



Australasian Crested Grebe Survey – Coleridge Lakes

13 February 2021

About the survey

On Saturday 13 February 2021, the Coleridge Habitat Enhancement Trust (CHET) undertook a survey of lakes in the Coleridge basin that are known to be used during summer months by crested grebes.

The aim was to get a feeling for the numbers of birds using the area and breeding success.

The Conservation status (2016) for crested grebe is Nationally Vulnerable i.e., the population is 250 - 1000 adults with a predicted increase >10%.

The last survey - which was part of a national survey - was carried out in 2014, and prior to that in 2004. Results of counts in the Coleridge basin from these past surveys are included below for comparison alongside the 2021 survey results.

The population in Canterbury is increasing slowly. In Otago, the breeding success is higher largely due to conservation work initiated by John Darby who started installing floating platforms as safe nesting sites in 2013 and monitoring breeding success with volunteers' help on the lakes around Wanaka. Floating platforms have been tried in several locations around Canterbury in recent years (Boat Harbour of Lake Coleridge, Lake Lyndon, DOC has trialed platforms in other Canterbury locations), however grebes have shown no interest in using them in any Canterbury locations as far as CHET is aware.

Fifty-six grebes were recorded in the 13 February 2021 survey of the Coleridge lakes, 46 adults and 10 juveniles. Grebes were counted on nine of the ten lakes surveyed. Chicks fledged on half of the lakes surveyed. As with the previous surveys breeding success rate indicates low productivity. If we assume 26 adults (13 pairs) nested from the total of 46 adults, the 10 juveniles observed represent 0.25 chicks per adult pair (note - it is likely there were more pairs among the adult grebes observed than were obvious). The low number of fledged chicks is a concern. More monitoring of breeding success in future years would be ideal.

Grebe nests are built on the shoreline and are vulnerable to lake level change, predation by mustelids, feral cats and rats, and potentially other impacts like human and dog disturbance.

Survey method

In consultation with Rosalie Snoyink, who was involved in organising both previous national grebe surveys, CHET identified the lakes used by grebes in the Coleridge basin and had 15 volunteers assist with surveying these areas on 13 February.

The volunteers worked in pairs and also recorded sightings of other birds using the same lakes as the grebes.



Two boats were used to cover the whole of Lake Coleridge, with each boat surveying half of the lake (either the western or eastern end). The other lakes were accessed using vehicles and by foot.

The assistance of the managers of both Glenthorne and Lake Coleridge Stations - including as volunteer surveyors on the day - made the survey possible and more thorough than CHET and volunteers could have achieved alone.

More detailed information about how the survey was conducted can be obtained via CHET.

Lakes surveyed

Listed in order of time of day from when the first surveyors started at 8.00am. The last lake was completed around 5pm.

1. Coleridge
2. Lilian
3. Henrietta
4. Ida
5. Little Ida
6. Catherine
7. Selfe
8. Evelyn
9. Georgina
10. Lyndon

Weather conditions

Saturday 13 February was a perfect day for conducting the survey.

The Nor-West breeze picked up from late morning, but the two boats on Lake Coleridge started surveying from 8.00-9.00am, so mostly completed their circumnavigation of the lake shore in calm conditions.

Meanwhile, a pair of surveyors travelled to Lake Lilian and surveyed there from around 10-10.45am.

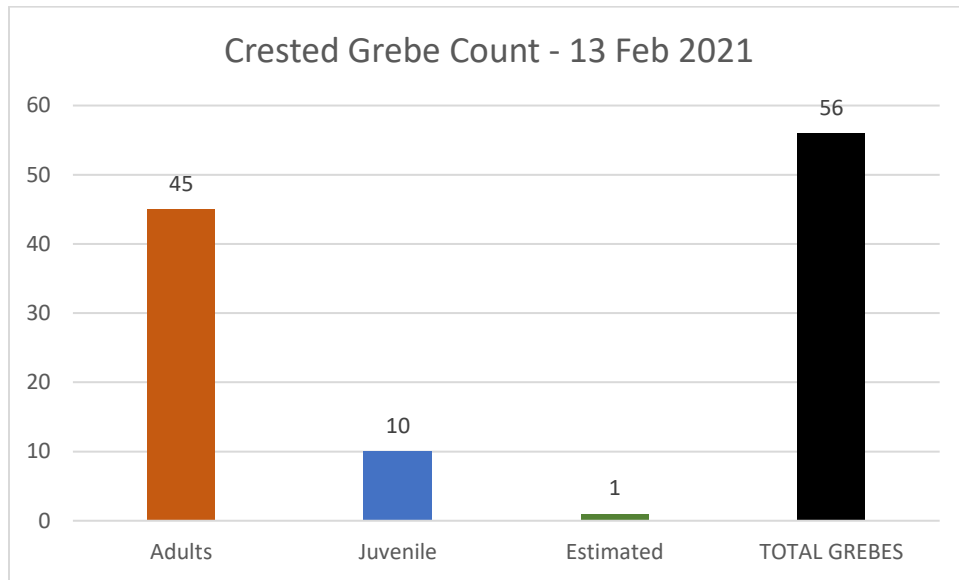
Other surveyors started surveying from around 11am (after a one-hour briefing). The breeze largely stayed away until near midday and became stronger in the afternoon.

