

2014-2015 Weekly Field Reports

Cape Shirreff, Livingston Island

Report 7
December 15, 2014

Seabirds:

1. In the two and a half weeks since mean chinstrap clutch initiation, 23% of nests in our reproductive study have failed. In the two weeks since mean gentoo clutch initiation, 68% of nests in our reproductive study have failed.
2. Of 39 known-age chinstrap penguins that have nested this year, 16 (41%) have failed. Of the 37 known-age gentoo penguins that have nested this year, 12 (32%) have failed. We continue to record observations of new known-age penguins that visit the colony.
3. We conducted the annual gentoo nest census on December 8, one week after the peak of clutch initiation. We counted 721 nests, 14% less than last year (N=839) and 12% less than the previous 17 year mean (N=822).
4. In the past week we weighed and measured both eggs in 50 gentoo nests. Mean egg masses were slightly higher than the previous 17 year mean.
5. We have observed 26 pairs of brown skuas attending nesting territories. Thus far, 14 pairs have complete two-egg clutches and 5 have lost their eggs.

Pinnipeds:

6. We have five remaining early-season perinatal captures of Antarctic fur seals. To date we have captured 38 adult females and 36 pups. Twenty-seven females have received a VHF radio transmitters for monitoring trip duration and attendance patterns. Fifteen have also received a time depth recorder, eight of which have GPS location capability. All females in this study have been captured and weighed within 48 hours of parturition.



7. We completed the first round of deployments of diving and location instruments for studies of foraging range and effort. We are now collecting at sea foraging location data on eight lactating female fur seals using time depth recorder (TDR) instruments with fast-loc GPS technology. Two of the eight females have started their foraging cycles and are currently at sea. One has completed her first trip and has departed on her second trip.
8. We have recovered another seven GLS (geolocating light sensors) deployed over-winter, bringing the total recovered to 22 out of 24 deployed. One of the two that has not arrived is overdue and the other, if she returns on the same date as last year, will not arrive until later this week.
9. As of this morning, 12 of our CCAMLR attendance females have departed for their first trip to sea. Seven have completed their first trip to sea. Trip duration to date this season has ranged from 1.5 to 2.5 days.
10. We are monitoring pup growth of our CCAMLR attendance females and have gotten a post-perinatal mass on nine of the pups whose mothers have departed to sea. The mean growth rate from birth until departure of the mother to sea is 150 g/d (range: 90.0-283.4). All the post-perinatal weights were taken post-absorptive the day following departure of the mother.
11. At the last census of fur seal study beaches on 14 December, we recorded a total of 434 adult females and 623 pups (609 live and 14 dead).
12. On the last phocid census on 13 December, we counted 147 southern elephant seals, 38 Weddell seals, one adult female tagged leopard seal, and one crabeater seal pup.
13. We have deployed eight PIT tags (Passive Integrated Transponder) on adult tagged female fur seals this season. This is the ninth year of deploying PIT tags to address the high incidence of tag loss in the population.



Weather:

14. This week our mean temperature was 0.5 °C warmer over last week though the mean remains below zero at -0.2°C. The high was 2.2°C and the low was -1.7°C. The mean wind speed was 12.5 mph, with a maximum wind gust of 47 mph. Prevailing winds this week were from the west (49.9%) and south (22.2%) with a brief period of north winds (17.6%) Our rain gauge recorded 0.2 inches this week, bringing the season total precipitation (since 3 November) to 0.73 inches. We had a welcomed break in gray, cloudy weather with a full day of sun on Saturday, bringing the mean daily solar radiation for the week to 18,295 watts per sq. meter. Sunrise and sunset are now at 02:46 and 22:51.

Camp:

15. The Cape remains snow covered, even on most of the steeper slopes. It has diminished somewhat and about half of our front deck is cleared of snow. All our water barrels, which remain mostly frozen, are set against the warmer exterior walls of the main hut and supply hut.
16. We just started using our 5th water barrel (of the 14 full barrels left at last season's closing) for the season . We have been using snow melt for most dishwashing and showers to conserve our water supply for drinking and cooking. In most years by this time, we would have set up the rain gutters to harvest rainfall, however our cold weather and precipitation in the form of snow has prevented that option.
17. We have not observed any ships in the vicinity of the Cape but we have been regularly sighting humpback whales off the eastside of the Cape.
18. On 12 December we had strong gusts from the Southwest that removed the last remaining wing of the Chilean wind mill (generator). It landed only several meters from the base. It was soon secured to prevent it from blowing away or moving to a beach.

Submitted by AMLR researchers currently recovering from a turkey-induced coma at the Cape Shirreff field station, Livingston Island. Images taken by Mike Goebel and edited by S. Sexton.

