

2010-2011 Weekly Field Reports

Copacabana, King George Island

Volume 15
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Science Report:

1. Penguins: We banded 250 Adélie penguin chicks and nearly 250 gentoo penguin chicks this week. These chicks will become the 2010-11 cohorts that we will follow for our known-age reproductive and survival study.

The known-age Adélie penguins that bred this season fledged 0.7 chicks per nest, lower than the colony-wide average of 0.98 chicks fledged per nest. Known-age gentoo penguins fledged 1.18 chicks per nest, higher than the colony-wide average of 1.05 chicks fledged per nest. All of these chicks of known-age parents will get banded, so we will be able to follow them throughout their lives and determine if the age of their parents is a possible factor in their survival, breeding, etc.

The first Adélie penguin chicks were observed leaving the beach on Sunday (1/23), so we began to collect their fledging weights. Chicks on the beach are captured using a hand-held landing net and then weighed. These data will be used to evaluate their condition at fledging, as low weights have been correlated with low over-winter survival.

We also collected gentoo penguin fledging weights on 100 of the 250 chicks that were banded this week (at 85 days after clutch initiation (CID)). The average weight was 4,946 grams, about 300 grams greater than the 13-year average. At 85 days post-CID, the chicks are almost fully feathered and semi-independent, but have not yet gone on their first trial foraging trip. Gentoo penguin chicks, unlike Adélie and chinstrap penguins, have a prolonged fledging period, where, as they get older, they go out to feed in the mornings, but still get supplemented by their parents, if necessary, in the afternoons.

The fifth gentoo penguin chick-rearing diet sample was conducted on Monday, 17 January. Krill (*Euphasia superba*) again dominated the samples this week, although fish did appear in two samples, but accounted for less than 1% of the total mass. The krill continue to range from 40 to 55 mm in length, similar in size to those obtained in net tows by the R/V *Moana Wave* during their at-sea sampling in the area. Females made up 68% of the samples.

We retrieved four of the five satellite tags we had out on gentoo penguins on Sunday, 23 January.

2. Skuas: Of the 167 currently active skua territories, 20% have eggs and 25% have chicks. So far, five new territories have been established in our study area this season. We banded six more adult skuas this week.

4. Seals: We conducted both of our seal censuses on Friday, 21 January, and observed that the fur seals are beginning to return. From Copacabana to Patelnia we counted 84 fur seals, 468 juvenile elephant seals, ten male elephant seals, four recently weaned elephant seals and five Weddell seals. Between Copacabana and Point Thomas we found 40 juvenile elephant seals, five fur seals and one Weddell seal.



Weekly Weather:

Monday, 17 January, through Thursday, 20 January this week were characterized by strong ESE winds (30 mph average, never below 20 mph), cold temperatures (below freezing), and sun. On Friday, 21 January, the wind died and it began to snow. Oddly, despite it snowing on and off all weekend, the snow only started to stick on Sunday evening, 23 January.

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