

## Racing Pumpkin, a homing African Penguin

*Jessica Kemper*

*African Penguin Conservation Project, c/o Ministry of Fisheries and Marine Resources, PO Box 394, Lüderitz, Namibia*

Pumpkin is a huge adult African Penguin *Spheniscus demersus* from Halifax Island off the Namibian coast. I found him on 6 May 2004, in an empty nest bowl in the main breeding colony, sporting large patches of oil on his chest, belly and flippers. I caught him, took him back to Lüderitz on my paddle-ski, and washed him. Since washing penguins strips the feathers of their natural waterproofing, they need to be held in captivity until they are waterproof again. Here they bathe regularly, which encourages them to preen. Although Pumpkin never learned to free-feed and did not particularly enjoy being handled, he settled down very quickly in the rehabilitation pen, together with 16 other rehabs. Seven weeks later he was ready for release.

Normally we try and release rehab birds at the island where they were found. We have never released a penguin from the mainland, in case the bird doesn't get the plot and gets munched by jackals or hyenas instead of heading for the nearest island. Since I was

pretty sure that Pumpkin is a resident on Halifax and since there was no boat to take him back to his island, I embarked on a little experiment. In addition to his flipper-band, Pumpkin received a spot of pink dye (Porcimark) on his chest.

On Friday 25 June 2004, Kathie Peard, Joan James (both from the Ministry of Fisheries and Marine Resources) and I drove to Guano Bay, which is situated directly opposite Halifax Island. Unfortunately it was very foggy, and the island was hardly visible from the bay. I then paddled across to the island. At 11:15, Kathie and Joan released Pumpkin, making sure he did not reappear on the beach somewhere, while I patrolled the landing beaches on Halifax Island for any signs of him. While waiting (and freezing to death in the fog), I did my routine bi-monthly penguin counts, returning to the beaches every now and again to scan for pink penguins. Alas, no sign of Pumpkin.

Eventually I turned my attention to the main breeding colony, ready to count all ac-



Pumpkin (with the flipper band) settled in back home.

tive nests, when through the fog I saw a pink spot! It was 12:40, and Pumpkin was back in his nest, greeting his partner who was covered in guano and had clearly been holding the fort. Not five minutes later the two were mating, and it was then that I realized that Pumpkin, despite weighing a hefty four kg, is female! For another hour I watched the two walking around each other and shaking their heads in typical penguin courtship fashion. Pumpkin's partner then enthusiastically started to get the nest ready by collecting large amounts of nesting material, mostly by stealing seaweed from the nest next door.

I am aware that penguins have a brilliant GPS in their heads. This was demonstrated during the *Treasure* oil spill near Cape Town in 2000 when about 20 000 non-oiled penguins from Dassen and Robben islands were evacuated and relocated to Cape Recife near Port Elizabeth, about 800 km away. They were released there in the hope that the oil around the islands could be cleaned up before the first penguins returned. The gamble paid off, but it was a close call. It took the fastest penguins only eleven days to swim

back to their islands! (See ADU website for details.)

Nevertheless, Pumpkin still bowled me over completely. An hour and a half after being released from an unfamiliar place in thick fog, after seven weeks in captivity, Pumpkin had found her nest and her partner and was preparing to breed. I guess penguins will never cease to amaze me.



Postscript: When I visited this island again on 21 September Pumpkin had become the proud mom of a substantial chick!

## Observations at a breeding colony of Red-billed Quelea in the Klaserie Private Nature Reserve

*Zephné Bernitz & Herman Bernitz*

*PO Box 1276, Middelburg, Mpumalanga 1050; bernitz@iafrica.com*

On a recent family holiday to the Klaserie Private Nature Reserve in mid-April 2004, huge numbers of Red-billed Quelea *Quelea quelea* were conspicuous all over the veld. During the course of a game-viewing drive, we became aware of a clamorous cheeping and swizzling which marked the site of a quelea breeding colony. In 25 years of visiting the area as committed birders, this was the first time that the spectacle described below had been experienced.

