

The status of the Pink-eared Duck in the Hunter Region

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The sight of hundreds of Pink-eared Duck *Malacorhynchus membranaceus* congregated on a confined area of open water, foraging as pairs performing figure-of-eight patterns round each other, is one of the most exhilarating moments of bird watching I have experienced. Unfortunately, it is not a regular occurrence in the Hunter Region. As shown in the distribution map (Figure 1) based on Birds Australia's (now BirdLife Australia) Birdata records up to December 2011, the Pink-eared Duck has a restricted distribution, occurring in only 15 of the 151 10-minute grids which comprise the Hunter Region. Ten of these grids lie in the lower Hunter Region, emphasising the importance of the wetlands in this area.

There were large variations in the annual reporting rates (RR) of Pink-eared Ducks in the Hunter Region as indicated by Figure 2, with 1999, 2002 and 2003 being years when the species was more frequently recorded. In contrast 2000 and 2010 were years in which the species was scarce, a trend which continued into 2011. The results suggest that the coastal areas of the Hunter Region act as a drought refuge and the species moves inland when conditions are suitable as in the current wetter conditions associated with the La Niña cycle of 2010 - 12.

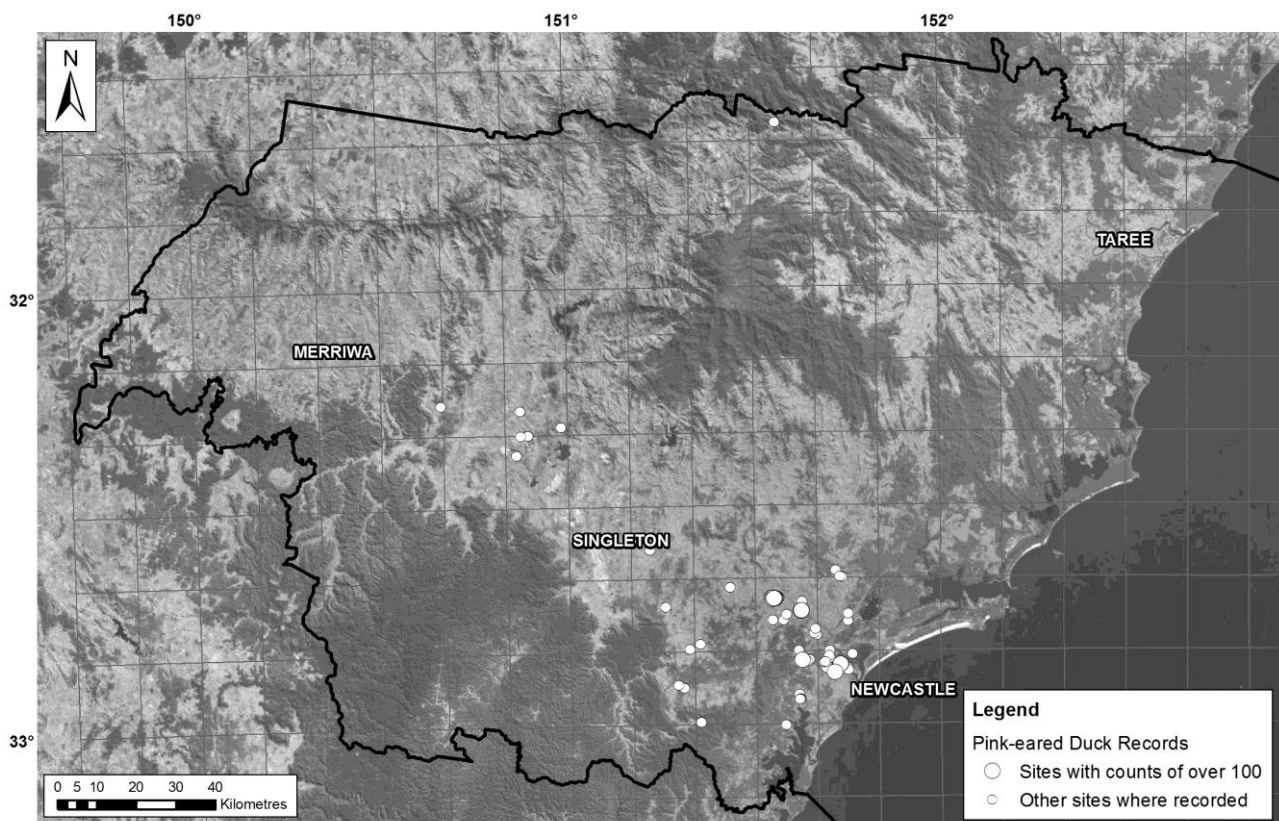


Figure 1. Distribution of Pink-eared Duck in the Hunter Region (Birdata 2ha and area surveys 1998 -2011).

