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**Project:** Hoiho Population and tracking: POP2018-02  
**Date:** 2 September 2019

## Monthly report for the period 2 September 2019 – 24 September 2019

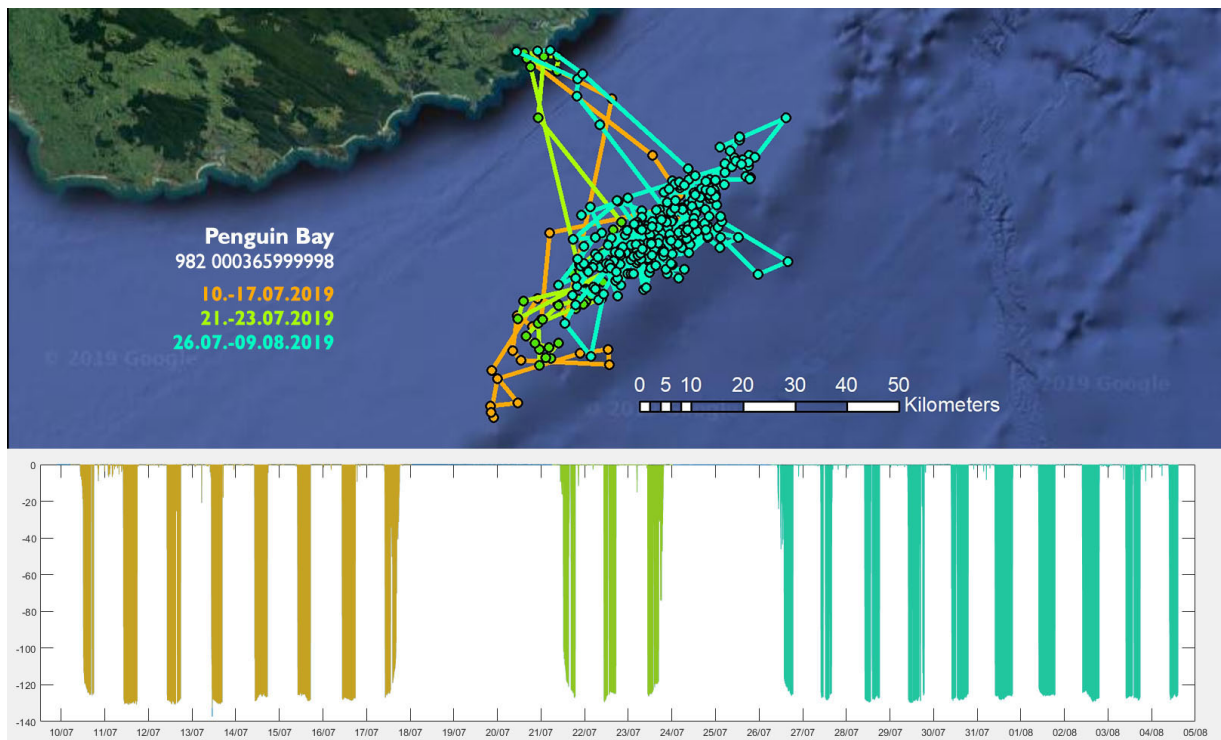
### Summary

Several fruitless attempts to recover a satellite tag from a male hoiho fitted with the device in Penguin Bay in late July have been made. The satellite tags stopped transmitting on 18 September which may be indicative of the bird being stationary in a location where transmission is blocked (i.e. nest site under dense vegetation). The last known fix is from Jacks Bay which probably explains why searches for the bird at Penguin Bay were without result. Otherwise field work has been suspended due to the penguins now intensive preparations for the upcoming breeding season. Pairs have been found to spend the days together at potential nest sites. Unfortunately, from the numbers of birds observed at our current study site in Penguin Bay, we may have to expect another drop of nest numbers this year. The field work downtime provided the time to perform the dive analysis of the satellite tagged bird recovered in late August.

### Results

#### Penguin Bay, female, bird id: 982 000365999998, dive analysis, 10 July – 5 August 2019

The dive logger fitted in conjunction with the satellite tag operated from 09 July to 4 August, when its battery was depleted. The dive data recorded covered two full and one partial foraging trip during which the bird foraged along the continental shelf edge some 40 km south-west of Penguin Bay.