At 70 000 ha, the Klaserie Private Nature Reserve (KPNR) is the largest privately

owned nature reserve in SA (Bornman 1995), and is home to the Big Five. It lies in the eastern Lowveld where it shares a common (unfenced) border with the Kruger National Park, and is limited by the Olifants River to the north, the Timbavati Game Reserve to the south and Hoedspruit Airforce Base to the west. Only the western boundary is fenced, as this forms the western-most limit of the large conservation area encompassing the Kruger Park and adjacent private nature reserves.

The KPNR straddles the junction of two



**Figure 1.** Quelea nests in *A. nigrescens* trees.



**Figure 2.** Five day old Red-billed Quelea chick in the hand.

vegetation zones, namely arid woodland and Mopane woodland as described in the bird atlas (Harrison et al. 1997) and in Van Wyk (1972). The authors' property, Dundee Farm, which is a small part of the KPNR, consists mainly of arid woodland where the following species dominate: Red Bushwillow *Combretum apiculatum*, Knobthorn *Acacia nigrescens*, Marula *Sclerocarya birrea*, Russet Bushwillow *Terminalia prunoides*, Silver Terminalia *Terminalia sericea*, Appelblaar *Philonoptera violaceae*, Weeping Wattle *Peltophorum africana*, Flaky-bark Thorn *Acacia exuvialis*, False Marula *Lannea schweinfurhtii*, Candelabra Tree *Cassia abbreviata*, Jackalberry *Diopspyros mespiliiformes* and Tree Fuchsia *Schotia brachy-petala* along the Klaserie River which bisects the farm, and Tree Wisteria *Bolusanthus speciosus* along drainage lines. Mopane *Colophospermum mopane* occurs at low densities as shrubs in the area, but seven km to the northeast are solid stands of Mopane. The midstratum consists chiefly of several raisin bushes *Grewia* spp., Sickie Bush *Dichrostachys cinerea*, gwarries *Euclea* spp. and Poison Grubwood *Commiphora africana*.

The grasses are sweetveld (Van Oudts-hoorn 1992): Buffalo Grass *Panicum maximum*, Natal Redtop *Melinis repens*, *Eragrostis curvula* and Love Grass *E. superba*, finger grasses *Digitaria* spp. and Herringbone Grass *Pogonarthria squarrosa*, with steekgras/bristle grasses *Aristida* spp. in overgrazed areas. Above average rainfall had fallen late in the season and the veld was in

excellent condition with good grass cover. Rainfall for the area averages 500 mm per year. The Klaserie River was flowing strongly after a dry period of about four months, during which it consisted only of pools.

Dundee Farm is undulating and lies at an altitude of c.300 m. The area is scattered with rocky outcrops of quartz in which mica commonly occurs. The town of Mica lies to the northwest. Our property has only one artificial waterhole, a cattle trough mounted below ground level in front of the homestead, the trough being an artefact of the previous generation of Bernitzes who wished to view game from the stoop. The Klaserie River bisects the property and renders the eastern portion inaccessible when the river is at high levels, as was the case at the time of the visit.

The breeding colony of queleas covered an area of at least 1 km by 0.5 km, and probably extended further east onto the adjacent farm, but that area is not accessible by road and was therefore not surveyed. The coordinates of the ringing site were 2407S 3108E. Nests were almost entirely in Knobthorn *Acacia nigrescens* trees, especially in the smaller trees up to 3 m tall, with a few *Terminalia prunoides* also utilized. Every single Knobthorn was utilized, and a count yielded 84–130 nests per tree. Not all nests were active, and especially on the periphery of the colony, many trees contained incomplete nests consisting of only an opening ring.

**Table 1.** Age and sex of Red-billed Queleas caught.

Breeding males	Breeding females	Immatures
113	153	167

Most nestlings that could be seen peeping or hanging from the nests were at the same stage of development, with primaries all in Moulting Stage 2. This represents an age of five days which is the ideal age for ringing (C. Elliott pers. comm.).

