

A view to the south-west over Haywards Lagoons (foreground) and J K Donald Reserve to the flats and backwaters of the eastern shore of Lake Wairarapa.

Photo: C J R Robertson

— a wetland of international importance

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Despite the recent fervent debate between developers and conservationists over the fate of Lake Wairarapa and its adjacent wetlands, this area is little known by the public. Few people, therefore, appreciate the importance of this system to wildlife, particularly birds. In this article Peter Moore remedies this deficiency by describing the bird life of the Lake Wairarapa wetlands and explaining why the area has such high value for wildlife. This account complements the description of the area's vegetation by Colin Ogle and Tom Moss in the February 1984 issue of *Forest and Bird*.

At least 90 percent of the former ponds and swampland of the lower Wairarapa region have been drained, a casualty of a century of European settlement and agricultural development. Today Lake Wairarapa itself has come under threat.

In 1964 the Wairarapa Catchment Board began the Lower Wairarapa Valley Development Scheme, in which it was proposed to drain more than 5,200ha of lake and wetlands and to protect a further 16,200ha of farmland from flooding. Several parts of the scheme have been completed; the final stage of development, the 'polder scheme', proposed to 'reclaim' some lake bed, creating 1,700ha of low-lying farmland and protecting 900ha of land adjacent to the lake, by building a system of banks along the eastern side of the lake. This development would eliminate most of the lake's shallow water and marshland, the single most valuable wildlife habitat in the wetlands.

The Wildlife Service has sought to reserve the remaining wetland areas since

the early 1970's. Although large areas were lost, including the 386ha Te Hopai Lagoon, the other large pond complexes adjacent to Lake Wairarapa, the old Ruamahanga channel and part of Allsops Bay have now been set aside from development, giving a total reserve area of 817ha. While the Crown owns the largest part of the remaining wetlands, most of the lake shore itself is unprotected.

Over the past decade, members of the Ornithological Society, Wellington Acclimatisation Society and Wildlife Service have compiled a list of birds and made a few counts of individual species inhabiting the lake, but up to 1982 there was no detailed information on seasonal variations in bird numbers, activity or habitat use, nor on what parts of the wetlands were important to birds. Therefore, the Wildlife Service began a detailed study of the habitat requirements of wetland birds in late 1982 and over the next year I spent 136 days observing birds in the Lake Wairarapa wetlands. The results of this study have now been published.

Wide open spaces

Lake Wairarapa is one of the largest lakes in the North Island, being 18 km long, up to 6 km wide and covering 7,800 ha, but is nowhere more than 2.5m deep at normal water levels.

The two sides of the lake are noticeably different. The western shore is narrow and shelves quickly into relatively deep water whereas sediment brought by the main rivers to the eastern shore has created large areas of shallow water and frequently-exposed flats, with an intricate system of backwaters, channels and pools. The lake's water levels vary by up to 30cm (occasionally by 1m in floods) daily and seasonally because of rain in the catchment, control of the outlet and local effects

of wind. Because of these water changes the vegetation cover ranges from bare sandflats to turfs of native plants, mostly less than 5cm tall, and finally to rushland dominated by the introduced jointed-leaved rush (*Juncus articulatus*), which is mostly less than 15cm tall. This marshland (turfs and rushes) covers nearly 400ha, and up to 600ha (or 1km across) of sandflats can be exposed at low water levels. Even at normal water levels, the eastern shore leaves a lasting impression of wide open spaces with anyone who visits it.

The main pond complexes lie adjacent to the eastern shore of the lake in J K Donald Reserve, Boggy Pond Reserve and Matthews Lagoon Reserve. They have a wide variety of pond types, ranging from permanent water to seasonally dry ponds, and from natural to managed ponds. Raupo commonly borders the ponds, as do large areas of willow forest. Unfortunately, there are few native trees remaining. Some swampland borders the lake in the south-west at Allsops Bay.

Pasture surrounds most of the lake and separates it from all the pond complexes except J K Donald Reserve.

Abundant birdlife

Eighty species of birds have been recorded from the Lake Wairarapa wetlands in the last decade. This is much more than other purely freshwater systems such as the Whangamarino wetlands (56 species) or the Ahuriri River (55 species). Of the 57 wetland species at Lake Wairarapa (i.e. ignoring the terrestrial birds), 24 species are permanent residents and at least 15 species are regular visitors. The remainder visit the area only occasionally.

Waterfowl, the main group of birds, include both native and introduced species. In some years they are very abundant; for example, in the autumn of 1978 waterfowl

