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## West Coast Black-billed Gull Count

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Thanks to funding from Fruzio and Birds New Zealand Projects Assistance Fund, a complete aerial survey of the West Coast for black-billed gull colonies was carried out. The survey took place at mid-incubation over the course of two days, 12-13 November 2015. A total of 31 rivers were covered, including all braided sections where nesting gulls may be found (Fig 1). This included long days of flying in a fixed wing aircraft in sometimes very windy conditions. Photographs were taken by circling over the colony several times without disturbing the birds. Only breeding colonies were photographed as this provides the best indication of population size in the region.

A total of five colonies were found, evenly spread throughout the West Coast region (Fig 2). Aerial photographs were counted by using Microsoft Paint, placing a dot on each individual gull that appeared to be sitting on a nest (apparently occupied nest). Ground counts were carried out on 13 November 2015 following the flights in order to distinguish between red-billed and black-billed gulls in coastal colonies, as well as to ground-truth aerial photograph counts (Table 1). Light and wind conditions affected photograph quality, and this will be taken into consideration during future surveys. An additional survey due to take place during 2016/17 will be useful to determine annual trends in locations and numbers as well as for developing a correction factor for comparing ground counts and aerial photograph counts. Overall, this survey has shown that there are a large number of black-billed gulls in the West Coast region.

**Table 1.** Location and number of black-billed gull nests counted from aerial photographs taken on 12-13 November 2015 compared to ground counts carried out on 13 November 2015.

Colony	Aerial Photograph Count	Ground Count	Percent Difference
Maruia	537	300+ <sup>a</sup>	-
Hokitika	6	6	0%
Whataroa	226 <sup>b</sup>	-	-
Cook	288	390	26%
Arawhata	-	12	-

<sup>a</sup> Estimate done on 12 November 2015

<sup>b</sup> Count may include red-billed and black-billed gulls – colony was inaccessible and could not be confirmed

The Maruia colony ground count was assigned to be done by someone else but it was never done as an exact count. The Whataroa colony was inaccessible on the ground, and hence no ground count was done. It is also unknown whether or not it was a mixed colony of red-bills and black-bills. Picture quality of this colony is very poor due to high winds. The Arawhata colony was a mixed colony of red-billed gulls, black-billed gulls, and white-fronted terns. It is not possible to distinguish between red-billed and black-billed gulls on the photograph hence no aerial photograph count is shown.

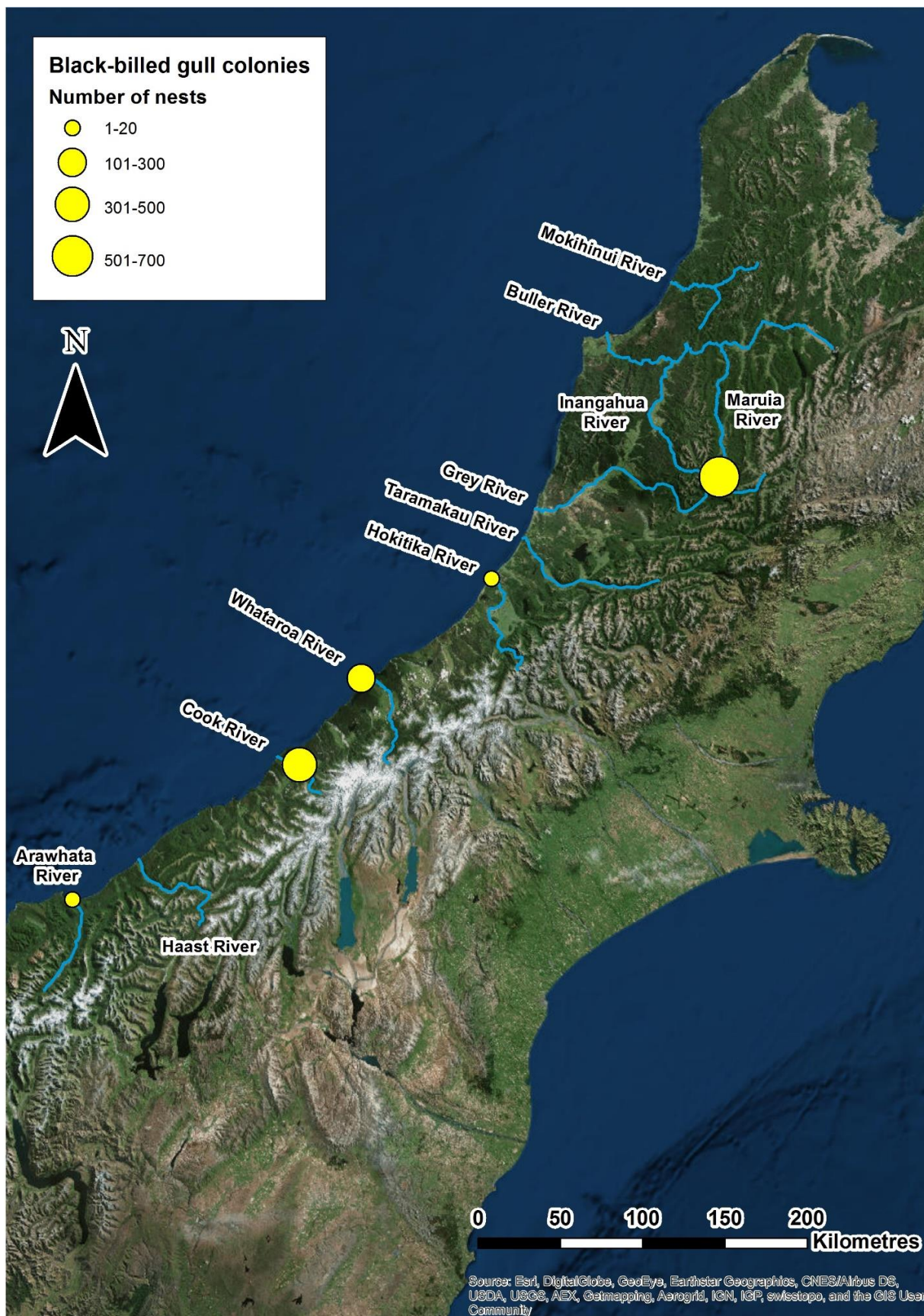
Red-billed gull colonies were also located and photographed; however, this information will be reported on separately in the report for the national red-billed gull census.

Special thanks to the pilot for doing an incredible job at flying and for donating the time, as well as to Mike Bell and Dianne John for doing the surveys. Thank you to Nikki McArthur for drawing the maps.



**Figure 1.** Map showing all rivers in the West Coast region that were flown on 12-13 November 2015 while surveying for black-billed gull colonies.





**Figure 2.** Map showing location and size of black-billed gull colonies found in the West Coast region during flights done on 12-13 November 2015. Aerial photograph counts were used for the Maruia and Whataroa, and ground counts for the Hokitika, Cook, and Arawhata colonies.