No nestlings were ringed, however, as the abundance of adults made extracting nestlings from nests in thorny trees unnecessary. Also, mortality of first year birds is known to be high (Fry 1980), so the investment of ringing adult birds made more sense. The area below the trees was liberally scattered with empty egg shells (very pale blue, 19 × 13 mm) and the odd addled egg. The whole area was pervaded by a pungent odour not unlike that of Bird Island, Lambert's Bay, which could be ascribed to the accumulation of faeces all over the foliage of the trees and the underlying grasses. The nutrient value of the droppings to the vegetation must be substantial.

It was conspicuous that not a single dead nestling was found below the nests, despite considerable searching. This probably indicates high levels of predation by small carnivores and scavengers. Only one raptor was consistently present in the area, a Wahlberg's Eagle *Aquila wahlbergi* (cf. Biggs 2001). The breeding colony was within 500 m of a known Wahlberg's Eagle nest site, but this late in the season there was no evidence of breeding, with only the single bird seen.

The nest of the Red-billed Quelea is oval in shape, approximately 110 × 90 mm, with a large opening that is partially covered by a "porch". The nests are woven from grass and are unlined.

The huge concentration of nests in the breeding colony meant that there was a con-

**Table 2.** Distribution of facial mask colours of the Red-billed Quelea breeding males caught.

Black/red	Black/yellow	Cream/red	Cream/yellow
61	41	6	5

tinuous flow of parent birds to and from the area. Three mist nets between trees caught birds consistently throughout the day at a fixed rate, c. eight birds per clearance from net one (12 m), three birds per clearance at net two (9 m) and two birds per clearance at net three (12 m). Time of day did not influence the catch rate. A total of 433 birds were caught in three sessions. See Table 1 for the spread of age and sex.

Any bird with a horn-coloured bill (or partly so) was considered to be immature. It was noted that each and every individual with a yellow/pale yellow bill had a well-developed brood patch. See Table 2 for the ratio of facial mask colours in the breeding males.

Not a single bird was found in moult. Only one bird was retrapped immediately after release when it flew directly back into the mistnet, and only one non-target species, a Laughing Dove *Streptopelia senegalensis*, was caught. The only reason that more birds were not ringed was because of exhaustion of our ring supplies – who could have anticipated such a phenomenon?!

This was truly a remarkable highlight of a fantastic holiday.

### Postscript

On a subsequent visit to the site of the breeding colony, 11 weeks later on 29 June, all that remained were signs of disintegrating nests in the trees (mainly only opening rings), a mass of collapsed nest material below the trees and some eggshells. This represents the perfect calcium-enriched mulch.

Subsequently we came across two other spent quelea colonies within the KPNR, one smaller than ours, and another much bigger.

The three colonies were roughly in the position of the corners of an equilateral triangle, with sides of about seven km.

Red-billed Queleas caught by mistnet in the riverbed, on the second visit, confirmed the presence of a complete post-juvenile moult as described by Jones et al. (2001).

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## Sixty-five years of Blacksmith Plovers in the Western Cape

**L.G. Underhill**

*ADU, UCT, Rondebosch 7701*

On 26 September 1939, a klinking call alerted Professor Gerry Broekhuysen to the presence of a single Blacksmith Plover at Zeekoevlei, near the club house of the yacht club. Thus 26 September 2004 is the 65th anniversary of the first sighting of the Blacksmith Plover in the Western Cape.

Gerry Broekhuysen's bird had disappeared by the following day. This was one of the first records of this species anywhere south of the Orange River. In a large collection of bird data for the Western Cape, compiled between 1982 and 1986, the Blacksmith Plover was the eighth most frequently encountered bird species. Its metallic "klink klink klink" is one of the characteristic bird calls of open places in the Western Cape. So, it is hard to believe that this species was encountered in this area for the first time in 1939.

