

offer ample scope for zoological research of the following nature:

- (i) Entomology (zone a) only;
- (ii) Ornithology (all zones);
- (iii) Marine Biology (all zones);
- (iv) Mammalogy (all zones) and
- (v) Soil microfauna (zone a and perhaps zone d).

It would be presumptuous for me to try and define the scope for study in each of the fields of zoology mentioned above. It should be noted, however, that in spite of the earlier work done by La Grange and Rand, and the work at present being done on Marion, a great deal remains to be learnt about the habits, reproduction and migration of the bird life, as well as that of the seals. Very little in this respect has been done on Gough either. The marine littoral fauna of both these islands is very incompletely known, and would well merit serious study. The soil microfauna, as far as can be ascertained, has never been investigated, nor the insect life. The difficulty of landing on Bouvet Island, and the near impossibility of staying there for any appreciable length of time, precludes the possibility of undertaking any worthwhile research, although a great deal can be learnt about the avian fauna from observations done from the relief ship "R.S.A."

As regards the Southern Ocean, a great deal of oceanographical work has been done during the voyages of the research vessels "Discovery I" and "Discovery II". This does not mean that a great deal cannot still be learnt about the movements and relative abundance of krill and fish, the latter being of supreme importance to the fishing industry around the coasts of South Africa. In addition, a careful study of the oceanic bird life should prove to be of the greatest value to ornithologists here and elsewhere. Collecting and ringing birds from ships would entail running considerable risks and should not lightly be contemplated.

The pack ice offers a great deal of scope for studies on the distribution, abundance, population structure and behaviour, as well as the ecology, of the four species of truly Antarctic seals. The bird life is rich, and the relative stability of the pack ice makes collecting and ringing of birds possible. As far as is known, no extensive collecting of the fishes living beneath the pack ice has ever been undertaken. More or less the same conditions apply to the Antarctic continent itself, as well as the narrow strip of water surrounding it during the summer months.

Unquestionably, then, the scope for zoological, and to a lesser though no less important extent, botanical research in the Antarctic regions facing South Africa is great. The value of doing research in this region lies in the fact that apart from the voyages of the "R.S.A." to SANAE very few research ships traverse the Southern

Ocean and pack ice lying south of South Africa. This region is zoologically speaking still to some extent an unknown part of the globe, and would well merit serious consideration as an area to be extensively submitted to biological research. The storminess of the Southern Ocean would hamper research, especially during dredging for below-surface sampling, but that this is no insurmountable barrier has been conclusively proved by the research undertaken by biologists on the "Discovery" expeditions. The sub-antarctic islands and the pack ice offer a stable platform from which to conduct research, and here it is only inclement weather that has to be taken into account with, when in the pack ice, the danger that this may break up. In the pack ice and during voyages to the "weather islands" the "R.S.A." could be used as a floating laboratory and platform from which to conduct research.

It would serve little purpose, however, if the biological research should continue to be undertaken in such a haphazard fashion as has previously been the case. It would be a good idea if a programme, covering the zones mentioned above, could be drawn up so that biological research could in future be undertaken on a sustained basis. I would like to suggest that this programme, including all the fields of zoology as well as botany, be worked out by the Biological Panel of the Committee for Scientific Research in the Antarctic and then be circulated to the various Universities and Institutes with biological interests for comment. In this way a good idea could be obtained of the scope in the various fields, as well as the individual projects which the Universities and Institutes feel they would like to undertake.

Biologists stationed for a year or longer on the "weather islands" would be given the opportunity of working on long-term projects, or, as was the case with some of the biologists who recently returned after a stay of only a few months on Marion Island, the collecting of material. Biologists accompanying the "R.S.A.", especially to Antarctica, could undertake some research, as well as the collecting of material, during one voyage, and perhaps follow it up during a later journey. If the transport position could be satisfactorily settled, it might even prove profitable to have a zoologist staying "down south" for a year at a time. The equipment and apparatus used for undertaking the various projects could be supplied by the Universities and Institutes, so no great capital outlay would be involved.

The Antarctic region is vast and the possibilities for research nearly unlimited. The three South African scientific stations in this region offer a vast scope for biological research, and the results that can be obtained would well merit the small additional expense incurred. South Africa could thereby contribute significantly to this so important field of Antarctic research.

## NEWS FROM SANAE AND THE ISLANDS

### MARION, 1st March, 1965:

During the early hours of 26th February we experienced one of our rare thunderstorms on Marion Island, with a definite temperature increase but strangely enough a steadily falling barograph trace. The brief summer on the Island is past. Snow fell on the 28th, associated with cold weather.

All of us benefitted to some extent from our stay on Marion, not so much in terms of monetary gains, but by the experiences which we shared. We also learnt to know ourselves and each other. All this contributed to make us better human beings. We are now looking forward to be back in the Republic, but no doubt we will often think back a little nostalgically of our pleasant year on Marion Island.

