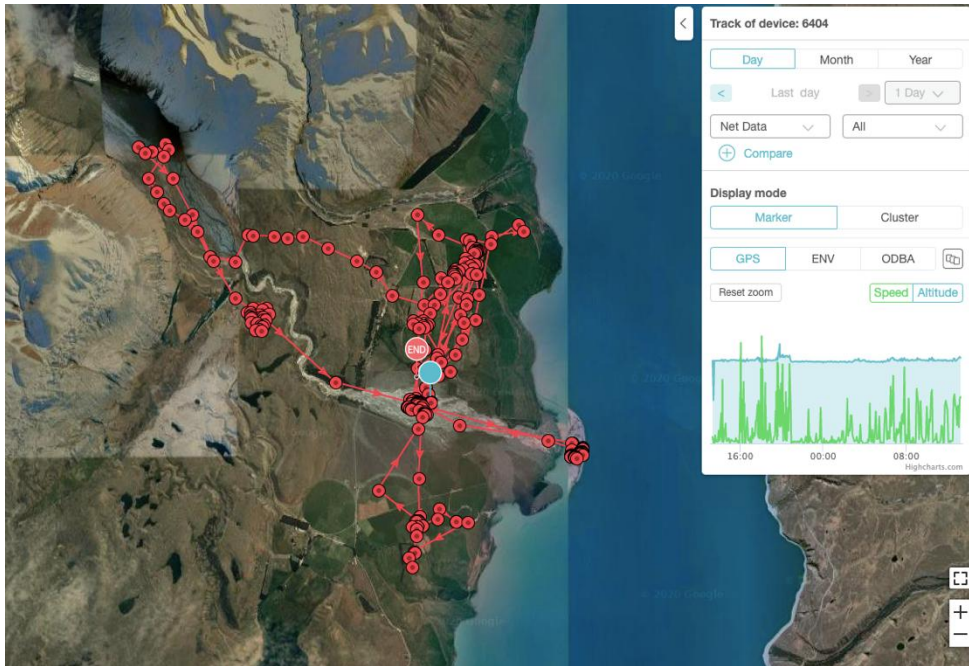


Breeding Movements and Post-breeding Dispersal in Black-fronted Terns/*Tarapirohe* (*Chlidonias albostratus*)

Black-fronted terns are frequently seen in braided rivers around the South Island, but we have little idea of how they spend their days. In November and December 2020, 34 black-fronted terns were caught using drop-traps in colonies in the Ohau and Cass Rivers in the Mackenzie Basin. Each tern was fitted with a GPS device (Druid Technologies, China) that uses a Bluetooth/cellphone network system to upload their data, all while weighing less than 3% of an adult black-fronted tern. Receiving units were placed by both colonies to capture data from the devices and transmit to an online data centre. The GPS devices transmitted data during the black-fronted tern breeding season until the birds stopped returning to their colonies and moved out of range of the receiving units. The terns were banded and three underwing pin feathers were collected from each bird to use DNA to determine the sex of the individuals.

Black-fronted terns transmitted data for between two and 94 days before leaving their colonies. During this time, the habitat the terns used most for foraging was high-producing exotic grassland, while they avoided areas of low producing and depleted grassland. The black-fronted terns in this study spent 99% of their time within 25 kilometres of their breeding colonies. DNA analysis revealed that of the 34 birds captured 15 were female and 19 were males, but there were no significant differences in the habitat selection of the two sexes. This study also provided the first evidence of breeding black-fronted terns roosting at night away from the breeding colonies. Limited data was available for the non-breeding season, with only 10 of the 34 terns transmitting non-breeding data. These 10 birds left the Mackenzie Basin by two discrete routes, down the Waitaki River and directly overland to the lower Rangitata River, with the Rangitata River appearing to be an important post-breeding site for black-fronted terns. The information gathered from this study will help to inform decisions regarding future black-fronted tern conservation. My thanks to the Department of Conservation, Birds NZ, Forest & Bird and Lincoln University for their support with this research.



24 hours (05-11-2020) of GPS points from a black-fronted tern nesting in the Cass River, the body of water is Lake Tekapo.



A black-fronted tern in the hand with its GPS device visible on its back. Photo courtesy of Adrian Paterson.