

Seabirds:

1. In the third week since gentoo penguin peak hatch 88% of the reproduction study plots have at least one chick, 12% have failed. In the fourth week since peak chinstrap penguin hatch, we are starting to see chicks forming crèches, to date 2% of the chinstrap penguin reproduction plots have crèched, 51% 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 50% have at least one chick and 50% have failed. Of 68 known-aged chinstraps that have initiated clutches 31% have at least one chick and 69% have failed.

3. From 18 January to 20 January we deployed 10 satellite transmitters and 6 Time Depth Recorders (TDRs) on gentoo penguins that are brooding chicks. We will recover these instruments after one week of deployment. From 19 January to 21 January we recovered the instruments we deployed on chinstrap penguins the previous week. These data await analysis.

4. To date, we have collected 20 diet samples from chinstrap penguins and 15 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, nine nests have failed and of the two failures that have relayed one has failed again.

Pinnipeds:

6. We recovered one our five GPS/time depth recorder (GPS-TDR) instruments that were monitoring foraging locations since mid-December. This is the second GPS-TDR recovered. The first has been re-deployed and we currently have four at sea collecting data of foraging locations, depth of dive and temperature at depth. In addition to the four GPS-TDRs we currently have deployed we also have two ARGOS PTTs that are successfully transmitting foraging locations.

7. All of our 29 attendance study females have completed at least six trips to sea. Five females (17%) lost their pups before completing their sixth trip. Mean trip duration for the first six trips to sea was 3.9 days (s.d.: 1.54, n=165, range: 1.2-13.2).

8. We have retrieved two of our eleven Mark 9 time depth recorders deployed on female fur seals. They were removed from females that had lost their pups. Both successfully recorded all dive behavior and temperature for at least the first six trips to sea.



9. Antarctic fur seal pup mortality rate since arrival of leopard seals has increased to 28.3%.

10. Daily tag re-sights continued this week. We have re-sighted 84 fur seals tagged as pups in previous years. However, this is 27% fewer than for the same time last year. We have not seen any two-year-olds or yearlings (the 2007/08 and 2008/09 year classes). The three most represented year classes in our tag returns are 1999, 2001, and 2006. No tags have ever been observed from the 2004 year class.

11. Tag loss in the AFS population is high and we have increased our efforts this year to recapture animals that have lost a tag. Since captures began we have captured 56 adult females and juveniles and have replaced 13 tags and pit tagged 34 individuals.

12.. Fur seal diet sampling continued this week with the collection of ten more scats, bringing our total to 60. All scats were predominantly krill.

13. We continue to make daily searches of returning elephant seals that may have CTD tags deployed last January. To date we have had one returned and retrieved.

14. We have tagged six leopard seals this year so far. We have recorded an additional eleven tagged from previous years, bringing the total tags observed to seventeen.

15. Weddell seal numbers ashore appear to be stable and most animals show evidence of molting.

Weather:

16. We had a high of 10.6 °C and a low of 0.6 °C this week. The average temperature was 2.4 °C. Mean wind speed for the week was 9.3 and the max. gust was 38.0mph. Easterlies dominated the winds most of the week.

Camp:

17. We had a Chilean ship and helicopter visit the Cape this week to pick up three Chilean researchers.

18. This week we had numerous whale sightings from the Cape. All appeared to be humpbacks.

19. Our support vessel, the R/V *Moana Wave*, was scheduled to depart Punta Arenas yesterday (Sunday, 24 January). We have not had a re-supply since arriving at the Cape on 18 October so we are all looking forward to the ship arriving at the Cape.



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