We hope that the members of the 22nd relief team will be as happy on the Island as we were. Somebody once said that the Prince Edward Islands should be avoided at all costs if no specific purpose is to be served by going there. Well, we think we served a good purpose!

### GOUGH, 19e Maart:

Die stilte, rus en vrede wat die afgelope jaar ons bestaan hier op Gough gekenmerk het is uiteindelik verbreek deur die gelui van die

klok vir die laaste rondte. Dit beëindig nie net ons verblyf hier nie maar onder andere ook daardie eetwedstryd waarvan in 'n vorige program melding gemaak is. Die wedstryd is byna 'n jaar reeds aan die gang en nog kan ons nie daarin slaag om 'n duidelike wenner aan te wys nie. Die volgehoue pas wat deurentyd aan die etenstafel gehandhaaf word is 'n duidelike bewys van die hoë graad van vaardigheid wat almal van ons voor die kospotte bereik het.

Ons was verbaas om te hoor dat groot gedeeltes van die Republiek en Suidwes-Afrika deur droogtes geknel word. Die 11 maande wat verby is was hier nie eintlik sprake van droogte nie. 'n Beeld van hoe klam ons jaar was kan gevorm word as 'n mens in gedagte hou dat hier op 2 millimeters na 2800 mm. gereën het. Dit is amper viermaal soveel as Pretoria en Kaapstad se jaarlikse gemiddelde reënval.

Die oorvloedige reëns kon egter nie ons boerdery dwarsboom nie. Hoewel ons elke Sondag twee hoenders in die kombuis oor die kole gehaal het sal ons nog tenminste 50 hoenders hier agterlaat. In die loop van die jaar het ons geveerde vriende gesorg vir 'n aanwas in hulle bevolking van meer as 100. Nie al die bloedjies kon die pyp teen die skua se aanslae rook nie, maar die wat suksesvol was, is goed op pad om ook hulle name op die spyskaart verewig te sien.

**SANAE, 1st March, 1965:**

Usually when a new expedition takes over from an old one it is a surge of frantic activity until the ship has left. The SANAE VI takeover from SANAE V was no exception. Despite the rush the offloading of stores and supplies, including two new Muskies and a new caboose, was accomplished without hitches, in perfect weather. After the departure of the RSA all were anxious to get organised as regards base work and scientific programmes. Very soon all food supplies, new scientific apparatus, etc., were safe and sound within the base. In the record time of three days 800 drums of diesel were transported from Tottanbukta to SANAE.

The past month has been an extremely busy one for all. Many programmes have been provided with additional new apparatus. The meteorological team installed a new radio-theodolite which is now working satisfactorily, providing upper wind speeds and directions. Hennie Joubert, Pottie Potgieter and in particular Dries Steyn, as well as surveyor Johnnie Strydom, who supervised the orientation of the antennae, and radio technician Smittie Smit are to be congratulated on this fine piece of work.

In addition to his normal duties Smittie runs the seismograph programme. Johnnie, ably supported by Doc. Jan de Wit, is often out in the field surveying an ice strain network.

It has been a busy time for the geophysicists. Ionosphericist Derek Sharwood has installed and is at present testing a new air-glow apparatus. Geomagnetist Zac Ezekowitz is testing the all-sky camera in preparation for the winter auroral programme. A Flux Gate magnetometer has been successfully installed and final alignments will soon be completed. Cosmic ray physicist Danie Joubert is preparing electronic apparatus for a balloon flight to be done simultaneously with a flight by other members of the Potchefstroom University research team during the Marion Island relief. The geological field party, consisting of leader Sewes van Wyk, deputy leader and senior mechanic John Joubert, geologist Dr. Wolf Pollake and Smittie Smit left mid-February for the mountains. However, after a harrowing experience between Dassiekop en Marsteinen, in which Muskeg and fuel sledge fell sideways into a five foot wide crevasse, necessitating the hasty departure of a rescue team consisting of Wilfred Hodson and Zac Ezekowitz, they were forced to return to base, the Muskeg and sledge with fuel having been successfully rescued. A reconnaissance of the region ahead revealed that it was insurpassable, particularly to a heavy vehicle. Radio operator Roy Statt is hard busy erecting a cubical quad antenna for his new self-constructed single sideband transceiver. This is sure to liven the interest in radio hamming.

**SANAE, 1e Maart:**

Harde werk en min slaap was die eerste ontmoeting van die SANAE IV span met Antarktika. Deur samewerking en inspanning is die RSA van 150 ton voorraad ontlast en op Sondag 24 Januarie het Skroef van Zyl en sy manne ons met 'n mengsel van blydskap en weemoed tótsiens gewuif. Ons aan wal het die RSA in stilte gevolg totdat dit as 'n stippeltjie op die horison verdwyn het. Eers op daardie oomblik is SANAE IV as span saamgesnoer want ons was nou alleen.

