



SAS Protea
Sea Fisheries Branch
22 Squadron

ANTARCTIC CRUISE

10 February — 21 April

1978

What it means to be Dressed in Blue

On 10 February 1978 at 15h00 our time arrived — we were off to parts unknown — but we had complete confidence in “Sat Nav”(??). It had been a hectic 10 days in Cape Town, what with Summer School, the Surveyor's Conference and the “Fishers”, with what seemed an endless stream of combi's and vans of equipment; in fact every store and compartment bulged.

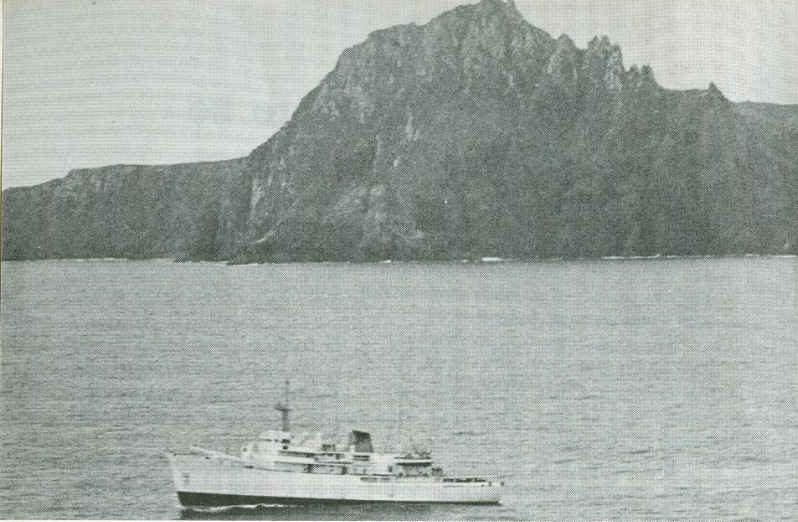
The Chief Tiffy swears he had to fill the forepeak water tank twice to compensate for the “A” bracket. (Everyone knows the relationship between any Chief Tiffy and water — you look at him twice and he rations it.) In fact, his Tanky even started to fill the paint locker much to the Buffer's delight.

But we made it, much to the horror of several members — there was Cape Town disappearing into the yonder . . . and when the SAAF arrived in their “infernal machine” we knew this was a serious operation.

Even bigger surprises were in store for the ship's company and at 11h45 on the 11th the navigator decided it was noon and the Fishers wanted an “O” station. All they got for the first 2 or 3 stations were sailors on the fo'c'sle saying “Oh”. However, everyone caught on and a few days later bottles and bathys were going down and up at a reasonable speed. There was a small problem with the “O” winch, but with their usual dexterity the Techs manufactured and fitted a handle (don't dare to think what would have happened had we used that at every station). Not to be outdone the “Leckies” traced some power and by the 15th everything was “swinging”, even the Public Sanitary Inspector (Loo Loo for short), locking his charges in time; but opening again was a different story.

On 26 February *SAS Protea* rounded Cape Horn both ways — not many ships round the Horn twice in an hour. The opportunity was taken to photograph this occasion by our friendly Parrot — with the assistance of the Fleet Photographer. And also on that day, having a few hours in hand before Ushuaia, the Fisheries gear, nets, side scan etc, were streamed just to iron out the snags — but it all worked well.

The trip along the canal Beagle was very picturesque as was Ushuaia, and the shutter bugs did well for themselves.



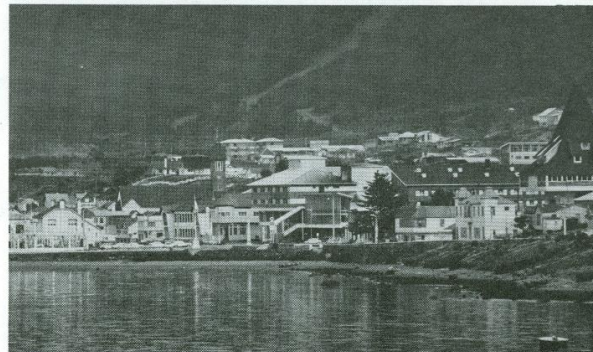
SAS Protea rounding Cape Horn

SAS Protea leaving Deception Island through Nelson's Bellows



The 28th found us heading Southwards into colder climes and on 1 March we met our first iceberg (hereinafter called 'bergs' because we've been round the Horn); but the day of days was yet to come. On 2 March the ship made a landfall (that means we sighted) Smith Island at the entrance to Boyd Strait which was to lead to Bransfield Strait. But not only the landfall, our *first* krill . . . more about that sort of thing in the Fishing Column.