It was next seen seven years later, in October 1946, in Milnerton, and in the following year the first nest was found, at Eerstevier on the Cape Flats, on 29 August 1947. Gerry Broekhuysen and Jack MacLeod, who reported this first nest, commented: "As the

species has now been found breeding it is very likely that it will stay and that its numbers for the neighbourhood of Cape Town will gradually increase. It will be interesting to follow the future behaviour of this species." Their prediction of a gradual increase was certainly correct, but it is unlikely that they could have envisaged that, within 40 years, it would increase to become the eighth most frequently encountered species in the region!

About 10 years after the first breeding record, Professor K.R.L. Hall undertook a review of the records of Blacksmith Plover in the region. All the early records were from vleis. He estimated that the maximum number in 1958 in the greater Cape Town area was 150 birds. At this time, regular counts of waterbirds were being made at most of the vleis in the region, and he was confident that "no large flock is likely to have been overlooked in 1958, the bird being so conspicuous both in plumage and call-notes."

Hall has a graph showing the number of nests recorded in the vicinity of Cape Town each year. Until 1954, no more than three

nests were found in a year. In both 1955 and 1956, five nests were found. In 1957 the count was eight, with a sharp increase to 21 recorded nests in 1958. Hall argued that the increase cannot be argued away as simply a consequence of better observers, but was a genuine increase. For example, the number of nests at the Athlone Sewage Works, a site that had been carefully watched, doubled in 1958 from the total for the previous three years. So it seems that 1958 was an important year in the evolution of the population in the Western Cape.

From 1958 onwards, the rapid range expansion and remarkable increase in abundance of the Blacksmith Plover in the Western Cape are incredibly poorly documented. We have no insight into how the Blacksmith Plover went from 150 birds in 1958 to being present on 69% of the 9300 birdlists submitted for the bird atlas project of the Cape Bird Club in the mid-1980s. The nest record cards, the bird ringing files, and other databases curated at the Avian Demography Unit will be the best starting point for doing this detective work. At some point in this period, the Blacksmith Plover discovered it was not limited to damp habitats such as the vleis to which it was initially confined in the Western Cape. It moved into relatively dry habi-

tats such as sports fields, golf courses and pastures, which were traditionally owned by Crowned Plovers. It is quite likely that Crowned Plovers are being quietly (or not so quietly!) ousted from these places by Blacksmith Plovers.

The 65th anniversary of the arrival of the Blacksmith Plover to the Cape Peninsula provides a reminder that bird distributions are not static, but are on the move. There is a continuous need to monitor bird populations, and to monitor as many species as possible, because the nature and direction of changes are unpredictable, as are the interactions between species.

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**Broekhuysen G.J. & MacLeod J.G.R. 1948.** Breeding record of the Blacksmith Plover *Hoplopterus armatus* for the neighbourhood of Cape Town. *Ostrich* 19: 237–239.

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“If you can get building permission it will be worth a fortune.”

## First record of Tree Pipit in western South Africa

Claire Spottiswoode<sup>1</sup> & Frank R. Lambert<sup>2</sup>

<sup>1</sup>Dept of Zoology, University of Cambridge, Downing Street, Cambridge, CB2 3EJ, U.K.; <sup>2</sup>c/o 64 Eldred Avenue, Brighton BN1 5GE, U.K.

The Tree Pipit *Anthus trivialis* is a Palearctic-breeding migrant to the Afrotropics. In southern Africa, it is a sparse summer visitor, most regularly to the highlands and plateau of Zimbabwe, but also scarcely to Botswana and Limpopo province, South Africa. In these regions it favours broadleaved woodland, forest edge, plantations and particularly hillsides (Irwin 1981; Clancey 1997). In South Africa, it has never been recorded west of about 27°E, or south of 25°S (Clancey 1997).

