



## Family Eustheniidae

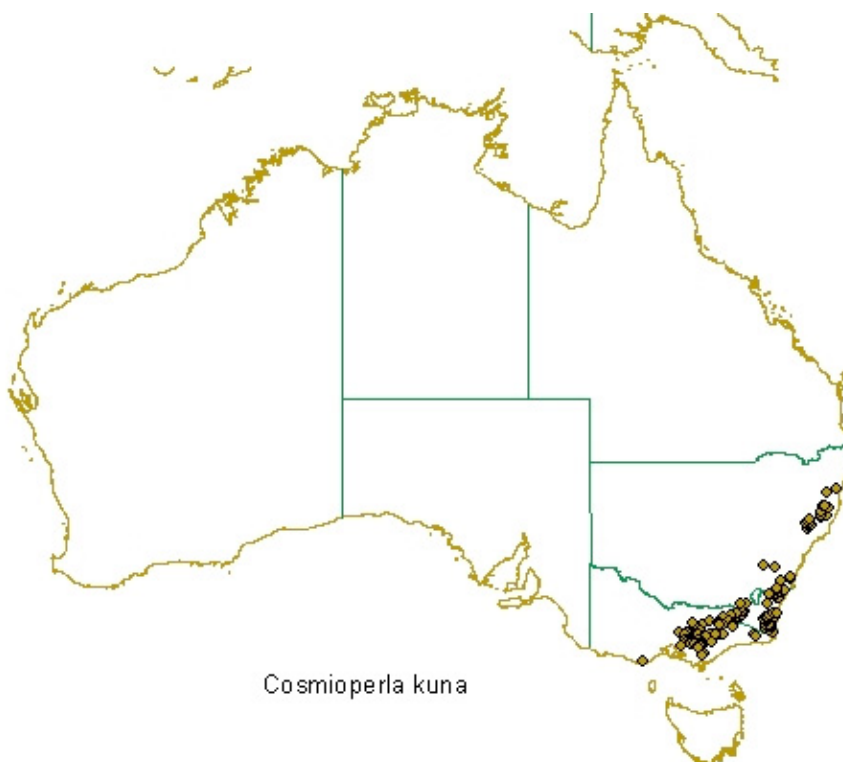
### Habitat Profile for *Cosmioperla kuna* Theischinger

*Cosmioperla kuna* Theischinger was described by Theischinger (1983) from adults and Yule (1997) included a key to identification of nymphs noting that a number of species were not associated with adults. Although identified as *C. kuna* it is possible that the records represent a complex within the genus and more than one species is represented. *C. kuna* was recorded from 370 samples, mainly from the riffle habitat, from Victoria and the eastern drainage in New South Wales.

*C. kuna* was recorded from streams at a wide range of altitudes (20-2020m) above sea level (Chart a) and generally close to the stream source (usually <20km) (Chart b) and the substrate was dominated by boulders, cobbles and pebbles with <5% detrital cover (Chart c). Streams were generally <20m wide (Chart d), depth was <0.5m (Chart e) with low alkalinity (Chart f) and low conductivity between 3 $\mu$ S/cm and 450 $\mu$ S/cm (Chart g).

The following generalities can be made about the other parameters listed in the Table: wide range of temperature (4.1-25 °C), pH was circum-neutral, range 5.4-8.8 and very low turbidity (0.4-12 NTU).