This whole voyage has really been a series of firsts because on 5 March the ship visited Deception Island and we think we can claim to be the first SAN vessel to do so. This island is formed by the crater of an extinct volcano. Thence back to pick up good shoals, but the ship was continually hampered by bad weather and ice, so the projected grid search was never completed.



*General
view of
Ushuaia*

At 16h00 on 14 March we rendezvoused with the German research trawler *Walther Herwig* in the proximity of Hoeseason Island, in the Croker Strait. The opportunity was taken to exchange envelopes stamped with the respective ship's cruise stamps.

Four full days were spent in the Croker Strait, probably the most productive days in the South Shetland Islands, most of the time the weather being suitable for flying; that's all in the Fishing Column.

Then, on the 17th, the ship moved NE through the Bransfield Strait towards South Georgia and all the islands — Livingstone, Nelson, Robert etc — looked most impressive. We had enjoyed snow and cold weather at times but also pleasant sunny days.

The visit to Grytviken, South Georgia, was mostly social, R & R — “Rest and Recreation” — but only if you call walking a social pastime. An excellent soccer match took place one afternoon and, although the ship’s team was beaten, they were not disgraced.

The Postmaster was probably the busiest man on the base (during daylight hours, anyway) as most of the ship’s company purchased British stamps, overprinted “Falkland Islands”. Other places of interest were the grave of Sir Ernest Shackleton in the cemetery alongside the old whaling station and the cross erected in memory of Shackleton which is on a rise above the British base. But surely the most photographed subjects were the “dusky maidens” sunning themselves in the “pools” in front of the cemetery. Pity about the halitosis. But why was one Fisher seen throwing stones at them? Perhaps he does that at Clifton as well . . .

A snow-covered Livingstone Island



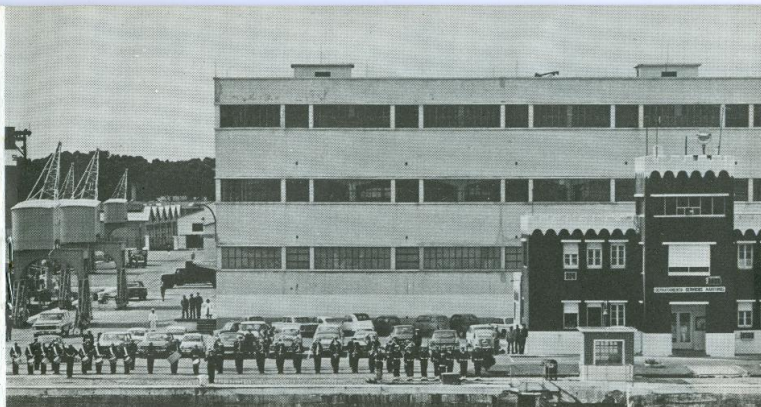
The “Dusky Maidens” – Elephant seals sunning themselves

On 25 March at 09h00 local time, the ship moved off towards the Bay of Isles on the NW coast of Georgia to continue air photography of penguin colonies, and although the weather was not in the SAAF’s favour for 2 days, a trip by boat to one colony of King Penguins was made.

On the 27th the weather cleared sufficiently to allow 2 hours flying in the afternoon and considerable photography took place; but that was our finale at South Georgia. The weather then clamped in and for 2 days we had a drop of the ‘roughers’. Looking back to the 20th, en route to South Georgia, *RRS John Bisco* reported sighting an iceberg 39 km by 51 km in area, in a position NW of Georgia. At dawn on the morning of 30 March, we found ourselves entering the icefield in the wake of this enormous mass of ice which presumably came up from the Weddel Sea. For 5-6 hours we steamed between

