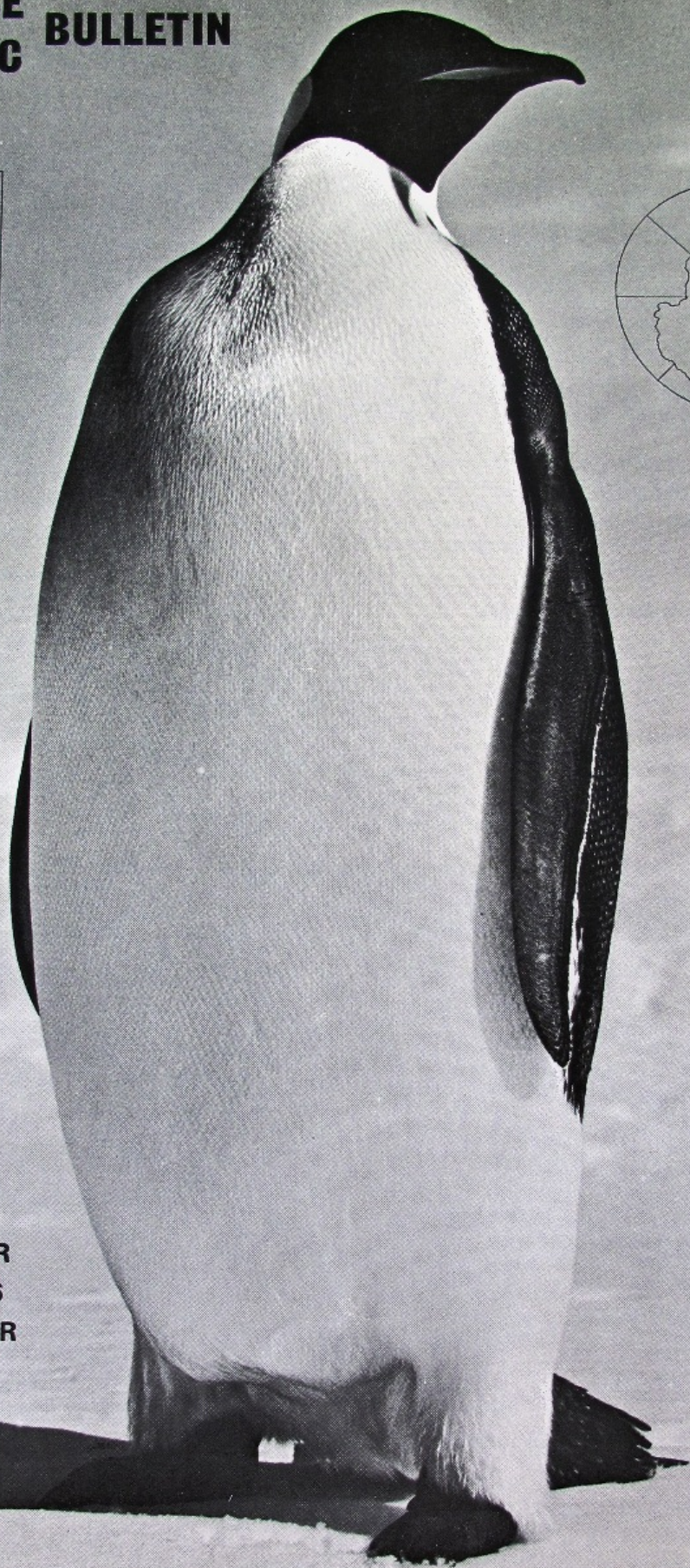


**ANTARKTIESE
ANTARCTIC BULLETIN**



**APRIL to SEPTEMBER
Vol. 2 1971—Nos. 5/6
APRIL tot SEPTEMBER**

Tydskrif van die Suid-Afrikaanse Antarktiese Vereniging

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AANSOEK OM LIDMAATSKAP

Suid-Afrikaanse Antarktiese Vereniging

Naam

Adres

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REDAKSIONEEL — EDITORIAL

Recently we received requests for more articles on the biological aspects of Antarctica. Unfortunately, although such articles are popular, very few are submitted for publication in the *Bulletin*. In fact, it is distressing to note that while there is great interest shown in South African Antarctic activities by the public, there is a noticeable lack of interest shown by many people active in the field. This is most unfortunate, because it is on these people that we rely for up-to-date articles on South African Antarctic research. It is with disappointment that we also note that almost half of those scientists responsible for the administration of the Antarctic Programme are not members of the South African Antarctic Association. We appeal to all those active scientists who are able, to support our cause of keeping the South African public informed of scientific developments on the Antarctic continent, and of fostering enthusiasm for Antarctic research and exploration. After all, the man in the street, the tax-payer, finances the expeditions.

