Aerial Survey of Wetland Birds in Eastern Australia - October 2013 Annual Summary Report

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Results summary

1. Most of the northern survey area has experienced extremely dry conditions since 2010, with few large areas of wetland available. However, the southeast of the survey region (Warrnambool, southern part of Coorong) high rainfall flooded many wetland areas. Wetlands throughout Queensland, New South Wales, and central and western Victoria were mostly dry at the time of survey (Fig. 1).

2. Trend analyses indicate continued long term (31 years) declines in waterbird abundance, wetland area, and breeding species richness (Figs 2 & 3). Wetland area, total abundance, breeding species diversity and breeding abundance declined considerably in 2013, compared to the previous year.

3. The Macquarie Marshes and Lowbidgee wetlands were partially filled by environmental flows but these were comparatively small areas compared to large flooding years. Most rivers in the Murray-Darling Basin were also low with little wetland habitat on the floodplains. Most of the large lakes of the Menindee Lakes system were full (Fig. 1).

4. Lake Eyre and Cooper Creek wetlands were mostly dry except for Lake Hope, which was drying back and supported more than 21,000 waterbirds. Lakes Yamma Yamma, Galilee, Torquinnie and Mumbleberry were also dry (Fig. 1).

5. There were relatively few large concentrations of waterbirds; only five wetland systems held more than 5,000 birds (compared to 35 in 2012): Burdekin River, Lake Hope, Paroo overflow, Loorica Lake (Lowbidgee) and Lake Proserpine (Figs 1 & 4)

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Result summary continued

6. Total breeding index (all species combined) was well below the long term average and lower than in 2012 (Fig 5). Breeding was concentrated in a small number of locations with most of the breeding (96%) confined to a single site. Breeding species richness was very low (four species), and comprised mainly (98%) of three non-game species (Figs 6 to 8).

7. Low numbers of waterbirds and breeding were observed on key wetland systems including Cooper Creek, Menindee Lakes, Paroo overflow, Cuttaburra channels, Macquarie Marshes and the Lowbidgee (Figs 1 & 4)

8. Game species abundances were all well below long term averages, in many cases by an order of magnitude (Figs 9 to 29)

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Figure 1. Wetland map 2013

Key to wetlands from W-E, by band

10 Lake Moondarra, Cloncurry River, Flinders River, Campaspe R, Burdekin R
9 Georgina R, Eyre Ck, Hamilton R, Diamantina R, Lake Galilee, Styx R
8 Mumbleberry-Torquinnie Lakes, Eyre Ck, Diamantina R, Thomson R, Barcoo R, various small coastal wetlands
7 Goyder Lagoon, Lake Yamma Yamma, Cooper Ck, Bulloo R, Paroo R, Warrego R
6 Lake Eyre, Lake Hope, Bulloo R, Paroo R, Warrego R, Balonne R,
5 Lake Frome, Paroo O'flow, Darling R, Macquarie Marshes
4 Menindee Lakes, Talywalka Lakes, Myall Lakes
3 Murray River Lakes, Lowbidgee Swamp
2 Coorong, Cooper + Mokoan Lakes, Cooma-Monaro
1 Curdies Inlet, Jack Smith Lake
Figure 2. Total wetland area

Figure 3. Total waterbirds
Figure 4. Band totals 2013

Scales vary on graph axes
Figure 5. Breeding index (all species)

![Breeding index graph](image)

Figure 6. Number of species breeding

![Number of species breeding graph](image)

Scales vary on graph axes
Figure 7. Breeding index (all species) 1-5

Scales vary on graphs
Figure 8. Breeding index (all species) 6-10

Scales vary on graphs
Figure 9. Pacific black duck 1-5

Scales vary on graphs – dashed line indicates long term average
Figure 10. Pacific black duck 6-10

Scales vary on graphs – dashed line indicates long term average
Figure 11. Black swan 1-5

Scales vary on graphs – dashed line indicates long term average
Scales vary on graphs – dashed line indicates long term average.
Figure 13. Australasian shoveler 1-5

Scales vary on graphs – dashed line indicates long term average
Figure 14. Australasian shoveler 6-10

Scales vary on graphs – dashed line indicates long term average
Figure 15. Chestnut teal 1-5

Scales vary on graphs – dashed line indicates long term average
Figure 16. Grey teal 1-5

Scales vary on graphs – dashed line indicates long term average.
Figure 17. Grey teal 6-10

Scales vary on graph – dashed line indicates long term average
Figure 18. Hardhead 1-5

Scales vary on graphs – dashed line indicates long term average
Figure 19. Hardhead 6-10

Scales vary on graphs – dashed line indicates long term average
Figure 20. Freckled duck 1-5

Scales vary on graphs – dashed line indicates long term average
Figure 21. Freckled duck 6-10

Scales vary on graphs – dashed line indicates long term average
Scales vary on graphs – dashed line indicates long term average
Scales vary on graphs – dashed line indicates long term average
Figure 24. Pink-eared duck 1-5

Scales vary on graphs – dashed line indicates long term average
Figure 25. Pink-eared duck 6-10

Scales vary on graphs – dashed line indicates long term average
Figure 26. Plumed whistling-duck 1-5

Scales vary on graphs – dashed line indicates long term average
Figure 27. Plumed whistling-duck 6-10

Scales vary on graphs – dashed line indicates long term average
Figure 28. Australian wood duck 1-5

Scales vary on graphs – dashed line indicates long term average
Figure 29. Australian wood duck 6-10

Scales vary on graphs – dashed line indicates long term average