Spotting grebes, and particularly adults with juveniles, as well as counting numbers of other species, was easier when the water was flat.

All lakes were complete by 5pm, with Lakes Evelyn and Georgina completed mid-late afternoon, and Lake Lyndon at the end of the day.

Summary of survey results

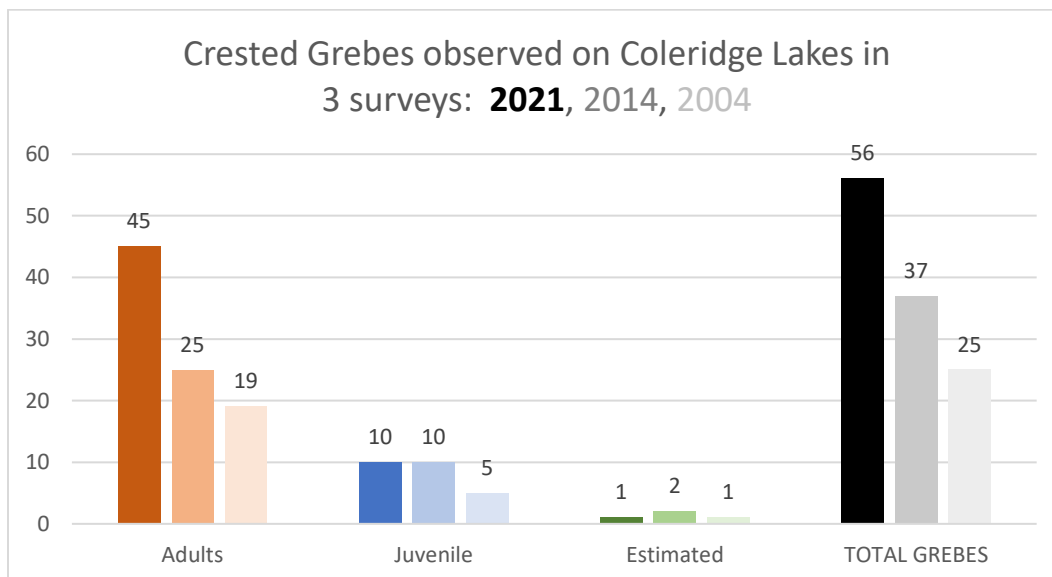
Summary graphs follow. Detailed survey results for each lake are available by contacting CHET.



Comparing survey results from 2021 survey with previous surveys in 2014 & 2004:

| YEAR | 2021 | 2014 | 2004 |
|---------------------|-----------|-----------|-----------|
| Adults | 45 | 25 | 19 |
| Juvenile | 10 | 10 | 5 |
| Estimated | 1 | 2 | 1 |
| TOTAL GREBES | 56 | 37 | 25 |

Graph showing all figures above....