On 25 November 2002, FRL noticed two unusual pipits on Dronfield Farm (28°38'S 24°50'E, c.1200 m a.s.l.), 10 km north of Kimberley, Northern Cape Province. The habitat here is primarily open Umbrella Thorn *Acacia tortilis* and Camelthorn *A. erioloba* savannah, punctuated by dolerite hills. The pipits were perched within *A. tortilis* thicket growing on a disused dam wall constructed from rocks. They were foraging close to each other on the rocks below the trees, and occasionally perched quietly in the tree canopy. They gave several soft "dzeep" calls, but responded to playback of neither Tree nor Striped Pipit *Anthus lineiventris* songs. CS collected one of the birds, a female, and the specimen was deposited at the McGregor Museum, Kimberley (accession number MMK/B/2581).

Examination of the specimen confirmed the birds' identity. The face was buff with a paler supercilium and a diffuse, black malar stripe. The throat was buff and the underparts from breast to vent were white, with heavy

black streaking on the breast and narrow black streaking on the flanks. The mantle and upperparts were olive-brown with conspicuously darker brown streaks, and the rump was diffusely streaked. The tail was olive-brown except for white outer tail feathers. The legs and base of bill were pale pink. Measurements were: wing 82 mm, tail 57 mm, tarsus 22.4 mm, and mass 21.0 g. These are all within the ranges reported for females by Keith et al. (1992). Digital photographs are available from CS on request.

November is the main southward passage period of Tree Pipits in southcentral Africa (Keith et al. 1992), so vagrants at this time would not be unexpected. The presence of two birds together, as well as their 'dzeep' calls and behaviour of foraging on the ground and perching on low branches, is typical of Tree Pipits on their non-breeding grounds (Keith et al. 1992).

We thank the late Richard Liversidge for coming to Dronfield to examine the birds, and Angus Anthony and Mark Anderson for permission to work on Dronfield and collect the specimen.

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## New records and seasonality of Wedge-tailed Shearwaters off the southern African coast

*Vincent L. Ward*

*Western Cape Nature Conservation Board & ADU, UCT, Rondebosch 7701*

Wedge-tailed Shearwaters *Puffinus pacificus* breed on islands in the tropical Indo-Pacific region and disperse widely during the non-breeding and post-fledging periods (Marchant & Higgins 1990). At island groups in the southwestern Indian Ocean, breeding has been recorded on islets off Madagascar (October–March), and in the Mascarenes (September–March), Cargados Carajos Shoals (December–January), Amirante, Chagos and at the Seychelles (August–February). The regional breeding season is therefore from

August to March, with peak activity in December and January (Newton 1958; Appert 1965; Temple 1976; Diamond 1987; Skerret et al. 2001).

This species is considered a rare vagrant off the southern Mozambique and South African coasts (Sinclair 1978; Batchelor 1980; Clancey 1996; Ryan 1997). This note reports on two new records and discusses the seasonality of occurrence of Wedge-tailed Shearwaters in southern African waters.

**Table 1.** Wedge-tailed Shearwater *Puffinus pacificus* records from southern Africa.

Date	Locality	Comments & source
<b>Breeding season</b>		
14/08/1975	Umhlanga Rocks (29°35'S 31°05'E)	One bird. Sinclair (1978)
24/08/1979*	Port Alfred (33°29'S 26°56'E)	Two birds. Anon (1979)
28/08/1979*	Port Alfred (33°29'S 26°56'E)	One bird. Anon (1979)
22/09/1974	Mozambique Channel (26°18'S, 34°06'E)	Eight birds. Sinclair (1978)
18/09/1979	Bird Island, Algoa Bay (33°50'S 26°18'E)	Photographed and measured. Batchelor (1980)
6/12/1979	Bird Island, Algoa Bay (33°50'S 26°18'E)	Flying 100 m east of the island. Batchelor (1980)
11/12/1996	Bird Island, Algoa Bay (33°50'S 26°18'E)	Flying 150 m north of the island. This paper
30/12/1993	Riet River/Black Rock (33°33'S 27°02'E)	Beached bird. Specimen in East London Museum. Macleod (1994)
20/01/1980	Bird Island, Algoa Bay (33°50'S 26°18'E)	Flew over gannet colony. Batchelor (1980)
<b>Post breeding period</b>		
21/05/1996	Agulhas Bank (37°00'S 25°46'E)	First record of pale morph in southern Africa. Hockey et al. (1998)
May 2000	Plettenberg Bay (34°03'S 23°23'E)	Beached individual; sent to SANCCOB. This paper
9/07/1978*	Port Alfred (33°29'S 26°56'E)	Two birds. Boddam-Whetham (1978)
29/07/1978*	Port Alfred (33°29'S 26°56'E)	One bird. Boddam-Whetham (1978)

