

2012-2013 Weekly Field Reports

Copacabana, King George Island

Science Report:

1. Penguins: The Adélie penguin censuses of occupied nests were completed at Copa on Wednesday (11/14) and Point Thomas on Saturday (11/17). Totals were 2048 and 3962, respectively, much lower than last year's counts, which were the highest in several years. The numbers this year were very similar to the other two seasons that had such deep snow (2007-08 and 2009-10), which resulted in many nests being buried and abandoned before the census.

Adélie penguin egg measurements were carried out at Point Thomas on Saturday (11/17). Both eggs at 50 nests were measured and weighed, to give us an indication of female condition at egg-laying. Preliminary analysis indicates that the mean volume of the first egg was slightly greater than, and the second egg similar to, the 25-year mean. This could indicate fairly good over-winter and early spring feeding conditions for the penguins.

Many of the gentoo penguins have not laid eggs yet due to the snow still covering their colonies. However, those in snow-free colonies, including many of the new, higher colonies, have had complete clutches now for over two weeks. A nest census was done of these colonies, but we will not be able to compare total numbers with past years until we have a complete, rookery-wide census.

The gentoo penguins that do have eggs continue to exchange at their nests daily, one member of the pair going out to feed at first light, then returning within 10-12 hours to relieve its incubating mate. Those pairs that don't yet have eggs continue to leave their colonies at daybreak, returning throughout the day to their nests. Once they lay eggs, they will begin taking turns at the nest, as above.

We returned to the Uchatka chinstrap penguin colony on Friday (11/16) to search for more GLS tags, but did not find any. However, we did find a PTT (satellite tag) from last year that we had been unable to recover, but ultimately had been molted off in the colony, after we had departed in March.

To determine penguin band loss for each of the two types of penguin flipper bands, we are continuing a study started two years ago in which male Adélie penguins are implanted with microchip transponders, half of which are banded with either an aluminum or stainless steel flipper band. Since male Adélie penguins return to within a meter of their old nest sites every year, we can determine if they have lost a band by reading their implant (using a hand-held scanner). This year we have again implanted 100 penguins, 25 of which were also banded with stainless steel bands and 25 with aluminum bands. An analysis of the returns from past two years is currently under way and will be reported in a future summary.



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2. Skuas: We continue to monitor the skuas around Copa daily and the ones at Point Thomas weekly. Most of the territories have pairs now, but due to the snow, no eggs have been seen yet. We expect to see eggs soon, especially in those pairs that control penguin territories. Most of the Adélie penguin colonies are clear of snow now, exposing many abandoned eggs, which the territorial brown skuas are taking full advantage of; with many eggs remaining uneaten on their territories.
3. Giant Petrels: The giant petrels appear to have eggs now, as they are sitting tightly on their nests. We do not go near them, due to their being easily disturbed, but will do a nest census from afar in December, when most of the nests will have eggs. Later, after chick hatching, we will read any bands on the adults, to record annual survival. Giant petrels lay only one egg, which they incubate for almost 2 months. The chicks will hatch in early January and, after a prolonged chick-rearing period, will finally fledge in April or May. Juvenile giant petrels remain at sea, feeding and circumnavigating the southern oceans, for at least 2-3 years, before they are seen again at their breeding grounds. The age at first breeding is usually 5-7 years old. We have many known-age breeders at Copa that were banded as chicks many years ago. It is thought that giant petrels may live as long as 50-60 years.
4. Whales and Seals: Several humpback whales were seen in the bay during the week, most appearing to be diving and feeding. The weekly seal census only resulted in a few elephant seals and two Weddell seals. Leopard seals have been seen infrequently, one small one hauled out on the snow near the glacier.

Weekly Weather:

The temperatures for the week have mostly been above freezing, finally, with two days actually nearing 40°F, with strong warm winds (maximum 72 knots) and rain from the northwest, resulting in a big melt off around the area. We now have running water in our kitchen and lab sinks!

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