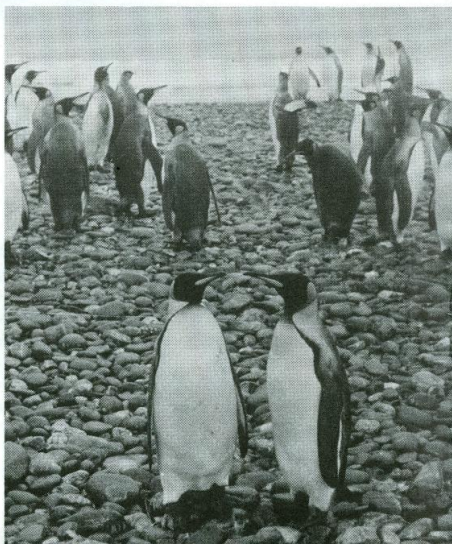


*Grave of
Sir Ernest Shackleton
at Grytøyen*



Guard and Band at Puerto Belgrano

*King Penguins
in South Georgia*



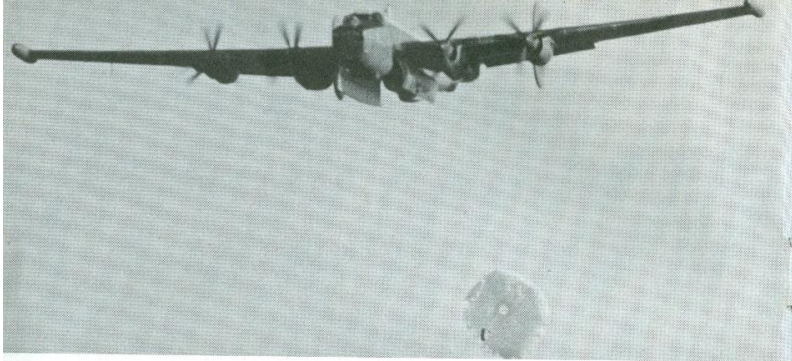
bergs of all shapes and sizes, a sight which many of us will not forget for some time; the last sight of ice was this huge iceshelf which covered the horizon on the starboard side.

We arrived at Puerto Belgrano on 5 April to a rousing reception by the Guard and Band of the Argentinian Navy paraded on the Bullnose.

In fact the whole visit from 5 to 9 April was one long, rousing reception — enjoyed, I think we can safely say, by both sides. Another soccer match at the Naval Stadium, and again an excellent effort by 11 sea-weary sailors. This was followed by a braai, but inside a replica of an original Argentinian settler's house.

But all good things etc . . . the 10th found us leaving Puerto Belgrano, once again with martial music; and now for the "trudge" Eastwards to carry out "O" stations daily. But the navigator had something going for him (there must be big holes in his mat) and no "O" stations were possible due to weather conditions until 18 April when the 'Fishers Bones' took the day. Once again the fo'c'sle was the scene of sailors saying "Oh", but this time they meant it. The winch power disappeared and it was handle time again.

The navigator was also heard to say "Oh" whilst on the bridge during this station but in a different (stronger) tone. But the station was eventually completed and off we steamed Westward Ho! trying to overtake time and make the ETA Simonstown.



Shackleton of 35 Squadron doing the mail-drop

But still time for 2 more "O" stations on the 19th and 20th to make a total of 45, and on the AM of the 20th those "get up early and go boys" of 35 Squadron arrived in their "Shack" right on time, much to the relief of one SAAF Sgt (ex 35) who had been given a hard time about mail-drops. Still, there they were, mail and all — thanks 35. Now it is really up and away, next stop Snookie.

Captain Wagenfeld presenting the darts trophy to AB Smith for the SACC Junior Rates "A" Team



Sport

Apart from the 2 soccer matches mentioned, a pick-up (then knock-down) side played at Puerto Belgrano. It was assumed by our hosts that every South African played rugby 3 or 4 times a day, and several local teams appeared on the spur of the moment to play the Sea Legs XV. Our rugby correspondent appeared in the mess swearing that his blue face (not just eye) was caused by the opposing fly half; ah well, we all have our stories.

During the cruise an Inter-Mess Marathon Darts Competition was played, and despite remarks heard in the alleyway, such as "what, again tonight?", was enjoyed by *most* of the participants. This was eventually won by the SACC Junior Rates "A" Team and the floating trophy was awarded by the Captain at the braai on the Flight Deck on 19 April.

The various messes had their own individual tournaments of darts, crib, uckers and one mess even played "Scrabble".

Two enthusiasts started building a sledge for South Georgia, but when they got there the hills were bare.

Another popular "sport" in a certain mess early in the cruise was "Othello". No one dressed, or had to swot up Shakespeare; this is a game of skill on a par with chess. But eventually our very own "Spaski" emerged complete with HP 65 in pocket. Since then the only time the ghost of Othello arises is when "Spaski" and "Loo Loo" are sorting out who goes ashore when, *and* if.

Other entertainment were films brought along by the Sea Fisheries Branch and TV video tapes which were made before sailing of both films and TV programmes.

Social News

On Thursday 20 April a memorable occasion took place in Ciroso's Palace, namely the investiture of the Muddy Order of the Elephant Seal upon CPO Miller, in future to be known as Sir Mudnite of Grytviken; and may he be treated by the staff of the Printing Press with the deference due A Titled Photographer, (but unfortunately not a "first" this time — the other is an Earl).