FOTOWEDSTRYD

(VOORBLADFOTO)

Die wenner van die fotowedstryd vir die uitgawe is mnr. Hans Loots van die Departement van Fisiologie van die Universiteit van Pretoria. Dit is tipies van die Pikkewyne wat op die see-ys en ysbank gesien kan word.

Information for Contributors

The Editors of the *Antarctic Bulletin* welcome contributions on any subject pertaining to the Antarctic and in particular to South African Antarctic Activities. According to a recent opinion poll, readers place subject matter in the following order of popularity:

- (1) Popular scientific articles.
- (2) Expeditions.
- (3) Living and working conditions in Antarctica.
- (4) Historical articles.
- (5) Articles on animal life.
- (6) Articles of social interest.

Contributions should be submitted to the editors at the above address.

The *Bulletin* is published quarterly and is free to members of the South African Antarctic Association. The charge for membership of the Association is R2,00 per annum. Should you wish to join the Association please fill in the form below (or supply the equivalent information) and send it to the above address.

APPLICATION FOR MEMBERSHIP

South African Antarctic Association

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Address

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.....

SANAE THREE MOVES IN

by D. C. Baker

THE *RSA* appeared to hover at the entrance of the bukta and quietly slid from view. Our spirits fell to their lowest ebb when we turned round and saw the mountains of supplies which still had to be taken to the base. We remembered the haven of warmth and comfort the *RSA* had been for the 18 days that she had been moored to the ice-shelf while the team from the Public Works Department in Cape Town assembled the vast jig-saw puzzle which was to be the new base.

Our minds flashed back to September of 1961 when most of us met as a team for the first time. For some of us the training period meant a lot of specialised training compressed into a short time, for others it meant bloody fingers from sewing dog harnesses and harassed trips to Cape Town to be shown how the base should be assembled in case the *RSA* had to leave in a hurry.

Finally we thought of when we left Cape Town on the 6th of January, 1962 – the *RSA*'s maiden voyage to

Antarctica. The trip was fairly uneventful except for the mental agony of having to do P.T. "to keep fit" and the agonies of trying to stay awake during interminable, but vital, lectures on the design of the base. We stood by on iceberg watch at night when we started passing the odd loose berg. I doubt whether we would have seen anything, but it gave our team a greater feeling of cohesion. The worst experience was undoubtedly when heavy seas started washing our petrol overboard and we had to work waist deep in freezing water to move the drums into the external passageways in order to lash them down. All the time Captain McNish was extremely patient with us landlubbers and did much to make our stay on the ship pleasant.

After the inevitable delays of being stuck in the ice we finally reached the appointed bukta. The reception committee from *Sanae 2* were taken on board and the ship was used to carve away the dangerous overhang before unloading started.



Another load of supplies arrives at the base and members of Sanae 3 take a break.

The materials for the animal laboratory were the first to go. These had been stored on the heliport and this hut would serve as a preliminary shelter for the PWD team once it was erected. Unloading started at once. We split into two teams who were supposed to work twelve-hour shifts. We found the fuel drums heavy going and Sanae 2 were in stitches over our amateurish attempts to handle them. We gazed with envy at the almost effortless way they were able to pick up these bulky drums and put them where they wanted to. It was to be many months before we discovered the knack.

Time soon lost all meaning for us. We worked till we dropped and then crawled into our bunks only to be woken after an hour or two to start again. Tempers became a bit ragged as we suspected each other of swinging the lead, but after a few days a pattern developed. We all knew that we were extending ourselves to the limits of our endurance in order to get the hundreds of tons comprising the base offloaded. After the initial misunderstanding, no-one was hauled out of his bunk – he deserved his sleep and no-one shirked.

