWK, Watson JAL (1988) Odonata. In 'Zoological Catalogue of Australia'. (Eds DW Walton and WWK Houston) pp. 33-132. (Australian Government Publishing Service: Canberra)

Theischinger G (2002) 'Preliminary keys for the identification of larvae of the Australian Petaluridae, Archipetaliidae, Austropetaliidae, Telephlebiidae and Aeschnidae (Odonata).' (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)