

2015-2016 Weekly Field Reports

Cape Shirreff, Livingston Island

Report 16
February 15, 2016

Seabirds:

1. Crèche formation of gentoo nests completed last week. Of reproductive study nests, 58% have crèched while 42% have failed. Gentoo reproductive study nests crèched an average of .84 chicks per nest. Crèche formation in chinstrap nests has also completed. Overall, 43% of chinstrap reproductive study nests have crèched while 57% have failed, with an average of .75 chicks crèched per nest.
2. In addition to the reproductive study, we also follow the fate of 50 chinstrap nests in a manner that minimizes disturbance to the birds, 68% of nests in the non-disturbance sites crèched at least one chick, and 32% failed, with an average of 1.12 chicks crèched per nest.
3. We continue to monitor known-age penguins. Of the 29 known-aged gentoo penguins that initiated clutches 45% have crèched, while 55% have failed. Of the 33 known-aged chinstraps penguin that have initiated clutches, 34% have chicks that have crèched while 66% have failed.
4. On 9 and 12 February we conducted fledge weights and gentoo chick banding on the West and East gentoo colonies, respectively. A total of 66 bands were put out on gentoo chicks across the rookery. The average fledge weight for gentoo chicks was 3610 grams.
5. On 14 February we conducted our chinstrap chick banding roundup. We banded a total of 239 chicks.
6. Of the fourteen pairs of brown skuas that we are monitoring 8 nests are still active, and 6 nests have failed. One previously active nest failed, while another previously failed pair have re-nested.

Pinnipeds:

7. Seven attendance study fur seals lost their pups this week, bringing the total number of study pups down to fourteen. Of these females, one lost her transmitter, bringing our continuing trip duration sample size down to 13.



8. This week we redeployed one TDR with accelerometer capabilities and recovered another. We currently have two deployed on fur seal females.
9. We also recovered one GPS-capable and two standard TDRs this week. These TDRs have provided further insights into the diving behavior of female before and after losing their pups, and have allowed us to further validate our VHF telemetry monitoring system.
10. We continue to monitor our fur seal adult tagged female population and mother pup pairs to get a measure of reproductive success and loss of pups due to leopard seal predation. Our current estimate for pup loss due to leopard seal predation as of 14 February climbed to 46.1%, bringing our estimate for total pup loss to over 50%.
11. We have concluded sexing and collecting DNA from pups of tagged females on the primary study beaches. We sampled 86 pups, of which 59% were female. We will continue to opportunistically collect DNA from any pups sighted with tagged females outside our study beaches.
12. Juvenile seals tagged as pups continue to arrive. To date we have seen 21 four-year olds (four of which pupped), three three-year olds, and 13 two-year olds. While we have noted yearlings on the beaches, none were tagged.
13. This week we collected our ninth fur seal diet sample of ten scats. To date 83 scats have been collected, and 81 have been processed.
14. On 12 February we completed our 16th weekly Cape-wide phocid census. Our crabeater count jumped up this week to five, all seen around the San Telmo area. In addition, we counted 319 southern elephant seals, 26 Weddell seals, and 14 leopard seals.
15. As of 14 February, we have recorded 102 sightings of 25 tagged leopard seals, three of which were tagged this season. These sightings include one female that was last seen in 2010. We have recorded an additional 40 sightings of untagged leopards, which have been added to our photo-ID database.
16. To date we have recorded 176 sightings of 27 tagged Weddell seals. These include 11 seals that were tagged this season. In addition, we have collected DNA from three seals.



UAS (hexacopter) missions:

17. Relatively low winds and clear skies allowed for hexacopter operations on February 9 and 10 to obtain aerial coverage of the penguin colonies. We completed five flights on February 9, covering all of the west side colonies plus penguin control colony #2. On the following day we completed four flights to cover all of the east side colonies and conclude penguin hexacopter ops. We also utilized the opportunity to provide Ground Station Operator training for Matt. Hexacopter ops will continue for pinniped research as time and weather permits.

Weather:

18. The mean temperature for the week was 0.9°C with a low of -2.0 and a high of 4.7°C. Total precipitation for the week was 0.38 inches. Total cumulative precipitation since 29 October is 2.58 inches. The average wind speed was 11.9mph with a maximum wind speed of 42.0mph. Winds were predominantly from the east and west (35.9% and 35.2% respectively) followed by winds from the north (25.4%). Mean daily solar radiation 12,651 watts per square meter. Sunrise is now at 5:17 and sunset at 21:05. Daylight hours have decreased by 38 minutes in the past week.

Camp:

19. We currently have just over eight barrels (400 gallons) of water and six empties at the main camp.
20. We repaired three window covers this week in preparation for closing next month.
21. Repairs were also made to the ATV shed door, which had been damaged by wind and ice.

*Submitted by AMLR researchers currently
Residing at the Cape Shirreff field station,
Livingston Island. Images provided by
M. Goebel.*

