

A PREVIEW OF NATURAL HISTORY STUDIES AT LAKE GREGORY

S.A. Halse. Department of Conservation and Land Management, Wildlife Research Centre, PO Box 51 Wanneroo, WA 6065.

CALM and other institutions have recently begun a multi-disciplinary study at Lake Gregory in the Tanami Desert of north-western Australia. The lake lies within the Djurabalan Pastoral Lease and consists of a series of inter-connected basins with an area of 390 km². It receives regular inflow via Sturt Creek from a 65 000 km² catchment area to the north-east and rarely dries out. Hydrological conditions alternate over a few years from flooded with freshwater to drying out and moderately saline as solutes are concentrated by evaporation. The lake is one of the most important sites for waterbirds in Australia. Its water chemistry and use by waterbirds and aquatic invertebrates are being documented.

Lake Gregory is also a valuable source of information about past climates. Lake sediments are 90 m deep and encompass the last 10 million years. About 30 000 years ago the lake was 15 times its present size, indicating a strong monsoonal regime. About 18 000 years ago the lake was much smaller than it currently is, indicating weaker monsoons. The aims of the multi-disciplinary study are (1) to provide a history of the lake and its fauna and (2) to determine what types of management are suitable for sites such as Lake Gregory.



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