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Lake Dumbleyung Waterbirds

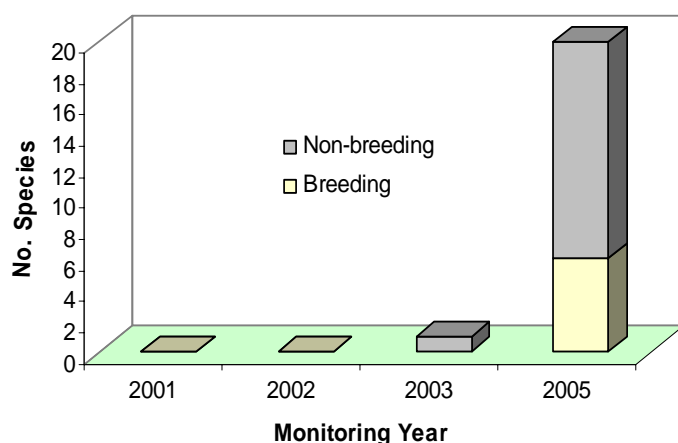
The Wheatbelt Wetlands Monitoring Program

The Wheatbelt Wetlands monitoring program commenced in 1997 with 5 wetlands and was expanded to 25 wetlands by 1999. Lake Dumbleyung was first surveyed in 1999 but held no water until 2001. 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 Lake Dumbleyung in late Winter (August), Spring (October) and Autumn (March) of each sampling year, however, the lake held only shallow hypersaline pools until it filled in 2005, consequently only four surveys detected waterbirds.

Waterbird Species Richness at Lake Dumbleyung



A total of 20 species have been recorded since monitoring began all of which were recorded after the lake filled in 2005. Only the Australian Shelduck was recorded prior to the lake filling. During 2005 six species successfully bred on the lake with most broods (64%) recorded in Spring when all six breeding species were recorded simultaneously. Grey Teal were the most abundant species recorded, with more than 2500 birds (67% of total abundance) in autumn 2005. Hoary-headed Grebe (809) and Black Swan (479) were also recorded in significant numbers

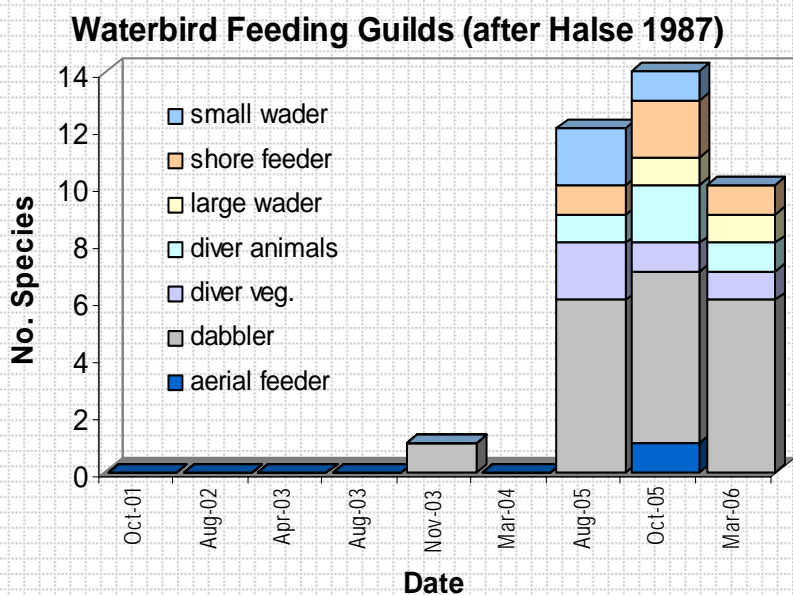
As water levels declined through 2005 the area of shoreline increased and areas of flooded plants and dead timber declined. These flooded margins were important to waterfowl as was evidenced by the aggregation of individuals within them during surveys. However, the reduction of species richness that accompanied this decline in sheltered area is most likely a seasonal response since most absent species,

such as Whiskered Tern, Little Pied Cormorant and Australasian Shoveler, were less dependent on such areas than many persisting species. Some species such as White-necked Heron, Black-winged Stilt and Australian White Ibis were probably not present in Autumn because of the reduction in suitable habitat.



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The distribution of waterbird richness across functional feeding groups gives an indication of the available niches for waterbirds at a wetland. The waterbird community at Lake Dumbleyung during its filled phase was dominated by species of dabbling ducks which make use of open water and flooded margins while feeding. Most other feeding guilds were also present reflecting the broad array of available niches. However, except for dabblers most guilds were represented by only one or two species.

TABLE 1 Waterbird species list for Lake Dumbleyung compiled from three surveys in 2005 and one in 2003. % Occurrence is the proportion of surveys for which the species was recorded

Species	1999	2001	2003	2005	% Occurrence
Australian Shelduck	0	0	√	√	100
Black Swan	0	0	0	√	75
Grey Teal	0	0	0	√	75
Pink-eared Duck	0	0	0	√	75
Hoary-headed Grebe	0	0	0	√	75
Eurasian Coot	0	0	0	√	75
Australasian Shoveler	0	0	0	√	50
Hardhead	0	0	0	√	50
Silver Gull	0	0	0	√	50
Black-winged Stilt	0	0	0	√	50
Whiskered Tern	0	0	0	√	25
Chestnut Teal	0	0	0	√	25
Pacific Black Duck	0	0	0	√	25
Little Pied Cormorant	0	0	0	√	25
Musk Duck	0	0	0	√	25
White-faced Heron	0	0	0	√	25
White-necked Heron	0	0	0	√	25
Masked Lapwing	0	0	0	√	25
Australian Wood Duck	0	0	0	√	25
Banded Stilt	0	0	0	√	25

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.