\* Records are considered equivocal

### New records

A single dark morph was sighted flying approximately 100 m north of Bird Island, Algoa Bay, on 11 December 1996. The sighting occurred while tropical cyclone Daniella was present in the Mozambique Channel.

A stranded dark morph was collected along the coast near Plettenberg Bay and admitted to SANCCOB (Southern African Foundation for the Conservation of Coastal Birds) rehabilitation centre in Cape Town on 14 May 2000. The bird was later euthanased and the specimen was subsequently lost.

### Seasonality

There are 13 published sightings of Wedgetailed Shearwaters in southern African waters from both the breeding season and post-breeding period (Table 1). The four records published by Boddam-Whetham (1978) and Anon (1979) are not accompanied by any supportive descriptions and are therefore considered equivocal.

Records in the breeding season are possibly attributable to tropical weather systems that force some individuals outside of their usual range. The southwestern Indian Ocean is dominated by two meteorological phenomena during the austral summer: strong easterly winds, south of 15°S, and periodic tropical disturbances ranging from atmospheric pressure depressions to cyclones (Parker & Jury 1999). The 1993 and 1996 sightings were associated with tropical disturbances in the Mozambique Channel: TC 9311 and Cyclone Daniella, respectively. Strong tropical weather systems were present in the oceanic region east and south of Madagascar before, and concurrent with, the 1975 and 1979/1980 sightings (data from Mauritius and South African weather services).

The post-breeding season records are presumably examples of birds dispersing south of their regular range and into southern African waters.

### Acknowledgments

Thanks to Tony Williams, Les Underhill, Marianne de Villiers and Peter Ryan for comments on earlier drafts.

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## Helping conserve albatrosses and petrels at sea: towards the creation of a marine protected area around South Africa's sub-antarctic Prince Edward Islands

**J. Cooper<sup>1</sup>, T. Akkers<sup>2</sup>, R.J.M. Crawford<sup>2</sup> & D.C. Nel<sup>3</sup>**

<sup>1</sup>ADU, UCT, Rondebosch 7701; [jcooper@adu.uct.ac.za](mailto:jcooper@adu.uct.ac.za)

<sup>2</sup>Marine & Coastal Management, Dept of Environmental Affairs & Tourism,  
P. Bag X2, Roggebaai 8012

<sup>3</sup>Marine Programme, WWF South Africa, P. Bag X2, Die Boord 7613

### Introduction

South Africa's sub-Antarctic Prince Edward Islands in the southern Indian Ocean are its only overseas possession. The islands (Marion and Prince Edward) have been managed as a Special Nature Reserve since 3 November 1995 in terms of Section 18 of South Africa's Environment Conservation Act (Act No. 73 of 1989). The boundaries of the reserve were then set at low-water mark.

Currently, no conservation legislation has been extended to either the territorial waters (out to 12 nautical miles) or to the 200-nautical mile Exclusive Economic Zone (EEZ) surrounding the islands. However, no fishing activities are allowed within eight nautical miles of the island in order to reduce the incidental mortality of procellariiform seabirds by longline fishing. Additionally, fishing activities by South African vessels in waters surrounding the islands in the main abide with the various regulations and guidelines adopted by CCAMLR.

