

**Seabirds:**

1. Currently 42% of nests in the gentoo reproductive study have begun to hatch, 44% still have eggs, and the other 14% have failed. The chinstrap eggs have begun to hatch in our plots. Currently 1% of the chinstrap nests have chicks, 90% still have eggs and the other 9% have failed.
2. The nests of known-age gentoo penguins have begun to hatch. A total of 35% are brooding chicks, 38% still have eggs, and the rest have failed. The failure rate of known-age chinstrap penguins is higher than the reproductive study nests at 20%.
3. A macaroni penguin has been seen on various chinstrap and gentoo colonies over the past few days. It has added amusement to our day never knowing in which colony we'll stumble upon this colorful bird.
4. Of the 27 brown skua pairs attending territories 59% have laid eggs. Out of these, two pairs have already lost a full clutch of eggs.

**Pinnipeds:**

5. 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 six lactating female fur seals using time depth recorder (TDR) instruments with fast-loc GPS technology. These TDRs also have external temperature probes that will allow us to measure depth of the thermocline at fur seal foraging locations.. Five of the six females have made at least one trip to sea and one has not left on her first trip yet.
6. As of this morning, 23 of our 30 CCAMLR attendance females have departed Cape Shirreff for their first trip to sea. Sixteen have completed their first trip to sea. Mean trip duration for females that have completed their first trip as of yesterday is 2.3 days (s.d.: 0.86; range: 0.9-4.1 N=16). Seven females have completed two trips to sea.
7. We are monitoring pup growth of our CCAMLR attendance females and have collected a post-perinatal mass on nineteen of the pups whose mothers have departed sea.
8. We have been retrieving overwinter instruments. Those are instruments that were deployed in late-February/early-March last season. So far of the 19 animals that had a GLS, light sensor instruments, 15 have returned with the instruments and three without them. Out of those 15 we retrieved 10 GLS as of today. Of the 20 ARGOS-PTTs deployed since March 2010, 16 animals have returned, five of those were still carrying the instruments which have all been retrieved; 11 lost their instruments.
9. At the last census of fur seal study beaches on 19 Dec we recorded a total of 584 adult females and 1,119 pups (1,089 live and 30 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 low. This is the third year recording 11-13% decline in pup production.
10. Fur seal diet sampling protocol began on 18 December with the collection of 10 scats. All scats contained krill.



11. On the last phocid census on 18 December we counted 113 Southern elephant seals, 29 Weddell seals, and one adult female tagged leopard seal.
12. To date we have seen 61 fur seals that were tagged as pups in previous years. One yearling has been seen.
13. We have deployed 26 PIT tags (Passive Integrated Transponder) on adult tagged females thus far this year. This is the fifth year of deploying PIT tags to address the high incidence of tag loss in the population
14. Our sightings of leopard seals are increasing. Fur seal pups have only just begun to enter the water and only very close to shore or in very shallow water.

**Weather:**

15. Our snow cover is diminishing fast. Mean wind speed was 11.6 mph with maximum wind gust of 41mph. The mean temperature for the week was  $0.9^{\circ}$  C. The high temperature for the week was  $4.8^{\circ}$  C and the low was  $1.7^{\circ}$  C. Total precipitation this week was 0.3 inches. Mean daily solar radiation this week was 21001 watts per sq. meter.
16. We downloaded the overwinter temperature logger. The lowest temperature recorded over winter was  $-13.0^{\circ}$  C.

**Camp:**

17. This Friday we successfully finished the perinatal fur seal captures and deployed the last of 30 radio transmitters, which will give us valuable information on fur seal trip duration. It was a beautiful day and to celebrate we all hiked up a peak near camp and enjoyed a gorgeous view. We ended the day with a good BBQ dinner prepared by Kevin.
18. It is officially Christmas time; and Ray told me that I am now allowed to listen to Christmas songs all the time while in the hut. Last night Kevin and McKenzie took the little Christmas tree out and decorated the main hut with lights. There are already some packages under the tree from our NOAA-AMLR colleagues and friends. We have already taken turkeys out of the freezer to thaw in time for the holiday. In the Cape Shirreff tradition we are planning to smoke two turkeys!
19. Our thoughts are of home, family, and friends as we begin the holiday week. Even though it is the time of year where we wish to spend time with our families, we all feel incredibly fortunate and honored to be here in this amazing part of the world and part of NOAA-AMLR program. Best wishes to all for a Merry Christmas from the Cape Shirreff crew: Nicola, Ray, Kevin, McKenzie, and Allyson.

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

