

**Seabirds:**

1. In the third week since gentoo penguin peak clutch initiation all 96% of the reproduction study plots are incubating partial or full clutches and 4% have failed. In the third week since chinstrap penguin peak clutch initiation 63% of the reproduction study nests are incubating partial or full clutches and 27% have failed.

2. We continue to monitor known-age penguins. Of the 25 known-aged gentoo penguins that initiated clutches 72% continue to incubate and 28% have failed. Of 68 known-aged chinstraps that have initiated clutches 53% continue to incubate partial or full clutches and 47% have failed.

3. We continue to monitor brown skua territories for nesting activity. Fourteen pairs of brown skuas are now incubating partial or full clutches and one pair has lost their eggs.

**Pinnipeds:**

4. We completed the first round of deployments of diving and location instrument for studies of foraging range and effort. We are now collecting data on five lactating female fur seals using Wildlife Computers Mk 10 GPS/TDR instruments. These instruments also have external temperature probes that will allow us to measure depth of the thermocline at fur seal foraging locations recorded with GPS technology. Four of the five females are at sea and one has not left on her first trip yet.

5. As of this morning 25 of our 29 CCAMLR attendance females have departed Cape Shirreff for their first trip to sea. Twenty-three have completed their first trip to sea. Mean trip duration for females that have completed their first trip as of yesterday is 3.1 days (s.d.: 1.36; range: 0.9-6.0; N=21). Eleven females have completed two trips to sea.

6. We are monitoring pup growth of our CCAMLR attendance females and have gotten a post-perinatal mass on twenty-three of the pups whose mothers have departed sea.

7. We calculated arrival mass for our perinatal sample of females (measured on day one post-partum). Arrival mass was less than last year but greater than average for the ten-year mean.

8. At the last census of fur seal study beaches on 21 Dec we recorded a total of 623 adult females and 1363 pups (1292 live and 71 dead). This is approximately a 13% reduction in pup production over last year for around the same time. There are still some pregnant females but we do not expect this percent reduction to change much as most females have already given birth and the rate of daily new arrivals is now so low. This is the second year recording a 13% decline in pup production.

9. Thus far 76.0% (146/192) of our tagged female population have returned to Cape Shirreff. We recorded eleven new arrivals since last week. The natality rate for returned females thus far is 81.5%. Both survival and natality are lower than last year.

10. To date we have seen 61 fur seals that were tagged as pups in previous years. Four new known-aged seals have returned since last week. No yearlings have been seen yet.



11. We have deployed 23 PIT tags (Passive Integrated Transponder) on adult tagged females thus far this year. This is the third year of deploying PIT tags to address the high incidence of tag loss in the population
12. Our sightings of leopard seals are increasing. On 19 Dec we observed our first incidence of leopard seal predation on fur seal pups. Fur seals have only just begun to enter the water and only very close to shore or in very shallow water. The observed predation was of a pup on shore and not in the water.
13. We have been conducting a daily census of elephant seal wallows and looking for female elephant seals returning with satellite-linked data recorders that were deployed last January. Our numbers of elephant seals are continuing to increase and almost doubled over the previous week. Weddell seals have also increased over last week and we counted 20 Weddell seals hauled-out on one beach at the same time. We also observed our first elephant seal tagged as a pup at Cape Shirreff.

**Weather:**

14. This was our first week with temperatures above freezing all week. Our snow cover is diminishing fast. Mean wind speed was 12.6 mph with maximum wind gust of 51mph. The mean temperature for the week was 2.0° C. The high temperature for the week was 7.8° C and the low was 0.1° C. Total precipitation this week was 5.8 inches. Sunrise and sunset today, the solstice, are 02:56 and 22:57. Mean daily solar radiation this week was 15,834 watts per sq. meter.

**Camp:**

15. With only four days until Christmas we are all looking forward to the holiday and opening the presents under our small tree. We have already taken a turkey out of the freezer to thaw in time for the holiday.
16. Our thoughts are of home, family, and friends as we begin the holiday week. Best wishes to all for a Merry Christmas from the Cape Shirreff crew: Mike, Kevin, Ryan, Ray, McKenzie, and Carolina.

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*Submitted by AMLR staff currently residing at the Cape Shirreff field station, Livingston Island.*

