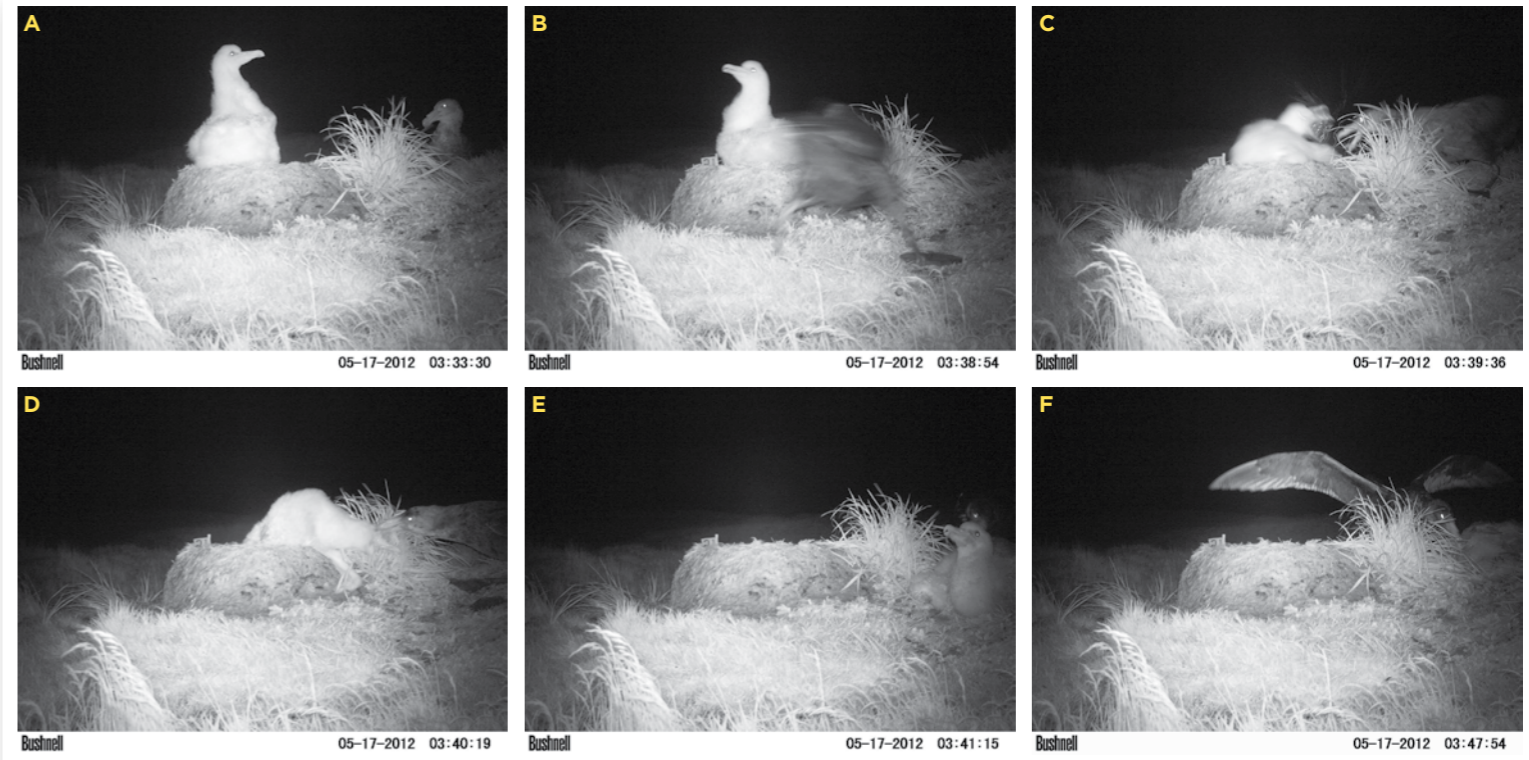


IN THE dead. OF night



The breeding success of some albatrosses varies considerably from year to year, but among the great albatrosses, *Diomedea* species, it tends to be fairly consistent, with approximately 65 per cent of eggs laid resulting in a fledged chick. Most failures tend to occur during incubation, at hatching, or when the chicks are very young. Few chicks die once the parents leave them alone, four to six weeks after hatching. Indeed, it was the unusual disappearance of large chicks that first alerted Richard Cuthbert to the problem of mice attacking Tristan Albatross *D. dabbenena* chicks on Gough Island.

