

Waterbirds & Habitat

Waterbirds and Waterbird Habitat in the Lachlan Catchment

Waterbirds are a valued component of the Lachlan Catchment, making up a large proportion of the faunal biomass within the lower catchment. Waterbirds tend to have preferred locations and vegetation for shelter and nest sites. Most waterbird breeding sites are located in semi-permanent wetland vegetation types, requiring regular, frequent and prolonged flooding. Managed environmental flows and appropriate land management are critical for their maintenance and, in some cases, their restoration.

Some of the ecological requirements of breeding waterbirds in the Lachlan are known and this includes information about the wetland vegetation and materials required for most nesting. There is also a broader knowledge with regard to flow size, timing and duration required for different sized breeding events, food requirements and what happens to both adult and young birds after breeding (Kingsford and Auld 2005 ; Brandis et al 2009). Of the waterbirds that breed in the Lachlan, colonial nesting species are prominent, and have been the most studied.

Australia is also a signatory to a number of International Agreements which aim to protect migratory birds and their habitats. Species that have been recorded utilising habitats within the lower Lachlan that are included under International Agreements are the Great Egret, Glossy Ibis, Bar-tailed Godwit, Common Greenshank, Common Sandpiper, Latham's Snipe, Long-toes Stint, Painted Snipe and the White-bellied Sea-eagle. The Environment Protection and Biodiversity Conservation (EPBC) migratory species list has been referred to when assessing the status of particular species within the Lachlan wetlands.

Up until 2010, there had only been two substantial colonially nesting waterbird breeding events in the lower Lachlan since 2001. In 2005, a relatively small stock and domestic flow in Merrowie Creek supported a successful nesting of approximately 10,000 pairs of Straw-necked Ibis in Lignum scrub. This event was not predicted because flows were lower than the threshold previously considered necessary to stimulate breeding, and was the first record of colonial nesting waterbirds breeding at only one location in the creek. Another breeding event occurred at Lake Brewster in 2006, this was an unusual event as it supported a variety of species and was achieved with a minimal volume of water in the dead storage area of the lake. Details of these events are provided as case studies.

Following large inflows into the Lachlan during 2010, three large-scale bird breeding events occurred in the lower Lachlan Catchment. The largest of these took place in the Booligal Wetlands, with approximately 120,000 Straw-necked Ibis successfully recruited. A smaller breeding event of Straw-necked Ibis occurred 2.5-km upstream of Cuba Dam on Merrowie Creek, with at least 10,000 nests observed in the area. The third breeding event in the lower Lachlan was located at the newly reconfigured Lake Brewster, where several thousand pelicans successfully nested for several months from December 2010. See the LRWG March Newsletter for details.

Large-scale waterbird breeding events (>40,000 nests) in the lower Lachlan indicate the whole ecological system is functioning well. The review of the ecological and social system of the lower Lachlan has highlighted a number of management issues affecting the ability of the ecological system to support large waterbird breeding events. Most of these relate to flow regime but other issues include the effects of grazing, clearing, pests and the lack of understanding of complex systems such as the lower Lachlan.

The minimum requirement for successful colonially nesting waterbird breeding is flooding of sufficient volume and duration to inundate colony sites and feeding areas for a minimum four to five months between August and March. These flows are also critical for maintaining wetland vegetation, and for the completion of life-cycles of aquatic invertebrates (Jenkins 2006). Although smaller flows do not generally support successful colonially nesting waterbird breeding, they do enable other flood dependent waterbird species to breed (Marchant and Higgins 1990).