Comments

by our Air Correspondent

The success of the SAAF contribution to *SAS Protea's* Antarctic Cruise goes to the Technical Staff, who, in the very short period of time available to them before commencement of the cruise, managed to fit the aircraft out with its dunking Sonar and Spectroradiometer plus its associated power supply and recording equipment.

This was done in such a professional manner that the handling of the aircraft from the Pilots', Flight Engineers' and Ground Engineers' points of view became a relatively simple operation.

Although the hours flown on task were relatively small in number compared with original estimate, this does not detract from the fact that the information was collected, as required, and when required, under sometimes very cold and inhospitable conditions.

At the commencement of the journey none of us had the faintest idea what a krill looked like but very soon after we found out a larger than life-size krill was painted on the front of Wasp 93, and she soon became affectionately known as the *Krillicopter*.

From the Air Force's point of view the cruise was a great success and afforded the team an excellent opportunity to see pastures new.

Results of the Cruise

by our Fishing Correspondent

The noon and "O" station

The objective was to obtain a series of stations throughout the entire cruise at which the colour of the ocean was measured by the NASA equipment in the helicopter. The data collected at the "O" station (chlorophyll content, light scattering, and numbers of particles in the water) from depths to 100 metres allowed us to determine the cause of the observed colour. Work proceeded entirely satisfactorily.

Echo-sounding on krill swarms

An excellent start was made during the first few days off Smith Island. All systems were working. Later, the acoustic data computer broke down so none of its specialised data could be recorded, although

we had a "fail-safe" tape recorder to record echo signals for later processing in Cape Town. The echo-sounder data is excellent, and will allow Sea Fisheries Branch to accurately specify the best type of acoustic system for measuring krill concentrations.

Nets for sampling acoustic targets

The modifications to *SAS Protea* to enable nets to be used over the stern were successful. The RMT net was used many times to identify acoustic targets and only on a few occasions was no catch made. The largest catch was 13 kg. The net was guided to the target from an echo-sounder in the laboratory giving readings from the V-fin transducer attached to the net. This was particularly successful. The Bongo nets were not used because of the RMT success and fine weather.

Krill flights with the helicopter

A number of flights were made, with little success until we entered the Gerlache Strait, when most of the daylight hours were spent near dense concentrations of krill. Here we were able to convincingly demonstrate that the personnel aboard the helicopter could not detect the bulk of the krill swarms. On one occasion the helicopter echo-sounder was dunked and 2 krill layers were recorded, one at 30 metres and the other at 8 metres. Neither were visible. However, near

RMT net with V-fin transducer streamed



Intercurrence Island, a number of krill swarms were detected and the NASA equipment was successfully used to record their colour. Cameras were also used. Neither the spectra nor the photographs were very good, but the equipment was used more successfully later.

General

After leaving the Gerlache Strait (and passing the halfway point) the objectives of the cruise broadened to include birds which eat krill (Macaroni Penguins), birds which eat chokka which in turn eat krill (King Penguins) and kelp. The basic idea is that as krill are difficult to find at sea (and it is even more difficult to estimate the size of its population) it is a good idea to closely monitor animals which feed on it and watch for changes in their populations, which reflect changes in the krill population. It is not the best method, but penguins know how to find krill and they are easy to count so it is certainly the easiest method for monitoring changes in krill abundance. British Antarctic Survey have been monitoring birds on South Georgia for many years and our contribution to the overall international programme is to try to get data to compare with satellite pictures of South Georgia on which it is hoped to measure the size of selected penguin rookeries. Due to poor weather, this was not entirely satisfactory, but we have the basic minimum of data.

The kelp programme is different: it is a resource which could be exploited one day so we obtained data from the kelp beds so that satellite pictures can be used to do a "stock-taking" on all the large kelp beds in the Antarctic. Krill was very scarce after leaving Gerlache Strait. All other expeditions had poor results from krill searching and catching programmes, so we must consider the choice of our survey areas as very fortunate.

In summary, the results of the cruise exceeded our expectations. The weather was far better than anticipated, so correspondingly more data was collected. The quality of the "O" station data, echo-sounder data and RMT data is excellent, as was the helicopter work on kelp. The penguin work was less than half-complete as no spectra were collected, but there is enough in the aerial photography to start off with. Everyone has learnt a lot, and it is always nice to have a successful first attempt at a new job.

If the information is as good as it looks then the Sea Fisheries Branch will be in a position to contribute useful information to the forthcoming International Conference on the Living Resources of the Southern Ocean.