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Lake Walyormouring Waterbirds

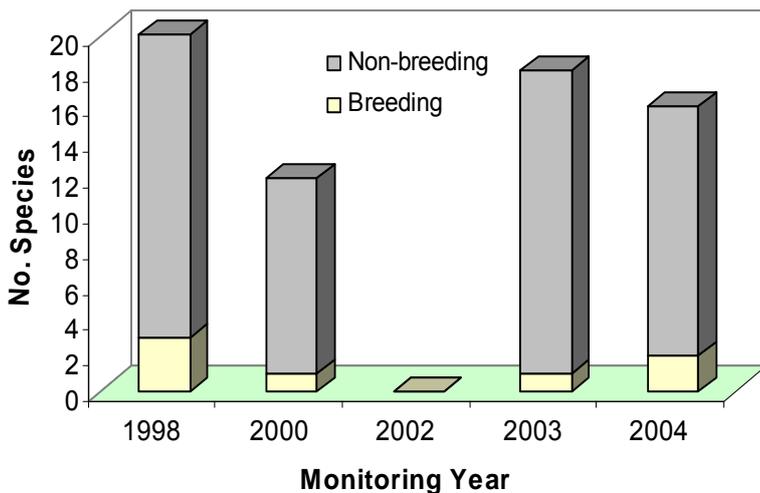
The Wheatbelt Wetlands Monitoring Program

The Wheatbelt Wetlands monitoring program commenced in 1997 with 5 wetlands and was expanded to 25 wetlands by 1999. Lake Walyormouring was first surveyed in 1998. 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 Walyormouring in late Winter (August), Spring (October) and Autumn (March) of each sampling year since 1997, i.e. 1998, 2000, 2002, 2003 and 2004, however, the lake was dry throughout 2002 and in autumn 2000, 2003 and 2004. A total of 25 species have been recorded since monitoring began.

Waterbird Species Richness at Lake Walyormouring



Waterfowl were generally abundant at lake Walyormouring with between 1969 and 9346 birds (mean 4568 birds) recorded for surveys where water was present. Usually the lake dried throughout summer resulting in progressively lower depth and higher salinity; 1998 was the only year in which water persisted throughout the sampling year. Species richness was negatively correlated with salinity ($r = -0.74$, $df = 7$, $P < 0.05$). There was, however, no correlation between abundance and salinity because a few species contributed the bulk of waterbird abundance.

Three species, the Australian Shelduck, Black Swan and Grey Teal were recorded breeding on the lake despite salinities ranging from 11.3 to 99.7 mS/cm. It is likely that

freshwater, from granite outcrops at the edge of the lake, is important for these breeding waterfowl.

Grey Teal, Australian Shelduck and Eurasian Coot were the most consistently encountered species occurring both more frequently and in greater abundance than other species. These three species accounted for more than 50% of total abundance on all sampling occasions and on two occasions collectively accounted for 97% of total abundance.

Overall the waterbird assemblage at Lake Walyormouring was dominated (both in richness and abundance) by small wader and dabbling species (see feeding guild figure

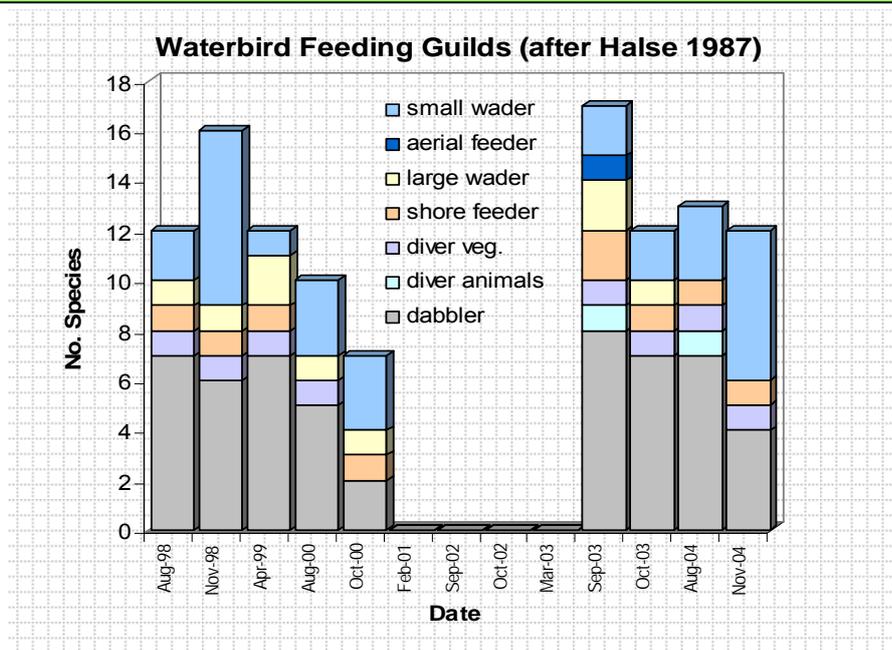
overleaf) with the balance shifting between these feeding guilds as depth changed to favour waders when shallow and dabblers at greater depth.

Most other feeding guilds were present on most occasions, but were represented by only one or two species each. With the exception of divers feeding on vegetation, which was represented by the Eurasian Coot, these guilds were in low abundance. The reed guild was not recorded and reflects the absence of this habitat.



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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.

TABLE 1 The waterbird species list for Lake Walyormouring was compiled from three surveys each sampling year except 2002, when the lake was dry, and 2000, 2003 and 2004 when the lake was dry for the third survey. % Occurrence is the proportion of surveys with depth greater than 0 m for which the species was recorded

Species	1998	2000	2002	2003	2004	% Occurrence
Australian Shelduck	√	√	0	√	√	81.82
Grey Teal	√	√	0	√	√	81.82
Silver Gull	√	√	0	√	√	72.73
Black Swan	√	√	0	√	√	72.73
Eurasian Coot	√	√	0	√	√	72.73
Pink-eared Duck	√	√	0	√	√	72.73
Pacific Black Duck	√	√	0	√	√	63.64
Black-winged Stilt	√	0	0	√	√	63.64
Red-capped Plover	√	√	0	√	√	54.55
White-faced Heron	√	√	0	√	~ 0	54.55
Australasian Shoveler	√	0	0	√	√	45.45
Hardhead	√	0	0	√	√	45.45
Banded Stilt	√	√	0	~ 0	√	45.45
Red-necked Stint	√	√	0	~ 0	√	27.27
Sharp-tailed Sandpiper	√	√	0	~ 0	√	27.27
Hoary-headed Grebe	0	0	0	√	√	18.18
Red-kneed Dotterel	√	0	0	0	√	18.18
Red-necked Avocet	√	0	0	√	0	18.18
White-necked Heron	0	0	0	√	~ 0	18.18
Whiskered Tern	0	0	0	√	~ 0	9.09
Australian Wood Duck	0	0	0	~ 0	~ 0	9.09
Chestnut Teal	√	0	0	~ 0	~ 0	9.09
Freckled Duck	0	0	0	~ 0	~ 0	9.09
Curlew Sandpiper	√	0	0	~ 0	~ 0	9.09
Yellow-billed Spoonbill	√	0	0	~ 0	~ 0	9.09