

U.S. Antarctic Marine Living Resources Program

2011-2012 Weekly Field Reports

Cape Shirreff, Livingston Island

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Camp Opening

The 2011 Cape Shirreff opening crew arrived in Punta Arenas, Chile on 29 October to begin the 2011/12 field season at the U.S.-AMLR base camp on Livingston Island. The crew this year consists of Kevin Pietrzak, McKenzie Mudge, Nicole Cook, Jay Wright, and the Crew Leader, Dr. Mike Goebel. We departed Punta Arenas for the Antarctic on the R/V *Laurence M. Gould* on 2 November. We arrived at Cape Shirreff the afternoon of Saturday, 5 November. A zodiac was launched along-side but sea conditions were deemed too unsafe to continue with opening operations and the zodiac was brought back on board. We spent the next 24 hrs waiting for swell at the ship to diminish and weather to improve. By late-afternoon on 6 Nov., winds had increased and we set sail for Palmer Station. We returned to the Cape on 10 November at 10am. Fortunately the sea and weather conditions were good enough to launch the first zodiac to shore at 13:45 with two Raytheon E.T. crew, the MPC, a zodiac operator and four of the Cape Shirreff crew. They conducted a preliminary survey of the landing zone and the camp site. The four Cape Shirreff and E.T. crew remained onshore and offload of cargo was initiated using only one zodiac. No additional volunteers or crew came ashore. However, zodiac turn-around time at the ship was minimized by the many volunteers from the science staff onboard and dedicated ship's crew. The entire offload except for empty cargo boxes was completed and onshore by 18:30. One last zodiac run brought three empty cargo boxes which are important to the Cape Shirreff operations for outdoor summer storage. There was a total of seven zodiac runs. The last zodiac went back to the ship and the Cape Shirreff crew was left to complete the transfer of cargo and opening the camp by 19:30.

The IT-electronics technicians from the *L.M. Gould* accompanied our team on the first zodiac and provided invaluable assistance in setting up communications and bringing a generator on line. SSB and VHF radio communications were soon up and running as well as a generator before they returned to the ship around 17:30.

There is less snow than usual. However, warm weather has resulted in slushy snow, making the transfer of cargo from beach to camp more difficult than usual. The camp and bird blind/emergency shelter on the north end of the Cape had no damage overwinter, and with the exception of leaks around the floor in the main camp buildings and pooling of water on the floors, the camp has overwintered well.



Science Report

Seabirds

1. In our first days after arrival, we opened the bird blind/emergency shelter. We are awaiting better weather to set up the solar panel and weather station.
2. The majority of the penguin colonies are mostly free of snow. A few gentoo penguins have well-built nests and have laid eggs prior to our arrival. A few of the nests have full clutches.
3. Most chinstrap penguins have established their nests; no eggs have been seen yet.
4. We have started to monitor known-age penguins that were banded here as chicks and have now returned to breed. We have also started to read bands to locate these known-aged birds and their nests.
5. We have established most of the gentoo penguin reproductive study sites and plan on establishing all of the chinstrap reproductive study sites in the next few days.
6. Brown skuas are re-establishing pair bonds and have been observed in pairs around Cape Shirreff and at the penguin colonies.

Pinnipeds

7. We conducted our first breeding elephant seal census on 11 November. There were 82 pups, a substantial increase over the 16 pups born at Cape Shirreff last year. We have yet to conduct a census at a secondary breeding site on the west side of the Cape that occasionally has breeding elephant seals. We expect total pup production to be greater than our current total once this secondary site is surveyed.
8. At the first fur seal census on 11 November there were already two non-pregnant females on the U.S.-AMLR fur seal study site.
9. The first fur seal pup on the study site was born at 12:05pm on 14 November. We were fortunate to be present for the first birth. There were five females on the study site at the time.
10. We have seen many Weddell seals but no pups have been observed thus far. This is to be expected, however, given our late arrival. Any Weddell pups born on the Cape would have been weaned before our arrival.



We will conduct the first weekly Phocid census of the entire Cape on 19 November, but for now the most abundant Phocid appears to be the southern elephant seal followed by the Weddell seal. We have not seen any leopard seals and or crabeater seals since opening camp on the 10th.

Weather

11. We set up our weather station on 14 November to record wind speed, direction, temperature, humidity, precipitation and solar radiation at 15-minute intervals. High winds prevented us from setting up the weather station until then. Since opening we have had strong westerly winds but little precipitation. Today we had our first full day of sun.

Camp

12. The camp opening though late has gone well. We had some trouble with the Inmarsat email system and for the first few days we were not able to use and communicate via email, but we solved the issued with the help of the NOAA crew in San Diego and tech support from our service provider.

13. Our Iridium system for phone communications has been up and operating since 10 November. Communications have been established with daily contact with Palmer Station at 0900 on the single side band radio.

14. Our single fixed solar array, wind generator, and gasoline powered generators are now all operational as of today, 14 November. All appear to be functioning well so far.

15. We are very grateful to the captain, officers and crew of the *Laurence M. Gould* for their support in opening the Cape Shirreff field camp. We extend our deepest appreciation and gratitude to all of the people who helped offload our cargo, especially Jullie Jackson, the MPC, Alan, the zodiac operator, and George and Kris, the *Gould* electronics technicians. We would also like to express our greatest appreciation to the Chief Scientist of LMG11-10, Dr. Ann Bucklin, whose outstanding leadership skills and support were invaluable to the successful opening of the Cape Shirreff field camp this year. She, the other LMG11-10 principle investigators, Drs. Peter Wiebe and Joe Warren, their graduate students and assistants all provided valuable support in opening Cape Shirreff besides being delightful ship mates for the long journey to the Cape.



16. Thanks are also extended to the staff of the NOAA Southwest Fisheries Science Center, Antarctic Ecosystem Research Division in La Jolla, California for their support in getting the 2011/12 field season off to a good start. In particular, thanks to Dr. George Watters, Douglas Krause, Stephanie Sexton, Jen Walsh, Raul Vasquez del Mercado, and Anthony Cossio.



Presented by the staff of the AMLR Cape Shirreff field camp, Livingston Island, South Shetland Islands, Antarctica

