

2012-2013 Weekly Field Reports

Copacabana, King George Island

Volume 14
January 14, 2013

Science Report:

1. Penguins: Reproductive monitoring of Adélie penguins ended this week and of the original 100 nests in the reproductive study plots, only 21 successfully crèched chicks. Fourteen of those nests crèched only one chick. Of the remaining three known age Adélie penguin nests, one is thought to have 'disappeared before banding' leaving us with only two successful known age nests. Only one of those nests crèched two chicks.

Diet sampling of Adélie penguins continued on Friday (1/18), with five more adults from the Castle Rocks colonies selected. Analysis of this week's Adélie penguin diet samples showed 65% of the krill (*Euphausia superba*) were in the juvenile range (35 mm or less in length), 25% were adult males, and 10% were adult females. One sample contained *Thysanoessa macrura* (aka "T. mac."), while no fish or otoliths were found in any of the samples.

All five of the Adélie penguin satellite transmitters (PITs) put out on January 10th were retrieved by Saturday (1/19). There are still no signs of the two missing Adélie penguin PITs from the initial deployment. One of those birds was last reported to be entering the Weddell Sea, which probably means it lost its chicks & is now fattening up in preparation for its molt.

Gentoo penguin reproductive success remains steady with 81 out of 100 nests still with chicks, 25 of which have crèched. Known-age gentoo penguin nests still stand at 52, 16 of which have crèched. Banding of gentoo penguin known-age chicks began on Tuesday (1/15). A partial gentoo penguin chick census was conducted in some of the hill colonies where the chicks are past peak crèche.

Five gentoo penguin diets were conducted on Monday (1/14). Five birds from the Copa Beach colonies were selected. These diet samples yielded a slightly higher percentage of adult krill (krill over 35 mm in length) than the Adélie penguin samples, with 20% male and 32% female. Forty-eight percent of the sample contained juvenile krill and one sample contained fish parts, but no samples were found to contain otoliths.

Five PITs were deployed on gentoo penguins this week. Five nests on Copa Beach, with two chicks and both adults attending, were selected. The nests were marked and will be monitored during the full nest checks. Three PITs were deployed on Monday (1/14) and the remaining two on Friday (1/18), after they were recovered from the Adélie penguin deployment. This deployment is to monitor foraging during the early chick-rearing phase, so the nests selected contained chicks between one-and-a-half and two-and-a-half weeks old.



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Breeding chinstrap penguins on Copa Beach stand at four nests: three nests with two chicks and one with just one chick. One two chick nest failed this week.

2. Skuas: Regular daily checks of the Copa skua breeding territories continue. There are still six active brown skua nests at Copa, one nest with an egg, the others with chicks. No new breeding activity was observed this week.

Point Thomas skua routes were completed on Wednesday (1/16) and Saturday/Sunday (1/19 and 1/20). There remain three active brown skua nests, all of which have chicks. The chicks of territory 29 were banded on Sunday (1/20). No new breeding activity was observed, though there has been an increase of resights at the 'Arctowski skua club' for the past couple of weeks, as the lakes have begun to grow with the melting snow.

The Demay and Patelnia skua routes were completed on Thursday (1/17). There still remain only two active nests, both of which have chicks. No new breeding activity was observed.

Back Country skua routes were completed on Saturday (1/19). Resights in the Back Country, as with the rest of the routes, remain somewhat sporadic and irregular, with new pairs coming and going every week. There are still no active nests in the Back Country.

3. Sheathbills: Two unbanded sheathbills have still been observed near Copa Rock and appear to be attending the old nest site used last year. Their nest was not checked for eggs this week.
4. Whales & Seals: Humpback whales were seen on four days this week, the highest count being three animals on Thursday (1/17). A different species of whale was also seen on Thursday (1/17); our best determination was that the five individuals were fin whales.

The Demay and Patelnia seal census, carried out on Thursday (1/17), yielded 519 total elephant seals: 509 juvenile/unknown sex, two large adult males, and eight weaners. There were also six Weddell seals, and three southern fur seals. The Copa and Point Thomas seal censuses, carried out on Sunday (1/20), yielded 93 juvenile/unknown sex elephant seals and two fur seals.

Leopard seal attacks eased at Copa Beach this week with none being observed. One leopard seal was seen patrolling, however, on Thursday (1/17).



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5. Other: The lucky gentoo penguin pair raising an Adélie penguin chick on the outskirts of the Bolinas colony has abandoned its eggs and appears to have crèched the Adélie chick, as we have observed the chick alone at the nest.

One Macaroni penguin was observed in the Ipanema Beach gentoo penguin colony on Sunday (1/20).

Weekly Weather:

The week's weather was very accommodating for most of the week with the exception of Saturday (1/19) and Sunday (1/20) when 15 to 20 knot west winds made the back country skua routes less comfortable than in previous weeks. Temperatures remained a few degrees above freezing most days, again with the exception of Saturday (1/19) and Sunday (1/20), when west winds drove the temperature up to the 40 degree mark, rapidly increasing the melting of what's left of the snow and ice.

Camp Activities:

During this week's trip to the Polish Station, Arctowski, we met international visitors from England and Australia who were members of the Shackleton Epic Expedition (shackletonepic.com) retracing the voyage from Elephant Island to South Georgia Island in a replica lifeboat. We also met scientists from Chile and Brazil conducting a variety of research projects from Arctowski.

The 2012-13 Copa Field Team:

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