Meanwhile at the base the PWD were working like slaves and gradually things took shape from the South end. The animal lab, balloon hut, diesel shack, dining and recreation area with kitchen, sleeping quarters,

latrine, science hut and finally the emergency power shack. Somehow the right materials appeared at the right time as needed. The PWD had very carefully seen to it that the materials were stowed so that they would be unpacked in the correct sequence.

We were finally able to start on the interconnecting snow passages and part of Sanae 3 was delegated to do this. We spent our time nailing poles and laying corrugated iron sheets over them. We cooked and washed dishes and more dishes. We occupied the bare boards of the sleeping bunks as one occupant after another rose from a dead dreamless sleep. The agony in our finger-joints became almost unbearable. Our fingers were so sore they could hardly be bent, and only loosened up after a few tons of material were shifted. Our gloves took on a permanent clenched shape as the result of the work. Somehow we staggered on and survived . . .

The news that the *RSA* was leaving came as a shock. Captain McNish decided that the safety of the ship and its crew could not be jeopardised any longer and that we should be able to carry on with what we had. There was a frenzied rush to write our last letters and to get our gear off the ship. We finally hoisted the South African flag at the base on the 12th of February and went down to the ship for our final farewells.



Establishing a bulk fuel supply in the south end of the snow-passage.

A disheartening scene which no member of Sanae 3 can forget. Many hundreds of valuable man-hours were spent in clearing the passages, only to have them partially filled up by another storm.



At 5.45 p.m. the same day the *RSA* left.

We loaded up as much as we could and returned to the base to see what we had inherited. Slowly the realisation would come that ours was the first truly South African Antarctic Expedition with our very own base. At this stage only the shell and internal walls of the buildings had been finished. The buildings consisted of prefabricated panels, mostly 4 ft by 8 ft. These panels were actually a sturdy framework clad with marine ply. The open spaces were filled with insulating materials. Metal clasps were provided so that they could be clipped together. The weight of the buildings was distributed over the snow by three sets of spreader boards laid along the length of the huts. On top of these came runners in the same direction and across these heavy beams at 2-foot intervals. The "house of cards" was then built on these beams. The roof had a very slight pitch and was covered with a special rubber sheet. The various buildings were to be connected by passages in which our supplies and spares were to be stored.

The day after the *RSA* left was proclaimed a public holiday and we had a well-deserved sleep till after noon. We started to move supplies from the old Norwegian base at this stage. Lights were rigged in the diningroom to run off the small auxiliary diesel which also powered the blower on the excellent diesel-fired stove.

Water was a constant problem both for cooking and washing. We simply put as many four-gallon tins full of snow as we could on the stove, and by diligent and constant filling, because of the low density of snow, could have as much as 12 to 20 gallons of water with which to cook, bath and wash our clothes. The cooking was divided into four-day turns, and a new skiewie assisted the cook each day. The highlight of the skiewie's day was being able to bath in front of the hot stove at night, even if the other members of the team

were sitting and making small talk in full view of the man in the tub.

Our first Saturday night set the theme for the Saturday nights to follow. This was a social gathering at which a film was shown. A large supply of snacks from the excellent food stores supplied by the Department of Transport was placed on the tables; raisins, a variety of nuts, biltong, etc. and an adequate supply of beer and spirits. We were to refine the technique of thawing out frozen beer in the oven in later weeks, but not until a couple of cans had exploded and lifted the oven door off its hinges.

The first Sunday after the *RSA* had departed we were hit by our first blizzard. Although a storm was always to be expected this one did more damage than any of the others. All our supplies were still in the open and were completely buried. We were to spend many days looking for items and could really have used a metal detector to find the many metal objects buried under a few feet of snow. The after-effects of this one storm were to haunt us until we left. We had to dig ourselves out of the hut after one of the smaller members squeezed through a window and managed to dig the door out. A temporary passage was built between the sleeping quarters and diningroom.