The National Environmental Management Protected Areas Act (Act No. 57 of 2003; NEMPA) allows for the continued proclamation of Special Nature Reserves, and as well as applying to territorial waters "also applies to the exclusive economic zone and continental shelf of the Republic" as defined in the Maritime Zones Act (Act No. 15 of 1994). A Marine Protected Area (MPA) as defined by the Marine Living Resources Act (Act No. 18 of 1998) may be included in a Special Nature Reserve, which must then be "managed and regulated as part

of the special nature reserve", as set out in the National Environmental Management Protected Areas Amendment Bill (B2 of 2004). NEMPA applies to the Prince Edward Islands, which are specifically named in the Act. Marine Protected Areas as defined in terms of the Marine Living Resources Act may be created for several purposes, including protection of flora and fauna and to facilitate fishery management. However, in terms of NEMPA, fishing is not an activity that would be allowed within a Special Nature Reserve.

A management plan for the islands was adopted in 1996 which allowed for the establishment of the Prince Edward Islands Management Committee (PEIMC), which advises the South African National Antarctic Programme (SANAP) of the Department of Environmental Affairs and Tourism (DEAT) on environmental matters. At its 14th Meeting, in August 2002, the PEIMC considered a verbal proposal for an expansion of the Special Nature Reserve to include territorial waters, and requested that a short document be prepared for further discussion at its next meeting. A written document was produced for the 15th meeting of the PEIMC, held in January 2003, when the committee endorsed the proposal and requested that the matter be discussed within governmental structures to ascertain a way forward.

On 28 July 2004 the Minister of Environmental Affairs and Tourism, Mr Marthinus van Schalkwyk, announced at a function to receive a WWF "Gift to the Earth" Award on behalf of the South African Government the

“firm intention to proclaim a major new MPA in the waters around the Prince Edward and Marion Islands which will effectively become one of the largest marine protected areas in the world”. He further noted that the first step in this process was likely to be the extension of the no-fishing zone around the island from eight to 12 nautical miles. His statement makes it clear that these intentions are to help combat Illegal, Unreported and Unregulated (IUU) fishing in the Southern Ocean, noting that new environmental patrol vessels and international co-operation with Australia and France through bilateral negotiations would strengthen South Africa’s ability to police its sub-Antarctic waters.

It is proposed that the territorial waters surrounding the Prince Edward Islands should be included as a Marine Protected Area within an expanded Special Nature Reserve, thus affording them the maximum level of environmental protection under South African legislation. However, to allow for the continuation of regulated fishing, a Marine Protected Area within the EEZ will need to fall outside this Special Nature Reserve. It would be zoned to allow for regulated activities in defined areas, whereas other zones would be fully protected as no-fishing areas.

### **Advantages of marine protected areas around the Prince Edward islands**

#### *An “inshore” Marine Protected Area within territorial waters*

Currently the Special Nature Reserve is made up of two islands, 19 km apart. Expansion of the reserve’s boundary to 12 nautical miles will greatly increase the area of South Africa’s only Special Nature Reserve and will create a single geographical entity, offering full legal protection to the shallow waters (<300 m) linking the two islands.

Fishing has never been allowed between the two islands, although passage for South African-flagged vessels is allowed. Further, longline fishing has not been permitted within eight nautical miles of the islands

since 1 December 2001 (not within five nautical miles since 1997). An expansion of this no-fishing zone to all of the territorial waters around the island will offer further protection to the affected bird species (five species of albatrosses, and four large petrels of the genera *Macronectes* and *Procellaria*), nearly all of which are considered globally threatened by the World Conservation Union, and all of which are listed in Annex 1 of the Agreement on the Conservation of Albatrosses and Petrels (ACAP). However, the South African legally-fishing vessels are to be commended for their efforts in minimizing the incidental mortality of birds in recent years.

