



**Sit. Rep. #11
21 January 2008
US AMLR Field Station
Cape Shirreff, Livingston Island, Antarctica**

Seabirds:

1. The proportion of nests in our chinstrap reproductive study that have failed is 77%. The remaining 23% of chinstraps are currently brooding chicks. Gentoo penguins continue to hatch and in our reproductive study, 38% are brooding chicks, 6% remain on eggs and 56% have failed.

2. In the past week we began weighing chinstrap chicks in our reproductive study as they reached 21 days of age. The 21-days-of-age mass is used as a measure of chick condition before they crèche.

3. We have successfully recovered six Time Depth Recorders (TDRs) and eight satellite tags (PTTs) that were deployed on nesting chinstrap adults last week. This week we will deploy six additional TDRs on chinstraps as well as seven TDRs and eight PTTs on nesting gentoo penguins.

4. To date, we have collected 10 diet samples from chinstraps and five from gentoos. Chinstrap diet samples have consisted almost entirely of Antarctic krill (*Euphausia superba*). Gentoo samples were mainly composed of fish including the species *Gymnoscopelus nicholsi*, and one sample contained the amphipod species *Hyperiella dilatata*.



5. Of the 20 pairs of brown skuas that initiated clutches, six are currently brooding chicks and twelve have failed. One pair has laid a second clutch and is incubating eggs.

Pinnipeds:

6. This week we recovered the remaining three GPS/time depth recorder instruments to complete the first round of foraging location study deployments. We collected data from 27 foraging trips. Round two of the foraging study deployments was initiated this week by deploying instruments on two adult female fur seals. We will deploy three more in the next few days.

7. All but two of the 28 attendance study females have completed at least six trips to sea. Mean trip duration for each trip is as follows: first trip 4.1d (s.d. =1.9, n=28), second trip 4.1 d (s.d. =1.4, n=28), third trip 3.4d (s.d.=1.3, n=28), fourth trip 3.3d (s.d.=1.1, n=27), fifth trip 3.4d (s.d.=1.0, n=27), sixth trip 3.8d (s.d.=0.9, n=26). Two attendance females likely lost their pup to leopard seal predation this week. Both had completed six trips to sea.

8. We continued identifying the sex of tagged females' pups. We have identified the sex of 87.3% of tagged females' pups.



9. Daily tag re-sights continued this week. We have re-sighted 97 fur seals tagged as pups in previous years. This week we saw two new yearlings, bringing the total of yearlings seen this season to four. Thus far, of the 500 per annum tagged we have seen the following percent return for the last eight year classes: 1997, 1.2%; 1998, 1.2%; 1999, 5.4%; 2000, 2.0%; 2001, 4.0%; 2002, 2.2 %; 2003, 0.8%; 2004, 0.0%; 2005, 1.8%; 2006, 0.8%.

10. Fur seal diet sampling continued this week with the collection of ten more scats, bringing our total to 50. As in previous years, we transferred scat samples (n=40) to the ship, where running water facilitates analysis.

11. We recovered another over winter satellite relay data logger from an elephant seal; bringing the total of returning seals to

four out of the 12 we deployed instruments on. We are still hoping for a few more to return with instruments.

12. A survey of fur seal breeding colonies in the South Shetlands was initiated this week. The first sites to be visited were the San Telmo Islands off the northwest coast of Cape Shirreff and Punta Negra east of the Cape. Four other sites on or near Livingston and King George Islands were also censused for pups. The first two weeks of January are the ideal time to census for pups as predation by leopard seals is only just beginning. We hope to complete the census in early February by visiting breeding sites on or near Elephant Island.

Cape Shirreff Weather for the Week:

13. Overall a pretty nice week with the weather. In spite of Monday afternoon's peak wind of 45mph, the average wind for the week was a moderate 11.2mph. Most of the winds were westerlies.

14. A high of 8.5 degrees Celsius and some calm and sunny skies allowed us to get some of the camp painted, but the week overall was cool, with lows at -0.9 degrees and an average of 2 degrees C.

15. Measurable precipitation fell on Monday and on Saturday, with a weekly accumulation of 0.06 inches, bringing the season total to 1.43 inches.

Field Station Notes:

16. The *R/V Yuzhmorgeologiya* arrived off of Cape Shirreff on Monday afternoon, (January 14) however conditions were not conducive to making a landing. 20-30mph winds at the beach and a swell running at the anchorage made it unsafe to conduct small boat operations. So the ship waited offshore for the evening, in hopes of better weather.

Tuesday dawned clear and calm - ideal conditions for beach landings and transferring supplies. With a great deal of help from the scientific staff on the ship and the crew, we received a good supply of fresh produce, and additional supplies to



tide us over through the remainder off the season. Supplies were shuttled by hand off of the small boats at the beach landing, and then most was run up to the camp using the Chilean camp's ATV. We really appreciate all of the help that we received.

17. The following days continued to be clear and calm, allowing us to get a good portion of the camp buildings prepped and painted.

18. On Thursday the 17th, the ship was back, having completed one leg of the South Shetland fur seal survey (as noted above). Dr. Mike Goebel (AMLR pinniped Principal Investigator), Dr. Dan Costa (UCSC), and Aileen Miller (AMLR) were welcomed ashore.