My diary from this point on bears one oft-repeated phrase: "dig, dig, dig". After a while it was possible to identify people by their shovel technique which soon became highly refined to enable the maximum amount of work to be done with the minimum of effort.

About two weeks after the *RSA* had left, the radio-operator started going to the old Norwegian base regularly to receive our radio letters and to send our joint common letters, four or five persons per single group letter.

We started clearing the snow passage. This was back-breaking; we would only just clear it when a new storm would fill it up again. Gradually the walls grew higher as we used the snow that we had dug out to build them up.

Most of our boxes were located from photographs which had been taken before the storm and we were able to establish a bulk diesel fuel store by laying five or six rows of drums on top of each other at one end of the snow passage. By 1st March we had moved over 400 tons from the passages and buildings. Our calculations were probably conservative.

Gradually as work inside the base progressed, the agony of the searing pain in our finger joints started to ease. We were finally able to get mattresses and extra blankets. The sewing machine was unearthed and we were able to start repairing our clothes.

At the end of March and beginning of April we finally wired up lights from the main generators and managed to get our communications going. With the temperatures

plummeting towards -30°C we finally started the meteorological tower. By now we had all suffered from frostbite in various degrees - but fortunately nothing serious.

The outside work came to a halt and we tackled the job of applying fire retardant paint to the inside of the base. No matter how carefully we worked we could not get the stuff to stick to the varnished plywood and only tremendous effort on our part enabled us to complete this job. However, the final finish fell far short of the manufacturer's recommendation.

About this time we were able to start working on our scientific programmes to varying extents. The work on the base would still limit and rule our activities for the rest of the year, but the mere fact that we were able to spend some time on scientific projects marked the end of phase one. Phase two was in fact the scientific work; this was why we had come and it was to enable this work to be done in greater comfort and safety that the Department of Transport had commissioned the new base.

SCIENCE

THE IONOSPHERE

Part 2 - Ionospheric Research at Sanae

To a first approximation, the Earth's magnetic field may be regarded as that of a dipole magnet. However, this magnet should be regarded as being displaced from the centre of the globe towards Vietnam. This results in a very strong magnetic field region in the vicinity of Vietnam and a "weak spot" on the opposite side of the globe viz. the South Atlantic region. The region of anomalously low magnetic intensities is known as the South Atlantic Geomagnetic Anomaly. A consequence of this is that electrons trapped in the Van Allen radiation belts surrounding the Earth are able to penetrate deeper into the atmosphere in the South Atlantic region than elsewhere and as a result would cause more ionization in this region than elsewhere at similar latitudes. Satellite observations have confirmed that large fluxes of charged particles are being precipitated into the ionosphere in the vicinity of Sanae. These regions of high particle intensities are shown in Fig. 1 and it can be seen from this that Sanae is ideally situated to study the effects of this radiation.

South African interest in the Antarctic polar ionosphere began with an experimental programme designed to detect possible effects of corpuscular radiation in the South Atlantic Geomagnetic Anomaly. Whether or not the electrons would interact sufficiently with the atmosphere to produce observable geophysical effects had been a matter for speculation until 1961, when two American scientists, Cladis and Dessher, suggested that balloons carrying X-ray equipment should be launched south of Cape Town to detect bremsstrahlung X-rays produced by bombarding electrons.

Gledhill and Van Rooyen of Rhodes University initiated South African research in this field by theoretically examining the possibility of corpuscular effects. They predicted that there should be observable airglow,

enhanced heating, X-ray and ionization effects in this region. Consequently, an ionospheric and airglow observatory was established at Sanae for the purpose of observing these phenomena.

The first ionospheric measurements were made at Sanae in 1962 by D. C. Baker (Sanae 3) and in subsequent years by:

D. G. Torr	Sanae 4	1963
M. B. Ezekowitz	" 5	1964
D. W. Sharwood	" 6	1965
D. P. Homann	" 7	1966
A. W. V. Poole	" 8	1967
M. H. Williams	" 9	1968
S. Engelbrecht	" 10	1969
D. W. L. Scorgie	" 11	1970
R. Haggard	" 12	1971

A number of papers have appeared on the observations made at Sanae and the results of these will be discussed in the ionosphere articles to follow.

