

SHORT NOTE

Changes in the number of black-billed gulls (*Larus bulleri*) nesting on the Ruamahanga River, Wairarapa, between 1998 and 2012

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Stidolph (1978) documented the first records of black-billed gulls (*Larus bulleri*) in the Wairarapa. He recorded black-billed gulls north of Lake Wairarapa for the first time when 17 birds were seen on December 1971 at the newly constructed Masterton sewage ponds. By 7 April 1973, there were 23 gulls at the same location. In October 1976 he observed a flock of 20 birds at the newly constructed recreational area of Henley Lake, Masterton (Fig. 1). Around the same time, black-billed gull colonies were found on rivers near Pahiatua, Woodville and Dannevirke, on the Manawatu River above the gorge (32 nests in 1972), near Oringi, 10 km south of Dannevirke (up to 80 nests, from 1977-1979) and on the Mangatainoka River and Pahiatua sewage ponds (up to 17 nests, from 1975-1978; Drake 1980). Most of these reported colonies were observed to produce fledglings. Higgins *et al.* (1996) list colonies of between 14-32 nests from these rivers and also mention 19 nests at Henley Lake (no year is given, but this would have been during the 1980s).

Since the reports of black-billed gulls nesting in the Wairarapa in 1970s and 1980s, I have not been able to find any reference to these colonies in later years. In December 2011, I undertook a brief survey of some historical black-billed gull colony sites on the Manawatu and Mangatainoka Rivers but failed to find any.

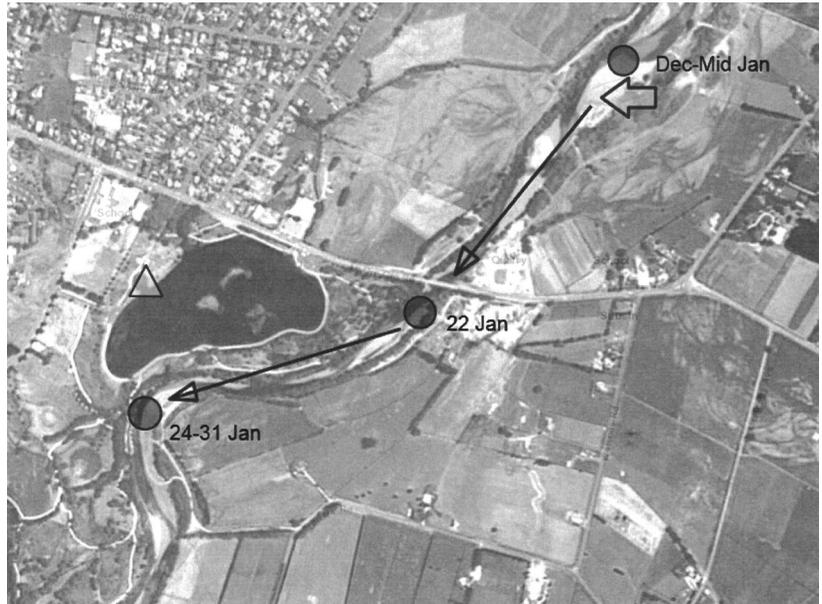
During bird surveys of Wairarapa river in 1998 and 1999, I found a black-billed gull colony on the Ruamahanga River, north of Masterton and again in 2010 and 2011 during repeat surveys. Each year, information about the colony size and breeding success was noted. In 2011, the colony and crèche were observed in more detail until after fledging.

This paper reports on colony size, breeding success and population increase of black-billed gull between 1998 and 2012 at the only known colony in the Wairarapa. At a time when black-billed gull numbers are decreasing significantly in parts of the South Island, especially in Southland (NZ Birds Online), it is important that all information about black-billed gull breeding success and population development is available. This paper aims to contribute such knowledge for the Wairarapa

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Fig. 1. Location of black-billed gull colony (arrow), crèche of chicks (circle), including the 2 downstream locations in late January, and the roosting area at Henley Lake (triangle).



region and assist in conservation efforts in their river habitat on the Ruamahanga River.

Nesting on the Ruamahanga River in 1998 and 1999

I discovered the black-billed gull colony on 16 December 1998. The colony was located on an island just downstream from Rathkeale College; 33 adult gulls were present and 31 were incubating. The colony was visited a few times in the following weeks and by late January ~ 20 young had fledged. After the gulls had left a count confirmed 34 nests.

The following year the gulls nested on the same island, but ~100 m downstream from the location of the colony in 1998. In late December 1999, I made a single visit to the colony and observed 17 birds that were still incubating and at least 4 chicks (about 3 weeks old) were visible in the colony. Fledged juveniles were later seen at Henley Lake, confirming that young had again fledged from the colony.

Nesting on the Ruamahanga River in 2010 and 2011

In 2010 the black-billed gull colony was located on the Ruamahanga River near Black Rock Road, 2 km downstream from the Rathkeale site. On 16 December 2010 the colony contained 34 nests, with 70 adults present. No chicks were seen, but some birds were sitting high on the nests, suggesting the presence of small chicks. The Ruamahanga River flooded on 29 December (236 m³ at Wardell's Bridge, further downstream). A visit to the colony on 4 January confirmed that the colony had been flooded, and would have destroyed any nests with

eggs and small chicks. However, a group of 17 adults and a crèche of 19 medium-sized chicks (aged 2-3 weeks old) had moved 300 m upstream from the colony site. This confirmed that the bigger chicks had survived the flooding. On 18 January, 16 chicks were seen at the same location. At Henley Lake, ~ 4 km downstream, the first fledged juveniles arrived on 29 January (6, along with 16 adults). The next day 8 juveniles were at this site. By early February all black-billed gulls had left Henley Lake for the season.

