

Seabirds:

1. Gentoo penguins have started to crèche this week. In the fourth week since gentoo penguin peak hatch 38% of the reproduction study nests have crèched, 48% still have at least one chick, and 14% have failed. In the fifth week since peak chinstrap penguin hatch, to date 19% of the chinstrap penguin reproduction study nests have crèched, 29% have at least one chick and 47% have failed.

2. We continue to monitor known-age penguins. Of the 27 known-aged gentoo penguins that initiated clutches 15% have chicks that have crèched, 33% still have at least one chick and 52% have failed. Of the 68 known-aged chinstraps penguin that have initiated clutches 4% have chicks that have crèched, 26% have at least one chick and 69% have failed.

3. From 26 January to 28 January we recovered the instruments we deployed on gentoo penguins that are brooding chicks. These data await analysis.

4. To date, we have collected 30 diet samples from chinstrap penguins and 20 from gentoo penguins. Chinstrap penguin diet samples have consisted almost entirely of Antarctic krill (*Euphausia superba*) with trace amounts of fish. Gentoo penguin diet samples were a mix of Antarctic krill and fish. To date, we have found otoliths from the species *Gymnoscopelus nicholsi*, *Lepidonotothen kempii*, *Pleurogramma antarcticum*, and an unknown species.

5. Of the eighteen pairs of brown skuas that we are monitoring six nests are still active, 11 nests have failed and of the two failures that have relayed one has failed again.

Pinnipeds:

1. The R/V *Moana Wave* begins its oceanographic and hydro-acoustic sampling on the West Grid off Cape Shirreff next week and in anticipation of that sampling, we completed our deployments of GPS/time depth recorder (GPS-TDR) instruments and ARGOS PTTs (Platform Terminal Transmitters). We now have six GPS units and two PTTs deployed on adult females with surviving pups for February foraging location data.

2. Fourteen of our 29 attendance females (48.3%) have lost their pups. The other females continue to make regular trips. Trip duration for females with pups this week was on average a day shorter than in early January.

3. We concluded collecting DNA of adult females from the beaches that are part of our genetics study. All of the target animals that still have pups have been sampled now.

4. Mortality rate of pups of tagged females has reached 40.8% this week and increases daily due to leopard seals.



5. Daily tag re-sights continued this week, and we have started cape-wide systematic resights as well. To date, we have re-sighted 90 fur seals tagged as pups in previous years. No tagged yearlings or two-year-olds have been observed.

6. Fur seal diet sampling continued this week with the collection of ten more scats, bringing our total to 70. Next week we will transfer scat samples (n=70) to the ship, where running water facilitates analysis.

7. We tagged three new leopard seals this week, bringing the total tagged this year to thirteen. We have recorded an additional eleven tagged from previous years. Also, we have DNA samples from all but five of our tagged leopard seals. The seals are progressing well into their molts. When molting is completed we will be deploying ARGOS PTTs for over-winter tracking.

8. One of our seabird biologists found a time depth recorder (TDR) deployed on a leopard seal two years ago. She found the instrument on a seldom visited beach on the west-side of the Cape. The TDR was still working and had collected approximately two weeks of data in February 2008 before it fell off the leopard seal.

9. Weddell seals are also molting and the maximum count for any one day for the Cape has been 37 individuals. A census of all phocids is conducted once per week. The average count since late October is 23 individuals.

Weather:

10. We had a high of only 5.9° Celsius and a low of -0.1 °C. The mean was 1.4 °C (two degrees cooler than the same week last year.). Mean wind speed for the week was 12.7 and the max. gust was 40.0 mph. More than 50% of the recorded wind directions were from the east. Precipitation for this week was 3.2 inches.

Camp:

11. We have been in daily contact with our support ship since it arrived in the South Shetland Islands on 28 January. We are all excited and looking forward to seeing our friends and colleagues and getting our first re-supply since arriving on 18 October. The ship is scheduled to arrive on 10 February but may be a day early.

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