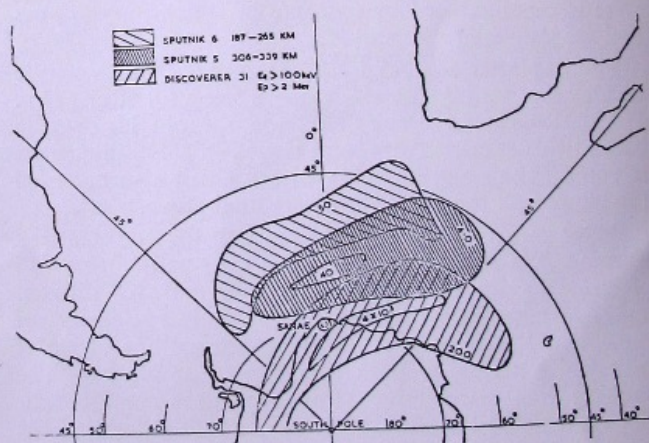


Figure 1.

Tenth Anniversary of the Antarctic Treaty

THE following letter was received from the Head of the Office of Polar Programs, National Science Foundation, by Mr. D. G. Kingwill, Director of Information and Research Services of the CSIR.

"Like you, we have been celebrating the tenth anniversary of the Antarctic Treaty during recent weeks. The U.S. stamp that was issued on June 23, 1971, was the occasion for a ceremony at the Department of State attended by representatives from each of the 16 nations signatory or acceding to the Treaty. On the occasion, the Honourable William P. Rogers, Secretary of State, delivered the enclosed message from the President to the assembled group. It is with pleasure that I forward this message to you together with envelopes postmarked on the first day of issue of the stamp."

Dr. Kingwill has the first day covers mentioned in the letter in his possession.

Statement by President Nixon on the occasion of the Tenth Anniversary of the Antarctic Treaty, June 23, 1971 (as delivered by Secretary of State, William P. Rogers)

Today marks the tenth anniversary of the Antarctic Treaty, an inspiring example of co-operation among nations for the benefit of all mankind. Since coming into force in 1961, the Antarctic Treaty has provided a unique framework for international co-operation in science.

Within this framework, man's knowledge of his environment and his understanding of the Earth and its physical history have been considerably enriched. Each nation participating in Antarctic research has contributed to this enrichment both through its own activities and through the sharing and dissemination of information resulting from these efforts. The names of persons early associated with Antarctica, names such as Charles Wilkes and Richard E. Byrd of the United States, Robert Scott and Ernest Shackleton of Great Britain, Roald Amundsen of Norway and Thaddeus Bellingshausen of Russia, exemplify the truly international character of Antarctic exploration and research.

In his message to the Senate in February 1960, transmitting the Treaty for ratification, President Eisenhower noted that the Antarctic Treaty was unique and historic, providing that an area of the world equal in size to the United States and Europe combined would be used for peaceful purposes only. To further this aim, the Treaty bans nuclear explosions, radioactive contamination and military utilization of Antarctica. To ensure its effectiveness, the Treaty also provides for a broad inspection system. These landmark provisions were later reflected in agreements such as the Nuclear Non-Proliferation Treaty and the Outer Space Treaty.

The Antarctic Treaty and its objectives continue to be extraordinarily relevant in our time, for the overriding goals of the Treaty are the acquisition of knowledge for the use of all men, the preservation of a unique region from environmental degradation, and the extension of peaceful co-operation across national bounds. I am indeed happy that the tenth anniversary of this significant international undertaking has been recognized by the issuance of a special commemorative stamp and I offer my congratulations and warm good wishes to all who are assembled to mark this important event.

Secretary's concluding remarks at Antarctic Ceremony

On a personal note let me say how pleased I am to participate on this occasion. The Antarctic has served for the past 10 years as a laboratory of both science and politics without precedent in history. From this laboratory have come dramatic scientific discoveries and from my point of view perhaps even more important, the Antarctic experience has provided to the political leaders of the world a feeling of confidence that large-scale international co-operation can pay dividends, that areas of potential trouble can be kept free of conflict, and that political agreements designed to further the common good can work. For these reasons I predict that the exceptional political innovation known as the Antarctic Treaty will be credited by future historians as a major breakthrough of our time. Thank you.