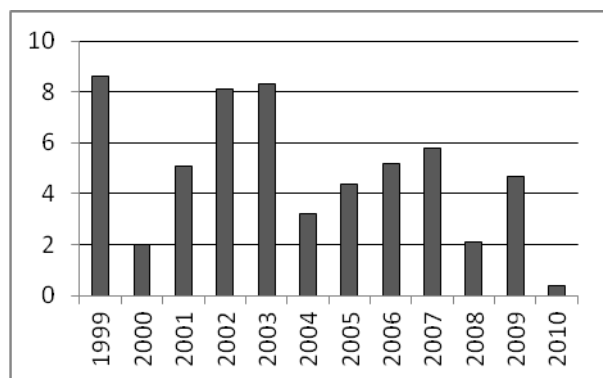


Figure 2. Variation in the annual reporting rates for Pink-eared Duck in the Hunter Region (source Birdata 2ha and area surveys 1999 – 2010; 1998 data excluded because of small sample size).

While Pink-eared Ducks were recorded in every month, they were more likely to be observed in the late spring-summer months than in winter (**Figure 3**). Many of the higher counts, involving flocks of over 100 ducks, occurred mid-year, but involved fewer records.

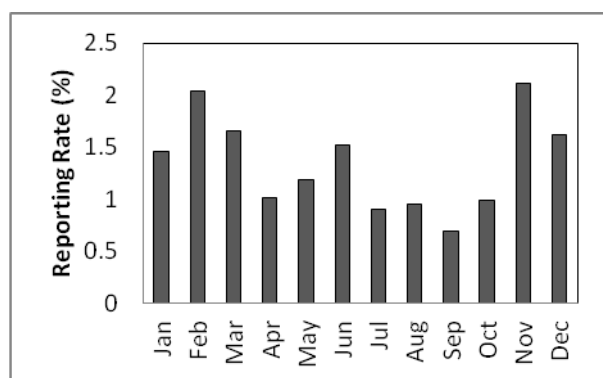


Figure 3. Monthly variations in Pink-eared Duck records in the Hunter Region (source Birdata 2ha and area search surveys 1998 – 2010).

Collectively the results (**Figures 2 and 3**) are consistent with movements found in other parts of Australia. Marchant & Higgins (1990, p. 1249) describe the Pink-eared Duck as “highly dispersive from inland Australia with movements related to availability of water. Seasonality of rainfall, however, gives some regularity to population movements.” In Victoria reporting rates were highest in spring and summer in coastal areas. Dry weather inland, where the species breeds, often causes irruptions to the coast (Marchant & Higgins *op. cit.*).

There are two records of Pink-eared Duck breeding in the Hunter Region. In January/February 1996 up to six birds were present at

Seaham Swamp Nature Reserve with one pair nesting and fledging two young. The other instance involved a pair with five ducklings at a large dam near Ravensworth in September 2007.

The Pink-eared Duck has a bill which is specialized for filter feeding. Consequently, it has a preference for shallow stagnant turbid water with abundant aquatic invertebrates. In the Hunter Region it is primarily found on medium-sized shallow lagoons and is absent from large deep water reservoirs. The settling ponds of sewage treatment plants and the tailings ponds of industrial operations often provide suitable habitat. The key locations used in the Hunter Region involve small to medium-sized water bodies of moderate depth (1 to 5 m) compared with shallow water, presumably inland, habitat described in the Handbook of Australian, New Zealand and Antarctic Birds (Marchant & Higgins 1990).

During the period 1998 to 2010 the Pink-eared Duck was recorded during 187 surveys submitted to Birdata with the 10-minute grid centred on 32°45' S 151°35' E having 93, almost 50%, of the records for the Hunter Region. This grid contains both the Morpeth Wastewater Treatment Works (MWTW) and the Walka Water Works, sites important to Pink-eared Duck for which long-term data sets based on monthly counts exist (Stuart 2001 - 2011). The other important grid is centred on 32°55' S 151°45' E with 44 Pink-eared Duck records, many stemming from long-term monthly surveys on Kooragang/Ash Island, particularly at Deep Pond. Results for these regularly monitored sites, which collectively provide almost 75% of the Pink-eared Duck records for the Hunter Region, are discussed below.