*Foraging tracks of female 982000365999998 recorded between 10 July and 9 August 2019 for which dive data could be recorded. Note: trip data were revised from dive data and differ from previous reports.*

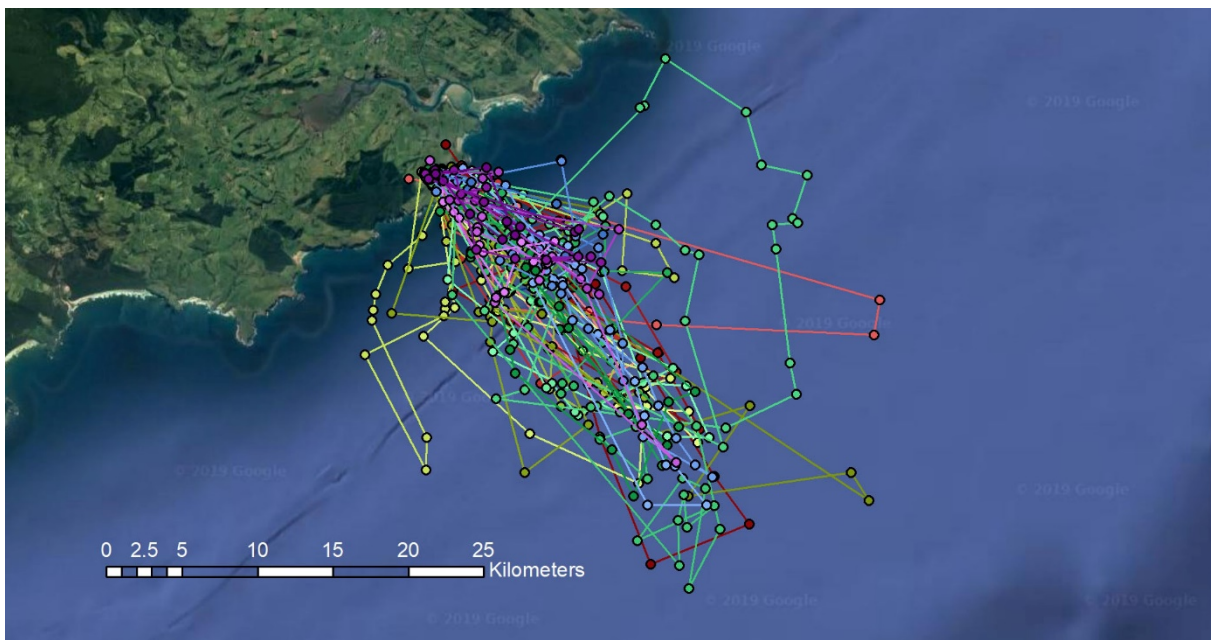
A total 2,560 dives were recorded during the TDR's operational time. The penguin performed an average  $137 \pm 8$  dives per day and foraged at depths of up to 137 m (average max depth  $84 \pm 2$  m). Mean dive times ranged around  $155 \pm 12$  s.

$89 \pm 5\%$  of the dives went to the seafloor. Almost two thirds of the time spent underwater was required for the transition from the surface to the seafloor (mean Descent duration:  $46 \pm 4$  s; mean ascent duration:  $51 \pm 3$  s). The average time spent searching for prey at the seafloor was  $59 \pm 5$  s.

Most pelagic dives occurred at the beginning and the end of the trips when the bird commuted to and from its foraging grounds. Further brief pelagic dives were registered late at night or early in the morning while the bird was still at its foraging destination. This behaviour presumably was associated with compensating for positional displacement due to currents.

**Penguin Bay, male, bird id: 982 000405532372, tracking analysis, 27 July – 18 September 2019**

Recovery of the second hoiho carrying a satellite tag is still pending as is the acquisition of any dive data recorded by the TDR deployed in conjunction with the transmitter. However, as transmissions ceased on 18 September 2019, it can be assumed that the bird is now engaging in pairing behaviour on land. Hence, analysis of the satellite data was performed.



*Foraging tracks of male 982000405532372 recorded between 27 July and 18 September.*

Throughout the entire deployment period, the bird only performed two overnight trips. The remaining 37 tracks all represent one-day trips. On average, the bird foraged within  $19.7 \pm 7.4$  km from Penguin Bay and travelled around  $51.8 \pm 26.9$  km per trip. Both overnight trips were within the same foraging radius as all one-day trips, trip lengths were 122 and 162 km.

**Next steps**

Field work will remain suspended until nest searches have been conducted and completed in mid- to late October. We will assist with nest searches at potential field work sites and make assessments of most suitable sites to commence tracking of breeding hoiho from early November onwards.

We will furthermore attempt to recover the remaining satellite tag and dive logger from the hoiho that was last seen at Jacks Bay.