NEWSLETTERS

Sanac Nuisbrief vir Maart 1971

Ten spyte van 'n laagste minimum temperatuur van -33°C en windstote by tye van tot 70 knope, was die weer oor die algemeen matig gewees en kon buitewerk nog gedoen word sonder te veel ongerief. Vanaf die 9de is daar weer begin werk aan die verskillende programme terwyl die middag nog spandeer is aan basiswerk. Alhoewel die hele basis nou omtrent heeltemaal bedek is met sneeu, verhoed dit nogtans nie die jagsneeu om die ysgange binne te dring nie sodat die uitgrawe van ysgange na elke storm nog steeds voorrang geniet onder die term basiswerk.

Alhoewel daar tot op die 31ste nog in aller haas gewerk moes word aan die Radioteodoliet Antennas, kon die eerste ballonopstyging op 1 April gedoen word en daarmee het die weerkundige program in volle werking gekom. Ander programme wat ook reeds teen die einde van Maart in werking was, was ionosfeer en luggloed. Die geomagnetiese en kosmiese straleprogramme sal hopelik onderskeidelik die middel van April en begin van Mei in volle werking wees.

Intussen het die Borgaspan gevorder tot ongeveer 20 km van Jekselen af, nadat hulle vir vier dae verdrag was op ongeveer dieselfde plek waar die vorige jaar se Borgaspan voor die winter probleme gehad het. Ongelukkig moes een van die Muskegs by Muskegdepot agter gelaat word. Hulle vrag word nou deur middel van aflosse verder geneem.

MAIN POINTS OF INTEREST

The team have settled down in the new Base, and by April 1st, the meteorological, ionospheric and airglow programmes were under way. It is hoped that the geomagnetic and cosmic ray programmes will be functioning by mid April. The Borga Base team were about 20 km

from Jekselen when they experienced much the same difficulties encountered last year and one Muskeg had to be abandoned at Muskeg Depot.

Marion Nuisbrief vir Maart 1971

Maartmaand en ook 'n jaar van verblyf hier op die eiland is verby en nog is die einde van ons verblyf nie mooi in sig nie. As gevolg van probleme wat ondervind is met die samestelling van die 28ste aflosspan, en die gevolglike vertraging, verwag ons die RSA aan die einde van April. Ten spyte hiervan loop die geesdrif nog hoog want ons gaan tog een van die dae terug.

Vroeër die maand is Koos en Leon met die nodige uitrusting vir 'n staptog om die eiland. As gevolg van gunstige weersomstandighede kon hulle die afstand aflê in die tyd van vier dae. Hulle het veel gehad om te vertel na die tog. Snaakse landformasies, mooi landskappe, verwensde lawaklinkervelde, hoë kusranse en die gevolglike bergklim, alle kleur katte orals, voetseer en blase, nat klere, moedeloosheid en wat nog als. Volgens hulle was daar volop kanse om interessante fotos te neem wat hulle inderdaad benut het te oordeel aan die aantal fotos geneem. Hulle het Molly Mawks met neste en kuikens teëgekome, 'n seldsame verskynsel op Marion.

Die twee huiskatte, Neelsie en Blikkies, het elkeen hul eerste muis gevang om sodoende die astrante muis in die huis deeglik bewus te maak van hul baasskap. Die twee katte verskaf veel plesier met al hul kaskenades.

Die winter nader nou vinnig. Dit kan opgemerk word aan die aktiwiteit van die dierebevolking en ook weergewys is daar 'n merkbare verandering. Die eerste sneeuvalle het voorgekom in die berge.



The scene just east of the sleeping quarters. Photos like this were used to locate supplies after the first bad storm experienced by Sanac 3.



The RSA at anchor just after the first supplies were removed from the heliport in 1962.

'n Albatros is in Australië gevind wat hier gebring is gedurende die 26ste aflos. 'n Duif van 'n onbekende spesie is 'n paar dae agtermekaar opgemerk in die omgewing van die hoenderhok.

