

# 2010-2011 Weekly Field Reports

## Copacabana, King George Island

Volume 3  
October 31, 2010

Science report:

1. Penguins: Adélie penguins are nearing the peak of egg-laying, with about 40% of the nests with eggs. At this time, we collect Adélie penguin adult weights and egg one measurements, as an indicator of adult condition at the start of the breeding season. On Thursday, 28 October, we selected 50 nests at the Point Thomas colony (near the Polish station) with both adults present and only one egg, then weighed both adults, and measured and weighed the egg. Initial findings show that the mean adult weights are among the highest recorded over the last 20 years. The mean egg volume, however, is one of the lowest recorded for the same 20-year period, which could indicate poor food availability for the females prior to coming ashore to breed.

We deployed three satellite tags (PTTs) on female Adélie penguins that had one egg last week, with two more scheduled for this week. The females go to sea after laying their second egg to replenish their depleted stores from the three week courtship fasting period. They typically return to relieve the males in 10-14 days and the males, which have been fasting since arriving in early October, are able to go feed themselves. We will follow the tagged females on their first foraging trips to determine where they are going to feed. We hope to compare this with similar information from past seasons. In addition, the krill-fishery was operating in this region during mid-September to early October and we should be able to ascertain the overlap between the penguin foraging areas at this critical time in the breeding cycle with the fishery coverage.

The peak of egg-laying for gentoo penguins was approximately 27 October, with most of the nests now having at least one egg. Most of the nests in the reproductive study sites now have eggs and one member of each pair banded. Once a nest has two eggs, it goes on the “full nest check” schedule, meaning they are only checked every four days, to minimize disturbance. We will be conducting a full colony census of the breeding gentoo penguin population later this week.

The first chinstrap penguin was seen recently and two or three have been seen regularly around the colony since. We typically have a few pairs breeding among the Adélie and gentoo penguins on Copa Beach every year, but no nests are being built yet. Their mean clutch initiation date is typically around the end of November, so it is still too early to expect the chinstrap penguins to be occupying nest sites now.

Five more gentoo penguin diet samples were collected on Tuesday, 26 October. See Sit Rep #2 for methods. Again, most of the krill were in the 40-50 mm range, with an equal mix of males to females. Very few juvenile krill were found and only one sample had any indication of fish. These data will be analyzed at a later date and be available to compared with the information we hope to obtain from the observer coverage of the krill fishing in the area.

2. Skuas: More skuas are arriving daily and several of the pairs that control penguin territories are back together again. Mostly only brown skuas have been seen, so far, since the few south polar skuas we have around Copacabana usually don't arrive until later. During our visit to Arctowski last week, we did our first skua check in the Point Thomas area, and found many of the brown skua territories occupied, but only one south polar skua.



3. Sheathbills/Gulls/Giant Petrels: Four to six sheathbills have been seen regularly among the penguins, mostly in the beach areas. Most of them are not banded, but one of our banded breeders, “Rasta”, has returned.

The giant petrels are already occupying nests in the colonies around Copa and Point Thomas. They are also back in the many new areas that they colonized last year. These birds are quite skittish and easily disturbed, so we don’t go near them until early-mid December, when we do a nest census.

4. Seals: Very few leopard seal kills have been observed this past week, after so many seen the first week. A group of 50 leopard seals was reported on the ice across the bay by Polish scientists about a week ago, at the same time we observed 14 leopard seals on an ice floe in the Copacabana area. Two crabeater seals were also seen near Arctowski when we went over last week for the Adélie penguin and skua work on 28 October. The first of the weekly seal censuses was carried out on Saturday, 20 October, with only one fur seal counted. This week we only covered the beach areas around Copacabana, but in the future, these censuses will encompass all beaches from Copacabana to Arctowski.

### **Weekly Weather:**

Thursday, 28 October and Friday, 20 October were calm and beautiful, with warm temperatures near 40° F, resulting in much of the snow melting around the area. Saturday and Sunday had strong winds, above 35-40 knots most of the time, but it was still warm so the melting continued. Most of the snow is now gone from the area, making walking and working in the penguins much easier.

### **Camp Activities:**

The “Polar Pioneer”, which is the ship the Polish use for resupply and transport of personnel, arrived on Friday October 29th. The new Polish expedition has been busy offloading all their supplies for the coming year and the changeover between the old winter-over group and the new science group will happen in a few days.

We had a nice, quiet Halloween party here with just the four of us, complete with some very imaginative costumes.

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