Enhanced legal protection will be extended to those inshore-foraging bird species, including the Imperial Cormorant *Phalacrocorax [atriceps] melanogenis*, Antarctic *Sterna vittata* and Kerguelen *S. virgata* Terns and Gentoo *Pygoscelis papua* and Eastern Rockhopper *Eudyptes chrysocome filholi* Penguins whose numbers are decreasing at the islands, and of which several species are listed as globally threatened by the World Conservation Union. These decreases are thought due to environmental changes affecting food availability.

An expanded Special Nature Reserve will greatly increase the number of legally protected species within its boundaries, including a large suite of benthic marine species that have been studied to varying degrees. Several of these species represent important prey for birds and seals breeding on the islands.

An expanded Special Nature Reserve with a large marine component will enhance the value of the island group as a Wetland of International Importance in terms of the Ramsar Convention. A proposal to nominate the Prince Edward Islands as Ramsar site has been endorsed by the PEIMC and is currently under review by DEAT.

An expanded Special Nature Reserve will strengthen South Africa’s World Heritage Site draft nomination text for the Prince Edward Islands, which includes territorial waters. This will match other World Heritage

island sites in the Southern Ocean, which all include territorial waters.

Congruity will be reached with a number of other island nature reserves in the Southern Ocean which extend to 12 nautical miles from shore. These include Gough and Inaccessible (UK), Heard and McDonald and Macquarie (Australia) and the Auckland Islands (New Zealand).

Lastly, the soon-to-be expanded capability of South Africa to protect its marine waters with the provision of new environmental patrol vessels with powers of seizure and arrest will allow for the more effective protection and management of the territorial waters around the Prince Edward Islands, making the declaration of an expanded Special Nature Reserve a more practical option.

#### *An "offshore" Marine Protected Area within the Exclusive Economic Zone*

A Marine Protected Area proclaimed within the EEZ of the Prince Edward Islands will hugely expand the area of sea surrounding the islands that is legally protected. It will represent South Africa's largest, and one of the world's largest, MPAs.

Control of both legal and IUU longline fishing will be enhanced, by way of regular patrols and by the adoption of regulations and imposition of penalties for infringements.

Legal protection at sea will be extended to a larger suite of foraging seals and seabirds breeding at the Prince Edward Islands, including the more offshore foraging Macaroni Penguin *E. chrysolophus*, the mollymawk albatrosses of the genus *Thalassarche* and the White-chinned Petrel *Procellaria aequinoctialis*, all globally threatened species.

Legal protection will be extended to benthic and pelagic marine species of deep (>4500-m) waters and on at least three sea mounts which rise to within 200 m of the surface, many species of which are very little known and some of which may be of poten-

tial commercial importance. It is most likely that many species are yet to be discovered as occurring within the EEZ, given the paucity of biological studies in the region that have been undertaken to date.

A South African Marine Protected Area within its sub-Antarctic EEZ will match and complement the two Marine Parks (equivalent to MPAs) recently declared by Australia in the EEZs of its sub-Antarctic islands.

#### **A biodiversity spatial assessment and conservation strategy**

Before an informed decision can be taken on how best Marine Protected Areas should be proclaimed around the Prince Edward Islands, a comprehensive review of the biotic and abiotic environment needs to be conducted. This biodiversity spatial assessment would include, *inter alia*, descriptions of physical and chemical oceanographic conditions, lists of biota known to occur within both territorial and EEZ waters, where possible descriptions of pelagic and benthic ecosystems, and a description and history of the legal and illegal fisheries for Patagonian Toothfish *Dissostichus eleginoides*.

In consultation with the various stakeholders, the Department of Environmental Affairs and Tourism will develop conservation strategies for both territorial and EEZ waters. It is considered that a conservation strategy for the proposed territorial waters' MPA should form part of a planned revision of the Islands' management plan on behalf of the PEIMC.

Furthermore, it is the intention of DEAT to conduct biodiversity surveys of the EEZ during 2006 and 2007. South Africa welcomes expressions of interest for international collaboration on these research cruises. They will also contribute to various Southern Ocean and Antarctic research initiatives forming part of the International Polar Year of 2007/08.