Weerkundige data vir die maand:

Lugdruk	1 015,0 millibar
Temperatuur	8,3 grade Celcius
Vogtigheid	87 persent
Sonskyn	113,7
Reënval	159,5 mm
Hoogste maksimum	17,7 op die 3de Maart
Laagste minimum	0,9 op die 21ste Maart

Gough Nuusbrief vir Maart 1971

Die sonnige dae gedurende die maand is terdeë geniet en visvangs het heelwat aandag geniet. Dit was 'n besige maand waarin baie loswerkies gedoen is met die oog op die aankruipende winter, naamlik die smering van kables en klamme om roes te voorkom, regmaak van lekplekke op die dak en regpak van die stoor. Daar is ook reeds begin met die skoonskoffel onder en om die „Cat-walks”.

Dit was 'n teleurstelling vir die manne toe verneem is dat die RSA nie meer hier aandoen teen die einde van April nie, maar dit laat ons darem nog nie op moed-verloor se vlakte nie. Almal geniet die eilandlewe nog baie en die manne se voorkoms wissel vanaf „Hippies” tot Rooihuide. Een verjaardagviering het hierdie maand plaasgevind, naamlik dié van „Pikkie” Fourie, ons Radio Tegnikus, wat op die 28ste dertig jaar jonk geword het. 'n Vreemde boot is vroeg in die maand waargeneem maar kon nie identifiseer word nie. „Shorty” Moolman het vir hom naam gemaak as die digter in die span en hy het al 'n hele paar gedigte geskryf wat met 'n bietjie verbeelding na talent lyk. Dries Wannenburg het ses steke aan sy hand ontvang nadat hy hard met die „Cat-walk” kennis gemaak het na die loslating van 'n ballon. Die manne kom nou voorendag met heel

oorspronklike idees wat die koskook aanbetref en heerlike maaltye is al voorberei.

Ons wil die span op Marion vaarwel toeroep en die nuwe span 'n baie suksesvolle verblyf op die eiland toewens. Ons is trots op die feit dat ons nou die „ou manne” op die eiland is.

Sanae Newsletter for April, 1971

April proved to be a month of great contrasts. The team experienced temperatures as high as $-6,8^{\circ}\text{C}$ and as low as $-40,6^{\circ}\text{C}$. Gusts of wind up to 86 knots also occurred, accompanied by tons of driftsnow, as a result of which the whole base is now covered up to the roof with snow. On the 10th and 11th of this month the team experienced their heaviest storm. One of the heavy doors of the balloon hut was blown open by the wind. The rest of the days were on the average fine and mild. Beautiful sunrises and sunsets occurred and many photographs were taken.

The two husky pups are still being kept inside the base and team members are now trying to teach them some tricks. The one named Whiskey learnt very quickly to lift his paw for a piece of chocolate.

Our Borga team have not succeeded in reaching the Borga Base owing to transport failure and they will now spend winter at Grunehogna.

On Sundays, weather permitting, the team takes the dogs sledging or should we say the dogs take the team sledging. These outings are stimulating and exciting. Further outside activities are becoming less and less as the days grow shorter.

The team would also like to welcome the new Marion team and wish them a happy stay on the island.

Gough Newsletter for April, 1971

The first five months on the island have literally flown by and have been enjoyed by everyone. The weather is becoming colder and consequently confining us more to

the house with the result that many of our leisure hours are taken up with various indoor activities, snooker and darts being amongst the most popular.

A heavy storm was blown up by strong south-easterly winds, the full force of which was felt on the 18th and gigantic waves caused by it, at times resulted in spray reaching as far up as the brownstore roof – a height of about 170 ft. These winds, unfortunately, also blow directly into the balloon-room, making the release of balloons very difficult.

Les Genlroud and Johann Coetzer went to much trouble in measuring and photographing the eggs and observing the activities of the Gough Island rails in a nest which was discovered nearby the house, in the hope that the information would be useful to biologists, who apparently know little about this bird's breeding habits. However, they became the laughing stock of the team when, after further observance, the nest proved to be that of a stray hen. They had to admit that their "scientific data" was probably well known to many, many years ago.

