

LIBRARY

Department of Biodiversity,
Conservation and Attractions

This PDF has been created for digital preservation. It may be used for research but is not suitable for other purposes. It may be superseded by a more current version or just be out-of-date and have no relevance to current situations.

Paperbark Swamp Waterbirds

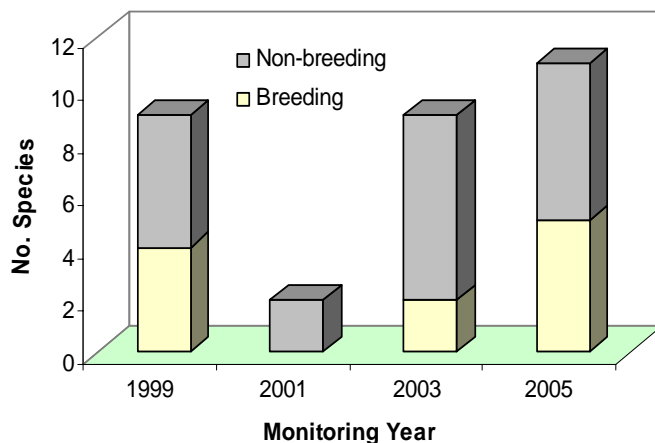
The Wheatbelt Wetlands Monitoring Program

The Wheatbelt Wetlands monitoring program commenced in 1997 with 5 wetlands and was expanded to 25 wetlands by 1999. Paperbark Swamp was first surveyed in 1999. Each wetland in the program is surveyed at least every second year for aquatic invertebrates and waterbirds and water chemistry and ground water parameters are measured. Waterbirds are surveyed using binoculars and a spotting scope to count all birds present. When lake depth is sufficient a small boat is used to gain better access to all parts of the lake. Evidence of breeding is recorded when observed, i.e. broods or nests with eggs, however, nests are not searched for and these data will be incomplete.

Waterbirds were surveyed at Paperbark Swamp in late Winter (August), Spring (October) and Autumn (March) of each sampling year since 1999, i.e. 1999, 2001, 2003, and 2005. In 2001 water was only present in late winter and then only in a small dam in the lake bed.



Waterbird Species Richness at Paperbark



A total of 13 species have been recorded since monitoring began. While Grey Teal were occasionally abundant most species were recorded at less than 20 birds per survey. Both abundance and richness were correlated with water depth ($r = 0.63$ and 0.69 respectively, $df8$, $p < 0.05$), however, minimum richness was recorded at both the maximum and minimum lake depths.

Seven species bred over the monitoring period including the ubiquitous Grey Teal, Eurasian Coot, White-faced Heron and Pacific Black Duck and less commonly encountered White-necked Heron, Pink-eared Duck and Australian Wood Duck. While no species bred during 2001 this was a year of very low water levels and it is likely that breeding generally occurs when water levels allow. Breeding is promoted at Paperbark Swamp by the canopy of *Melaleuca* sp. and the high abundance of aquatic invertebrates.

Most feeding guilds were represented at Paperbark Swamp during the monitoring period, with a maximum of five guilds present on several occasions. Dabblers dominated in terms of the number of species present and other guilds, except large waders, were represented by only single species. The

wetland does not include suitable habitat for reed or small wader guilds and the absence of aerial feeding species such as the Swamp Harrier is likely to be linked to the vegetative canopy over much of the wetland.



Department of
Environment and Conservation

Paperbark Swamp Waterbirds

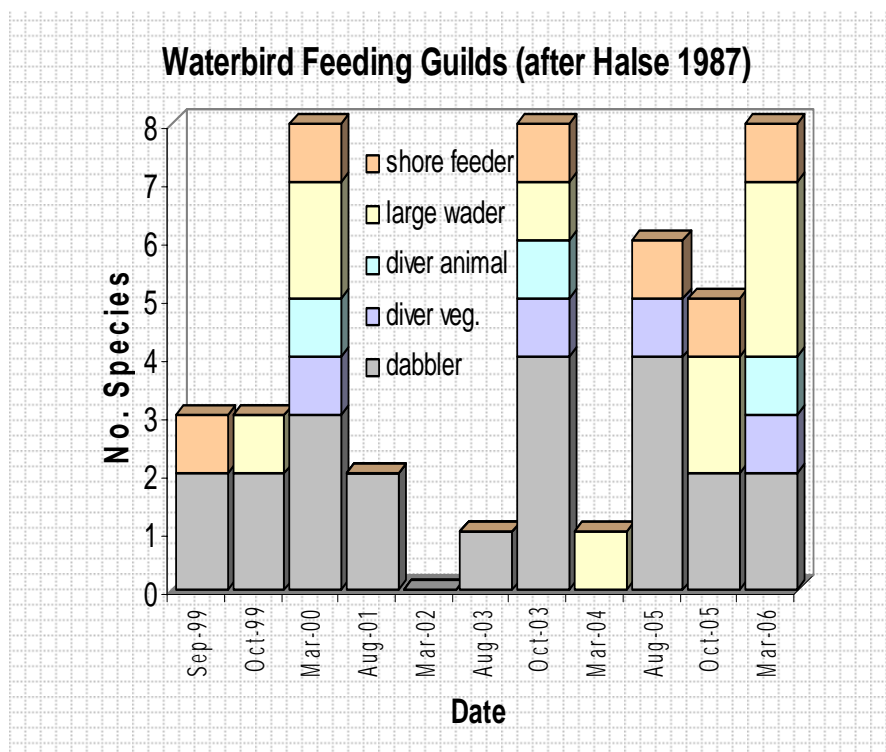


TABLE 1 Waterbird species list for Paperbark Swamp compiled from three surveys each sampling year except 2001 when the lake was dry for all but the late winter survey. % Occurrence is the proportion of surveys, with depth greater than 0 m, for which the species was recorded

Species	1999	2001	2003	2005	% Occurrence
Grey Teal	√	√	√	√	90
Pacific Black Duck	√	√	√	√	60
Pink-eared Duck	√	0	√	√	50
Australian Wood Duck	√	0	√	√	50
Eurasian Coot	√	0	√	√	40
White-faced Heron	√	0	√	√	40
White-necked Heron	√	0	√	√	40
Hoary-headed Grebe	√	0	√	0	20
Nankeen Night Heron	√	0	0	√	20
Australian Shelduck	0	0	0	√	10
Hardhead	0	0	√	0	10
Little Pied Cormorant	0	0	0	√	10
Black-tailed Native-hen	0	0	0	√	10

Further reading:

Cale D.J., Halse S.A. and Walker C.D. (2005) Wetland monitoring in the Wheatbelt of Western Australia: site descriptions, waterbird, aquatic invertebrate and groundwater data. *Cons. Sci. W. Aust.* **5** (1): 20-135
Halse S.A. (1987) *Probable effect of increased salinity on the waterbirds of Lake Toolibin*. Technical Report No. 15. Dept. Conservation and Land Management, Perth Western Australia.