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Chick provisioning strategies in Antarctic petrels and Southern fulmars

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Timing of breeding is crucial in a highly seasonal environment. Antarctic petrels (*Thalassoica antarctica*) breed 2.5 weeks earlier than Southern fulmars (*Fulmarus glacialis*). Antarctic Petrels have longer foraging trips and leave their chick unattended at an earlier stage than Southern fulmars. A pilot study was set up to investigate chick provisioning strategies in these two closely related species on Ardery Island (East Antarctica), where these species breed sympatrically. Earlier studies of this study colony showed that they were feeding similar food to their chicks (both around 80% fish, mainly *Pleurogramma antarcticum*). In the chick period of both species, between 23 January and 23 March 1999, ARGOS satellite transmitters were fitted on 8 Antarctic Petrels and on 12 Southern Fulmars, equally divided over both sexes. On average the devices were attached for 13 days (range: 2-31 days). The dataset of the raw satellite positions were re-analysed with a new filtering technique to achieve a higher resolution. Most Southern fulmar foraging trips were short (1-2 days) and mostly restricted to a relatively shallow area over the Antarctic continental shelf within 150 km of the breeding colony. The individual trips were difficult to detect because of the short distances they fly and the relatively long time intervals between two locations. Antarctic petrels have foraging trips of 3.6 ± 1.5 days (based on 21 trips) and are roaming over a much wider area. They flew often 1000 km during one trip and reached positions of more than 300 km away from the colony. The main foraging area for Antarctic petrels was situated near the shelf break, within the highly productive, seasonal sea-ice zone. Some deviating tracks of Southern Fulmars were also found in the same area. In this presentation we discuss which variables influenced the individual tracks and why both species fly to different foraging areas to come home with the same food for their chicks.