Morpeth Wastewater Treatment Works

Between 2001 and 2010 Pink-eared Ducks were recorded during 71 monthly surveys (RR 60%) at MWTW. Numbers ranged from 2 to a maximum of 1010 in June 2001. They were recorded in every month, but most frequently in November and December (RR 75%) and least frequently in January and February (RR 37%). However numbers peaked between April and July. Pink-eared Ducks were recorded in every year except 2010, with flocks exceeding 100 birds observed on 16 occasions, but only once since 2006. During large irruptions the ducks were sometimes present for over six consecutive months. Inspection of rainfall distributions for inland areas of eastern Australia during the past decade

confirm the hypothesis that Pink-eared Ducks are scarce in the Hunter Region when inland rainfall is above average (2000, 2004, 2008 and 2010), RRs falling in each of these years (**Figure 2**). The ducks return to the Hunter Region as their inland breeding habitat dries out. Irruptions can be large (**Figure 4**), particularly when inland rainfall levels are well below average (2002 and 2006).

Deep Pond, Kooragang Island

One hundred and sixteen monthly surveys were carried out between 2001 and 2010 at Deep Pond. Pink-eared Duck were present on 31 occasions (RR 27%) with numbers ranging from 1 to 267. There were records for every month. The largest numbers were seen in 2005, 2007 and 2009 and in eight instances flocks exceeded 100 birds, six of these instances occurring in 2009. Pink-eared Ducks were not recorded in 2003, 2004 or 2010. Comparison of the peak annual numbers for MWTW and Deep Pond (**Figure 4**) suggests that subsequent to 2006 Deep Pond displaced MWTW as the most important site for Pink-eared Duck in the Hunter Region, which is of concern given that the future existence of Deep Pond is threatened by industrial development.

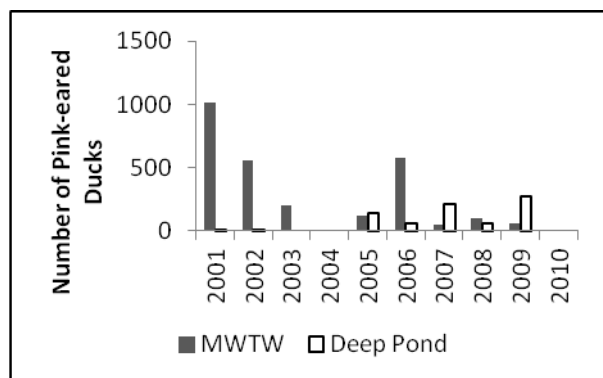


Figure 4. Annual peak numbers of Pink-eared Ducks at MWTW and Deep Pond, Kooragang Island based on monthly surveys (Source: HBOC Annual Bird Report series).

Walka Water Works

Since monthly counts commenced in April 2003 Pink-eared Ducks have been recorded at Walka Water Works on 13 occasions at a reporting rate of 12%. They were present annually between 2003 and 2009 with peak counts of 111 in January 2009 and 92 in 2003 and 2007, but from January

2009 to the end of 2011 there was just one record of three birds in July 2011. Before these monthly surveys commenced large numbers were present in May and June 2002, peaking at 350 in the middle of the latter month and similar sized flocks were recorded at the beginning of 2002.

Other Locations

Flocks exceeding 100 birds have been recorded at only three other locations, both in the lower Hunter, with over 300 present at Warabrook in July 2001, up to 600 present at Tarro Swamp between June and October 1985 (Waterhouse 1986) and up to 600 at Lenaghans Flat in July and August 2002. At all locations where large flocks occurred the ducks were often present for extended periods, which exceeded six months on occasions. Outside the core lower Hunter area Pink-eared Ducks have been recorded at a number of locations including: Mt Arthur, Bayswater Colliery, Ellalong Lagoon, Pokolbin Lake, Muswellbrook Sewage Treatment Plant and Stewarts River. This last is the only record for the north of the Hunter Region. Pink-eared Ducks are almost certainly under recorded in these areas.

In the Annual Bird Report Series of the Hunter Region the status of Pink-eared Duck is described as a “Bird of passage” which is defined as a “species present in a suitable area for a relatively short period and likely to be observed in any month of the year”. This analysis endorses that statement, except for the duration of the period that these ducks stay in the Hunter Region.

REFERENCES

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