Tracking threatened albatrosses off southern Africa

Vulnerable, stately and seen by relatively few people, albatrosses are mystical creatures facing a real threat of extinction. Indeed, they are arguably one of the most endangered groups of animals on the planet. Their survival is threatened primarily as a result of their interactions with fishing operations, which provide high-quality, predictable, but in many cases fatal meals for these opportunistic scavengers.

The productive waters of the Benguela Current provide rich foraging opportunities for many species of seabirds, most of which are visitors from distant breeding areas. Birds of at least 13 species are killed by fishing operations off southern Africa, with 12 of these species being threatened with extinction as a result. The two most common albatross species frequenting our waters are the Black-browed Albatross *Thalassarche melanophris* (Endangered), which makes its way northeast to the Benguela from South Georgia, and the Shy Albatross *T. cauta* (currently listed as Near-threatened, but probably soon to be listed as Vulnerable), which breeds at islands off New Zealand and Tasmania. Both are killed in significant numbers in southern African waters by long-line and trawl fisheries. In the case of long-line fishing, seabirds are killed when they swallow baited hooks, drowning as the lines are set. Trawling, on the other hand, kills seabirds by entanglement in the net or, more often, when they collide with the cable that attaches the net to the vessel (the warp cable) and are dragged underwater.

Although the biology of both species has been well studied during the breeding season, and ringing and tracking studies have revealed much about their long-range movements, relatively little is known about how the birds behave in southern African waters. The distribution of Black-browed Albatrosses is strongly linked to recent trawling activity, suggesting they are highly dependent on fishery discards, whereas Shy Albatrosses are more widely dispersed and are known to take a wide range of 'natural' prey. However, we know nothing about fine-scale movements within coastal waters and don't know whether individuals specialise in scavenging at fishing vessels.

Recently Samantha Petersen, a Masters student at the Fitztitute, deployed satellite transmitters on immature albatrosses to gain some insight into how these birds move in relation to fishing operations. With the assistance of Harry Dilley and Barrie Rose, four Black-browed and four Shy albatrosses were caught at sea off Cape Point.

Sam Petersen and Barrie Watkins attach a satellite transmitter to a Shy Albatross to track its movements around local fishing fleets.

The transmitters send signals to orbiting satellites, allowing the birds' positions to be estimated. Apart from one Shy Albatross which stopped transmitting signals within a week of deployment (possibly because the device failed), the other seven albatrosses will be monitored for the next few months and their flight paths superimposed on the positions of fishing vessels at the same time. We should learn the extent to which the two species remain in an area or follow fishing vessels. We may also be able to infer the extent to which they forage at natural food sources and only supplement their diet from fishing operations. If the pilot project proves successful, we shall seek funding to expand the project to include adult birds and begin to gauge the extent to which individuals have different foraging strategies. Such knowledge will help assess the threat posed by fishing mortality in southern African waters.

Because the albatross conservation issue is so dire, at the same time as the satellite-tracking study, work continues to improve mitigation measures designed to avoid seabird mortality during fishing operations in both the long-line and trawler fleets. Safeguarding albatross species from extinction and ultimately conserving our oceans – the only global commons – is a responsibility shared by all nations. □

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Percy FitzPatrick Institute of African Ornithology (a DST/NRF Centre of Excellence), University of Cape Town, Rondebosch 7701, Cape Town, South Africa.
Tel. (021) 650 3290; fax (021) 650 3295; e-mail *birds@botzoo.uct.ac.za*