South Africa's Prince Edward Islands are the most important breeding site for Wandering Albatrosses *D. exulans*, supporting more than 40 per cent of the global population. Members of the



FitzTittute have monitored the health of the population on Marion Island since the early 1980s. In addition to counts of all incubating pairs and large chicks each year, we have three study colonies where all new adults and the chicks are ringed each year. Breeding success has been similar at all three colonies until the past few years, when one colony began losing lots of chicks. This was most striking during 2011, when only 14 per cent of chicks survived in the Macaroni Bay colony, compared to more than 80 per cent in the other two colonies.

Fitz post-doc Maelle Connan, who was based on the island from April 2011, decided to expand the study area to include many more nests in 2012. Once again, chicks began to disappear after they were left alone by their parents. We have seen some mouse attacks on Wandering Albatross chicks on Marion in recent years, but they take several days to weaken a chick and they inflict characteristic wounds that are readily observed. In April and May 2012, Sylvie Vandenebeele, a visiting student from Rory Wilson's lab in Swansea, watched a group of nests from dawn until dusk to check when the parents returned to feed their chicks. Over three weeks, four chicks were lost, all seemingly in good health and all disappeared overnight.

Intrigued and alarmed, Ben Dilley and Delia Davies, the Fitz team based on the island in 2012/13, decided to investigate further. They deployed camera traps at 12 albatross nests and waited for something to happen. Eventually their perseverance paid off, and they twice caught the culprit in action: on both occasions an adult Northern Giant Petrel *Macronectes halli* killed and ate the chick. Giant petrels are aggressive predators at their breeding islands, but this is the first time they have been recorded killing *Diomedea* chicks, which defend themselves by regurgitating their oily stomach contents onto intruders. The giant petrel caught on camera circumvents this defence by attacking at night, and dancing around the chick to make it throw up. Its aim appears to be to get behind the chick, grab it by the head, and drag it from its nest to kill it.

This seems to be a novel behaviour confined to one area on Marion Island. However, in April–May 2012 we also witnessed Northern Giant Petrels kill three Grey-headed Albatross *Thalassarche chrysostoma* chicks that were almost ready to fledge. This is the first time this has been recorded, although giant petrels have been suspected of killing *Thalassarche* chicks at other breeding colonies, and sooty albatross (*Phoebastria*) chicks at Marion Island. Quite why

The series of infra-red images shows how the giant petrel arrives, causing the albatross chick to stand and face the threat (A). After several minutes the giant petrel starts dashing around the nest, trying to get behind the chick (B). The chick retaliates by regurgitating (C), but it is then grabbed by the head (D) and pulled from its nest by the giant petrel (E), which proceeds to kill it (F).

the giant petrels have developed a taste for albatrosses is unclear, but it is worrying given the relatively small numbers of albatrosses. Even if only a few giant petrels indulge, they can have a significant impact on albatross breeding success. We will continue to monitor the situation; should the behaviour spread, we might have to consider some management action.

The full story is published in *Polar Biology* (Dilley et al. 2013, doi:10.1007/s00300-013-1300-1).

For more information, contact The Director, Percy FitzPatrick Institute of African Ornithology, University of Cape Town, Rondebosch, South Africa 7701. E-mail fitz@uct.ac.za, tel. +27 (0)21 650 3291 or visit www.fitzpatrick.uct.ac.za