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



*Cosmioperla kuna*

Distribution of *Cosmioperla kuna* in Australia

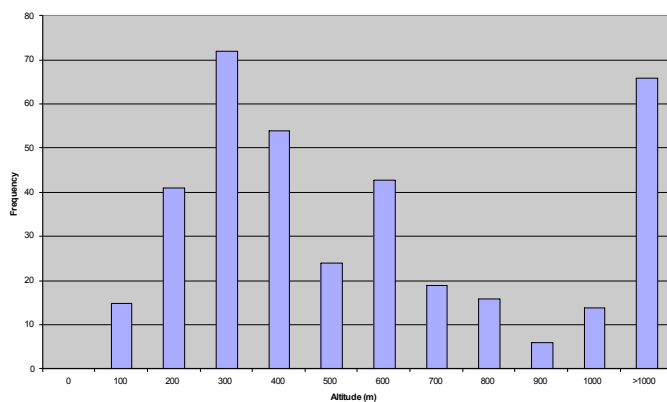


## *Cosmioperla kuna*, nymph and typical habitat

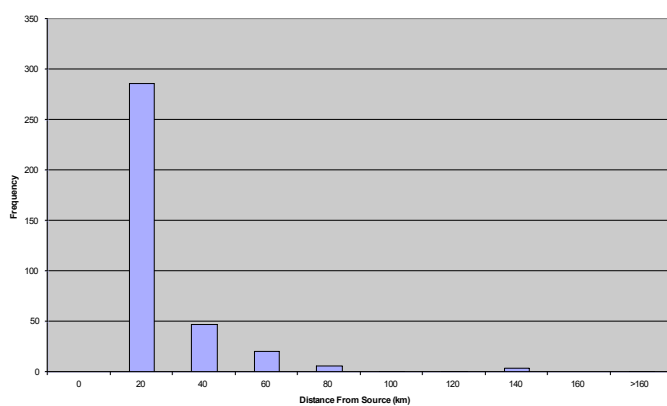


## Charts for *Cosmioperla kuna*

### a) Altitude

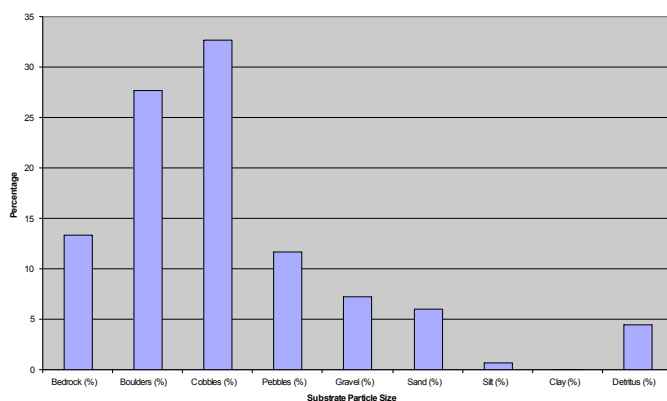


### b) Distance from source

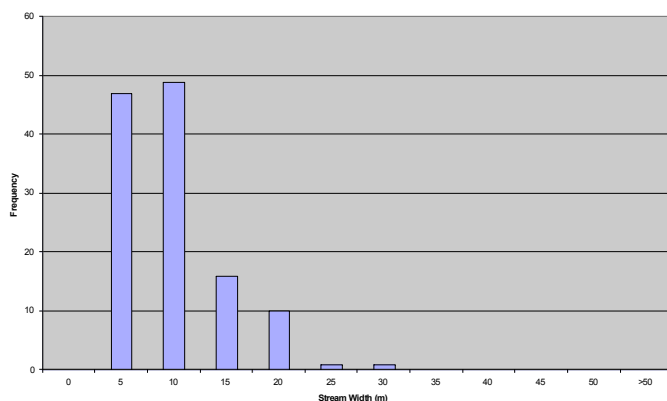




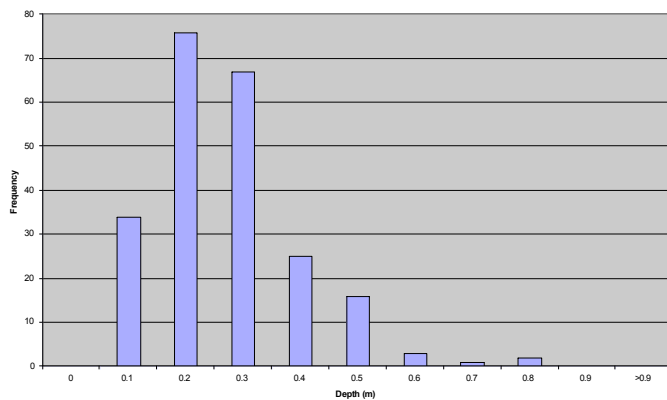
c) Substrate Particle Size



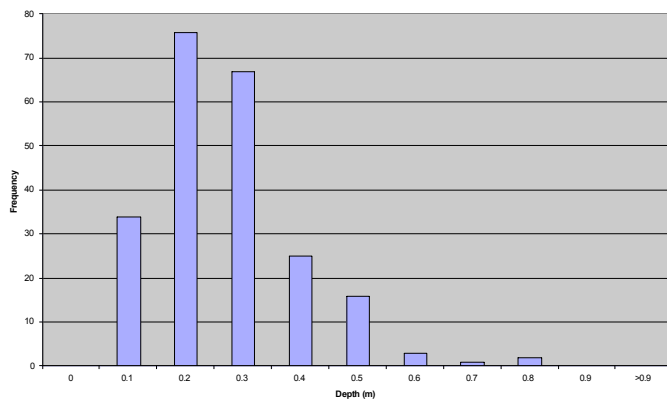
d) Stream Width



e) Depth

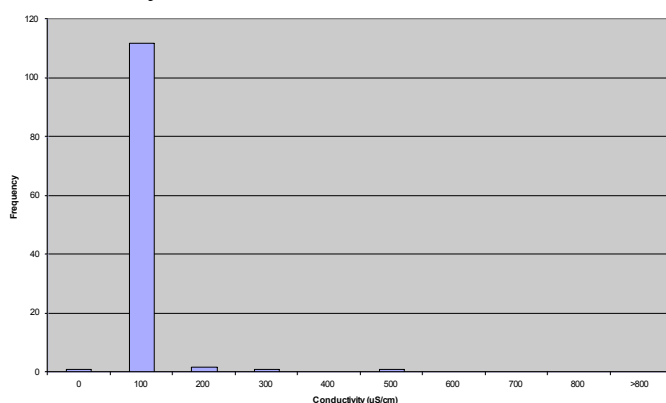


f) Alkalinity





g) Conductivity



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

	Mean	Median	Range	N
Altitude (m)	616	415	20-2020	370
Distance from source (km)	17.6	10.7	0.26-220.3	370
Width (m)	8.2	7.0	1-25	115
Depth (m)	0.25	0.22	0.02-0.80	224
Water Temperature (µC)	12.3	12.0	4.1-25	115
Conductivity (µS/cm)	41.2	31.1	3-446	115
pH	7.3	7.3	5.4-8.8	115
Turbidity (NTU)	2.5	1.6	0.4-12	115
NO3-N (mg/L)	0.069	0.020	0.003-0.370	115
Total N (mg/L)				
Total P (mg/L)	0.015	0.012	0.005-0.05	115
Alkalinity (mg/L)	15.7	11	4-130	115

References

Theischinger G (1983) The genus *Stenoperla* McLachlan in Australia (Insecta:Plecoptera:Eustheniidae). *Australian Journal of Zoology* **31**, 541-556.

Yule C (1997) 'Identification guide to the stonefly nymphs of New South Wales and northern Victoria.' (Australian Water Technologies: West Ryde)