In 2011 up to a dozen black-billed gulls started nesting in the last week of October 2011, with the majority nesting from mid-November onwards. The colony had moved 3 km further downstream, and was situated only 500 m above Te Ore Ore Road bridge, 1 km from Henley Lake. On 7 January 2012, a crèche of mostly downy juveniles contained 77 birds. By that time at least 1 juvenile had fledged and left the colony. The early bird was at least 2 weeks older than the other chicks. All chicks were in a crèche, 50 m upstream from the colony that no longer contained birds. The 72 nests were counted that day. There were about 20 abandoned eggs left in the colony, both inside and outside the nests: 4 nests had 2 abandoned eggs and 11 nests had 1 egg. The chicks in the crèche were counted from a photo (76 chicks of 1-3 weeks old and 1 fledged juvenile).

On 22 January no birds were seen in the vicinity of the colony. Four dead juveniles were found. The crèche of 53 young birds had moved 700 m downstream to just below Te Ore Ore Road bridge. Two days later the crèche had moved another 900 m downstream. The number of juveniles in the



Fig. 2. Overview of the 2011-12 colony on the Ruamahanga River, showing the narrow nature of the river and the typical height of the breeding island (December 2011, photo Aalbert Rebergen).

Table 1. Summary of known breeding attempts on Wairarapa rivers.

Year	Location	Colony size	Breeding success
1998	Ruamahanga River near Rathkeale College	34 nests	Successful; 20 chicks fledged
1999	Ruamahanga River near Rathkeale College	>20 nests	Successful; >7 chicks fledged
2009	unknown	unknown	Pre-breeding flock at Henley Lake in 2010 contained at least 10 second year birds, suggesting successful breeding in previous year
2010	Ruamahanga River at Black Rock Road	>34 nests	Successful; about 16 chicks fledged
2011	Ruamahanga River 500 m above Te Ore Ore Rd	72 nests	Successful; >50 chicks fledged

crèche had dropped to 42. The steady decrease in the number of juveniles may be the result of predation or disease, but most likely was due to young birds leaving the crèche with their parents (e.g., to Henley Lake, where on 22 January at least 5 fledged young were present in a group of 56+ black-billed gulls). This number grew to 45 juveniles in a group of 83 birds at Henley Lake on the 1 February 2012. It was estimated that by late January 2012 over 50 black-billed gull juveniles had fledged from the Ruamahanga River colony, a productivity of at least 0.7 fledged chick/nest.

The results of the study indicate this single colony has grown from 34 nests in 1998 to 72 nests in 2011. The population of black-billed gulls in the Wairarapa is estimated to be ~200 birds and increasing. The size of the colony in 2011/12 was the largest ever recorded in Wairarapa. The 72 nests were located on a small, 25 m² area of riverbed. Like previous years, the colony was on an island with

river channels on both sides. The nests were on the most elevated part of the river, ~ 1.2 m above normal flow level, and typically the area had the largest concentration of other breeding birds, including banded dotterel (*Charadrius bicinctus*), black-fronted dotterel (*Elseyaornis melanops*) and pied stilt (*Himantopus himantopus*). These 3 factors (river width/island, island height and abundance of other birds) appear to be important in determining where the nesting colony is most likely to be established.

It is not clear on what the Wairarapa black-billed gulls feed. At dusk, I have observed black-billed gulls at Henley Lake feeding on insects flying above the water and gum trees, and by walking and feeding in the grass, probably when mayflies and grass grubs emerge. At QEII Park in the centre of Masterton the birds feed on hand-outs from the public. These feeding activities are only occasionally observed and are probably not their main feeding strategy.

Fig. 3. Adult black-billed gulls guard the crèche of chicks and juveniles (January 2012, photo Aalbert Rebergen).



After the 2011-2012 breeding season, I estimated the Wairarapa 'population' of black-billed gulls to be around 200 birds (140-150 adults and 50-55 juveniles). It is not known where the gulls move outside the breeding season but it is of interest to note that during a survey on 15 February 2012 a total of 189 black-billed gulls were counted on the eastern shores of the Lake Wairarapa (Nikki McArthur, *pers. comm.*). At that time, all but a couple of gulls had left Henley Lake and it is possible that the gulls counted on Lake Wairarapa in mid-February were the Ruamahanga River black-billed gulls. A study using colour banded birds would prove if Lake Wairarapa is the non-breeding habitat for the Wairarapa black-billed gulls. The best place and time to catch and colour-band the gulls outside the breeding colony, would be pre-nesting at Henley Lake.

Black-billed gulls arrive at Henley Lake in late August, and up to 30-40 birds can be seen there in spring. In 2011 they returned in the middle of the winter. On 6 July 2011 a flock of 80 birds arrived at Henley Lake, of which 10-12 stayed for a couple of weeks until cold weather and snow made them leave again, returning in August. By mid-February most birds have left, perhaps to overwinter at Lake Wairarapa.

The ability of black-billed gulls to nest successfully on the Ruamahanga River suggests that suitable habitat survives in a much altered river system. Greater Wellington Regional Council is aware of the black-billed gull colony, and the value of the Wairarapa rivers for birds, especially banded and black-fronted dotterels. Annual flood control work removes woody vegetation from riverbeds, thus creating and maintaining the open habitat river birds require. Bulldozers can be used to further enhance rivers for the benefit of birds and other wildlife. Straight, single channels are

of little value to birds as are flat riverbeds. Multi-channelled rivers, with "high" breeding islands that provide some protection against predators and are safe from most flooding are crucial to black-billed gulls and other river birds.

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