Jan Dokter het reeds met die aankoms sy messe geslyp en met Tollie Traut se hulp is Ray Statt verlos van 'n wond wat nie wou genees nie. Sy vinnige herstel is moontlik te danke aan die koppie warm koffie waarmee die weerkundiges hom elke oggend wek.

As ons eerste kok het Danie Joubert se eerste baksel brood tot ver onder die pan se bodem gerys. Johnnie Strydom was verplig om weens beperkte kantooruimte sy intrek in die "Paleis van Justisie"

te neem. Daar het hy slegs gekla oor temperature onder vriespunt en te veel besoekers. Sels Pottie Potgieter het sy stilte versteur met sy kitaar oefening in die nabyheid.

In lieflike sonnige weer het 800 dromme brandstof in netjiese rye tussen merkepale verskyn aan die westekant van die basis. Ook die sneeuingang is skoongemaak en die voedselkassies netjies opmekaar in numeriese volgorde in die gang gepak.

Op Donderdag 11 Februarie het die eerste veldskpedisie na die berge vertrek. Alles het vlot verloop totdat die skeurgebied bereik is. Skielik sak die trekker na links in 'n 6-voet breë skeur — dit nadat die beste roete per voet bepaal is en nadat selfs breër skeure reeds oorbrug is. Hulp is per radio ontbied. Bewerig het Smittie gesê:

„Laat ek jou vertel, hierdie wêreld is voos van die karwatse!”

(Deur „karwatse” het hy natuurlik „crevasses” bedoel).

Danksy die spoedige optrede van Ezekowitz en Hodson is die toerusting in ere herstel, maar vordering is pas daarna deur 'n spinnerak van skeure beëindig.

Met die manne gaan dit almal goed. Baarde en hare raak weelderiger en die minder bedeelde skeer selfs. Smittie se baard ruk egter handuit en daar word gereken dat hy eersdaags 'n merkepaal sal moet gebruik om vir die vurk die rigting na sy mond aan te dui.

**SANAE, 30th March, 1965:**

The registration of a minimum temperature of minus 35 degrees Celsius must surely be an ominous sign that winter is rapidly approaching. During the past month the summer lull was broken by frequent storms, though as yet no storms have reached true Antarctic proportions. At present it is day and night as we know it in the Republic but this is rapidly changing to a predominance of night.

Some dazzling mirages in which the whole surrounding coastline and nearby icebergs are revealed, show that there is much beauty and many breathtaking spectacles in this white continent.

We have all now settled into the routine of life at an Antarctic base. The fellows are all in good health, so that after attending to minor complaints Doc. Jan de Wit, is able to devote his free time to studying and "gardening". Many interesting growths have already blossomed in the garden and it is rumoured that greens may be available by midwinter.

The met. team, Hennie Joubert, Pottie Potgieter and Dries Steyn have had extremely successful balloon flights recently and the average maximum height reached during March should be very close to a record for SANAE. Surveyor Johnnie Strydom has been most fortunate in his search for supposedly lost beacons in the SANAE region and he is now surveying the network.

Geologist Wolf Pollake and geomagnetist Zac Ezekowitz recently undertook a field trip which took them to the sub-station, Pingvin Base, and along the northeast coast to the last ice rise before the Trolltunga. Magnetic and gravity determinations were made, as well as some glaciological observations. Geophysicist Danie Joubert recently launched a partially successful cosmic ray balloon. He was given valuable assistance by the met. team who inflated the balloon. Nico Smit operated the antenna tracking system. Ionosphere expert Derek Sharwood, besides keeping his beast, the ionosonde, in check, is on night duty for the airglow programme. Radio operator Ray Statt has obtained very promising results with his single sideband radio equipment. Smittie has constructed a field strength meter enabling the cubical quad antenna to be properly tuned. Leader Sewes van Wyk gave useful assistance to the Diesel mechanics, Johan Joubert and Wilfie Hodson, who completed a long needed overhaul of the snow melter and a Diesel engine.

## NEWS FROM THE ASSOCIATION

After the summer "hibernation" period, which lasted for three months, the Association held its first meeting of the year on 22nd February. Unfortunately Mr. W. van Zyl, leader of SANAE V, who had been invited to address the meeting on the activities and programmes carried out at the station during 1964, could not attend and Dr. J. J. Taljaard consented to show his colour slides and a fifteen minute cine film on the expedition to Bouvet, Gough and

Tristan da Cunha Islands during March, April and May, 1964. The substance of his talk is contained in the report on the expedition published in "Antarktiese Bulletin" No. 4 of July, 1964.

The Award Committee for the South African Antarctic Medal decided to award the Medal this year to Victor von Brunn, geologist/glaciologist/geomagnetist of SANAE I. Details of the motivation will be published in the May issue of the *Bulletin*.