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Link to our website (which will be updated including English translations soon): <http://www.uni-giessen.de/fbz/fb08/Inst/tsz/voekophysiologie>

Our research group (Petra Quillfeldt, Juan Masello and students and co-workers from different countries and institutions) have worked on New Island since 2003, with a focus on Thin-billed prions and penguins. New Island is an interesting study site, on one hand because of the diversity of seabirds and on the other hand because its position at the edge of the island groups gives the birds access to both inshore and offshore habitats.

Thin-billed prions are small seabirds of 140g, which are long-lived and lay a single egg per breeding season. They excavate burrows, and both parents share incubation (between 46 and 47 days) and chick provisioning (47-61 days). Thin-billed prions are great flyers, and can therefore use the Patagonian Shelf as well as more polar waters hundreds of kilometres away. In elevated sea surface temperatures, they face difficulties finding sufficient food to feed their young, and often stay away for long periods (up to 8 days) to forage. Thin-billed prions feed on very small squid, mainly during the incubation period, and feed their chick mainly with amphipods. To study where prions feed, we use stable isotopes as markers as well as small data loggers (geolocators). These small devices are fixed to the leg ring of the prions. They store light measurements, and these can be transformed to latitude and longitude positions over the whole year. After the breeding season, most Thin-billed prions from New Island move east to polar waters south of South Africa for their moult, and then return to the Patagonian shelf for the second half of their breeding season. See for example:

**Quillfeldt, P.,** Cherel, Y., Delord, K., Masello, J.F., Delord, K., McGill, R.A.R., Furness, R.W., Moodley, Y. & Weimerkirch, H. (2015) Half a world apart? Overlap in nonbreeding distributions of Atlantic and Indian Ocean thin-billed prions. *PLoS ONE* 10(5):e0125007. [OPEN ACCESS](#)

More information can be found in further publications:  
<http://www.uni-giessen.de/fbz/fb08/Inst/tsz/voekophysiologie/publikationen>

The population dynamics and the foraging ecology of Rockhopper and Gentoo penguins have been another focus of our research projects. Together with other diving seabirds (Imperial cormorants, Magellanic penguins), they exploit the water column to a depth over 180m (although more commonly they will forage at 10-50m depth). Rockhopper penguins, like the prions, specialise on small prey such as larval squid and crustaceans like krill, while Gentoo penguins take more fish. Both species have experienced good and poor seasons over the years of our study, and a principal aim is to understand the underlying causes of this variability, and how flexible the species are in coping with variable conditions. We have used tracking devices such as GPS and dive depth loggers, and in addition to showing a great detail of the foraging movements, these data are also used to propose marine protected areas. See for example:

Masello, J.F., Mundry, R., Poisbleau, M., Demongin, L., Voigt, C., Wikelski, M. & Quillfeldt P. (2010) Diving seabirds share foraging space and time within and among species. *Ecosphere* 1: 19 (28 pp). [OPEN ACCESS](#)

**Paulo Catry (MARE, Marine and Environmental Sciences Centre – ISPA – Instituto Universitário) and José Pedro Granadeiro (CESAM - Centre for Environmental and Marine Studies, Faculdade de Ciências, Universidade de Lisboa)**

Link to our website: <https://atlanticmigrants.wixsite.com/atlanticmigrants>

Our research group (Paulo Catry, JP Granadeiro and students and collaborators from a range of universities and institutes from various countries) have worked on New Island since 2002. After some initial work with thin-billed prions (including the first census of the New Island population) the main focus of our research has been on a long-term demographic and ecological study of black-browed albatrosses (ongoing). However, we have worked with a large range of other species, including seabirds such as Falkland skuas, white-chinned petrels and penguins, and terrestrial species such as striated caracaras and introduced feral cats.

Albatrosses are amongst the most charismatic and spectacular birds. With a wingspan of more than 2 meters, they travel thousands of kms over the oceans, coming to land only during the breeding season. These birds are famous for their amazing flight capabilities, as they glide above the waves, taking advantage of wind currents, almost without flapping their wings. There are 22 species, most of which are currently classified as threatened, placing this family at the top of the rank of bird families facing severe conservation problems. Among the various causes for population declines, it is believed that the most important factor is a high incidental mortality caused by fishing gear, but changes in marine productivity, introduced species and emerging diseases also play an important role.

The Falkland Islands hold about two thirds of the world population of black-browed albatrosses. In 2003, we started the first detailed demographic study of the species in this archipelago. The annual monitoring of the population breeding on New Island, plus more limited work at other sites (including the largest colonies: Steeple Jason and Beauchene), is allowing us to learn enormously about black-browed albatross demography, ecology and behaviour, particularly of its relations with fisheries.

The long-term study of this top predator also contributes to the assessment of the state of marine environment on the Patagonian shelf and of the potential impacts of climate change. Being relatively easy to study, seabirds are excellent indicators of environmental quality and provide valuable information to decision makers, including on matters such as the management of fisheries and of seascapes, and the creation of marine protected areas.

Catry P, Lemos R, Brickle P, Phillips RA, Matias R, Granadeiro JP 2013. Predicting the distribution of a threatened albatross: the importance of competition, fisheries and annual variability. *Progress in Oceanography* 110: 1-10.

<http://dx.doi.org/10.1016/j.pocean.2013.01.005>

More information can be found in further publications:

<https://scholar.google.pt/citations?user=Ej3nssMAAAAJ&hl=pt-PT>