Grebes observed on each lake

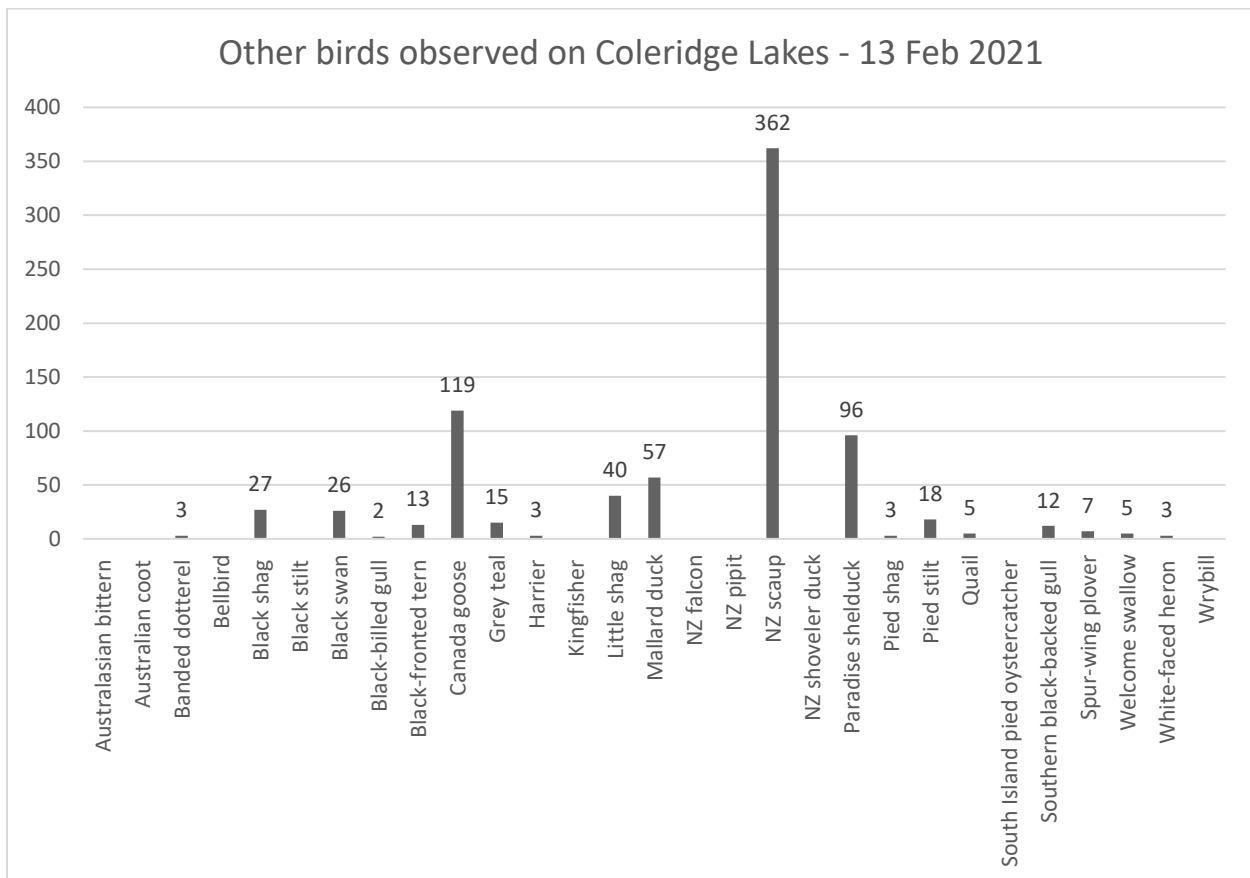
| Lake | Adults (pairs) | Juvenile | Total |
|---------------------|---|-----------|-----------|
| 1a Coleridge – West | 9 (4 pairs, 1 single) | 1 | 10 |
| 1b Coleridge – East | 6 (2 pairs, 2 single) | 0 | 6 |
| 2 Lilian | 0 | 0 | 0 |
| 3 Henrietta | 1 +1 estimated <i>(possibly 1 pair?)</i> | 0 | 2 |
| 4 Ida | 2 (1 pair) | 1 | 3 |
| 5 Little Ida | 2 (2 single – <i>possibly a pair?</i>) | 0 | 2 |
| 6 Catherine | 3 (2 single; 1 with the 4 babies - <i>possibly 1 pair + 1 single?</i>) | 4 | 7 |
| 7 Selfe | 13 (1 pair; 8 singles; 3 adults together – <i>possibly a pair and a single?</i>) | 1 | 14 |
| 8 Evelyn | 2 (2 single – <i>possibly a pair?</i>) | 0 | 2 |
| 9 Georgina | 3 (3 single) | 0 | 3 |
| 10 Lyndon | 4 (2 pair) | 3 | 7 |
| TOTAL | 46 | 10 | 56 |

Other birds observed

Detailed survey results for each lake are available by contacting CHET.

Numerous forest birds, including bellbirds, were observed but numbers of these small land-based birds were not recorded because determining exact species and numbers was impossible.

While surveyors did look out for birds more commonly seen on braided rivers in the area – such as oystercatchers, terns, banded dotterels, etc – as expected, very few of these species were seen around the lakes.



For more information:

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