

Camp Opening

We had excellent conditions for the 2012 opening of the Cape Shirreff field station. Seas were relatively calm and we had partly sunny conditions before fog rolled in mid-afternoon.

The 2012 Cape Shirreff opening crew arrived in Punta Arenas, Chile on 31 October to begin the 2012/13 field season at the U.S. AMLR base camp on Livingston Island. The crew this year consists of Nicole Cook, Jay Wright, Melany Zimmerman, Michelle Goh, our NOAA Corps officer, LTJG David O. Vejar and the Expedition Leader, Dr. Mike Goebel. We departed Punta Arenas for the Antarctic on the R/V *Laurence M. Gould* on 4 November at 13:30. We had an exceptionally good crossing and arrived at Cape Shirreff late afternoon of Wednesday, 7 November. Unfortunately, soon after arriving, we had a strong wind from the northeast and we could not initiate opening operations.

By Thursday morning, 8 November, the wind had died and the sea had calmed. Zodiacs were launched by 06:30. We spent the next six hours transferring cargo from ship to shore. Shortly after mid-day visibility diminished and all on-shore volunteers were called back from the ship. By that time most priority one cargo had been transferred. Approximately two hours later visibility improved and operations resumed and all priority two cargo including an ATV were transferred to shore. By 17:30 the ship was underway to Palmer Station. The total number of zodiac trips was estimated at fifteen. VHF and SSB radio communications were established shortly after the first zodiac trip.

Snow cover for the Cape at arrival was average for this time of year and there is little evidence for the start of the spring thaw. This has allowed for easing sledding of cargo over the snow.

There was no damage to the camp or the emergency hut/bird blind on the north end of the Cape.

Science Report

Seabirds

1. In our first days after arrival, we opened the bird blind/emergency shelter. We set up the solar panel and electrical system and are awaiting better weather to set up the weather station.
2. The penguin colonies are 95% covered in snow and gentoo penguins are beginning to establish nests; no eggs have been observed yet.



3. Chinstrap penguins are beginning to establish their nests; no eggs have been observed. To date, two chinstraps with overwinter GLS tags (geolocation light sensors) have been observed.
4. Brown skuas are reestablishing pair bonds and have been observed in pairs around Cape Shirreff and on territories. To date, one brown skua with overwinter GLS has been observed.

Pinnipeds

5. We conducted our first breeding elephant seal census on 9 November. There were 21 pups, a substantial decrease over the 82 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.
6. We have collected our first DNA samples of adult elephant seals. Only seven adult females remain on shore and 14 more have already weaned their pups and departed to sea. There is only one adult male on territory with females and pups. Thus far we have collected DNA tissue plugs on five adult females, the alpha male, and three peripheral males.
7. We have not yet conducted a formal first census of the U.S. AMLR fur seal study site. However, thus far we have not seen any female fur seals and have only observed adult males on territory. We have, however, recorded the first arrival for two known-aged tagged adult male fur seals.
8. We have seen many Weddell seals but no pups have been observed thus far. This is to be expected, however, given our arrival date. Any Weddell pups born on the Cape would have been weaned by now. We will conduct the first weekly phocid census of the entire Cape on 17 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 or crabeater seals since opening camp on the 8th.

Weather

We set up our weather station on 11 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 predominantly easterly winds and with some precipitation. We have not seen the sun since 8 November. Sunrise and sunset are at 04:03 and 21:23.



Camp

10. The camp opening has gone exceptionally well. All methods of communication have been established (i.e. e-mail, VHF, SSB, and Iridium).
11. Our Iridium system for phone communications has been up and operating since 8 November. Communications have not yet been established with Palmer Station but we should soon have a daily morning schedule for 09:00 on the single side band radio.
12. We have not set up our fixed solar array or wind generator, but our gasoline powered generators are now all operational. All appear to be functioning well so far.
13. We are very grateful to the captain, officers and crew of the R/V *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 Jamee Johnson, the MPC, Jack Greenberg and Dave Moore the zodiac operators, and Meredith Helfrich and Diane Hutt, who assisted zodiac operators in the offload. Jamee and her crew did an exceptional job that made this one of the quickest, safest openings in recent years.
14. 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 2012/13 field season off to a good start. In particular, thanks to Dr. George Watters, Douglas Krause, Stephanie Sexton, Jen Walsh, David Vejar, and Anthony Cossio.

Presented by Mike Goebel and Nicole Cook, with assistance from Jay Wright, Melany Zimmerman, Michelle Goh, and David Vejar at the Cape Shirreff Field Camp, Livingston Island, South Shetland Islands, Antarctica