A considerable area of the ground underneath the catwalks has been weeded and contrary to our earlier beliefs, this work is not so dreadful after all. Why! some even claim to enjoy doing it.

Weather statistics for the month are as follows:

Mean surface pressure	1 012,0 MBS
Mean surface temperature	12,7 degrees Celcius
Total sunshine duration	94,9 hours
Total rainfall	236,5 mm on 23 days
Mean relative humidity	83 per cent.

Sanae Nuusbrief vir Mei 1971

Meimaand was hoofsaaklik gekenmerk deur sterk winde. 'n Swart maand vir die bolugprogram waarin 10 opstygings nie gedoen kon word nie. Selfs 'n loslatingspoging waarby 'n oormag van 6 persone betrokke was, is nie met sukses bekroon nie.

Die paar kalm dae wat wel voorgekom het is nuttig gebruik om vir die werktuigkundiges 'n werkwinkel op te rig, sodat hulle nou onder dak sleë kan herstel vir die somer.

Binnemuurse aktiwiteite neem vinnig toe. Daar is begin met die verf van die basis en lê van tapyte. Op ontspanningsgebied is daar gereeld na aandete 'n krieket wedstryd op die pyltjebord. Die ontwikkeling en afdruk van fotos wat reeds lank agterstallig is word nou vinnig ingehaal. Die radio amateurs is ook druk besig om nuwe vriende oor die wêreld te verwerf. Wat die skaakwedstryde met Halleybay en Mawson aanbetref het ons vir Halleybay in 'n verdedigende posisie terwyl die stand met Mawson nog in die weegskaal hang.

Die Borgaspan is teen hierdie tyd reeds ingegrawe vir die winter by Grunehogna en hulle binnemuurse aktiwiteite sluit onder andere tapesirië en modelvliegtuie in. Intussen is die grawe egter nie vir die winter weggepak nie want by twee geleenthede was die ballonkamer omtrent vyf voet onder sneeu – suur-soet herrinerings van die ysgang-grawery vroeër vanjaar het opnuut teruggekom.

Op die misdaadfront het die maand op 'n hoë noot geëindig met oproer en geweld in die huskykamp toe drie honde losgeraak het. Na 'n woeste geveg is daarin

geslaag om twee van die oproermakers weer veilig vas te ketting terwyl die derde, Kero, eers na twee dae in 'n redelike gehawende toestand by die ou basis gevind is.

Gough Nuusbrief vir Mei 1971

'n Besondere interessante maand met heelwat gebeure is agter die rug. Sommige van hierdie gebeurtenisse sal as van die hoogtepunte deur hierdie span onthou word. Die reënval gedurende die maand was aansienlik meer as die vorige maande en die temperatuur het soms byna tot vriespunt gedaal, met die gevolg dat die hele span hulle met tye in die kombuis voor die stoof bevind het. Van die praatjies voor die stoof kan baie gou afgelei word dat vroumense en motors die middelpunt van bespreking is.

Na ons aanvanklike onsuksesvolle pogings om „gesofistikeerde” vis te vang, het ons hierdie maand daarin geslaag om drie snoek aan te keer. Op die 25ste is twee moorvisse („killer whales”) ongeveer vyftig meter van die land af gewaar. Hulle teenwoordigheid was egter van korte duur aangesien hulle van uit 'n suid-westelike rigting verby die eiland geswem het. Op die 30ste was ons aangenaam verras toe 'n Britse fregat, die *H.M.S. Jaguar*, hier aangedoen het en ons persoonlike pakkies en briewe, wat op Tristan da Cunha gelê het, afgelewer het. Van die mees gewaardeerde artikels – soos die onwillekeurige op en af bewegende kakebene kan getuig – is natuurlik kougom en lekkers; verder spog almal met splinternuwe klinknaelbroeke en seilskoene. Nuwe langspeelplate, tydskrifte, haarknippies en -bande was ook baie welkom. Ons is die *H.M.S. Jaguar* baie dankbaar vir hierdie groot guns wat hulle ons bewys het.

Al die spanlede geniet goeie gesondheid en sien uit na die paar maande wat nog voorlê op die eiland. Die robbe het die wyk begin neem en heelwat minder voëls word deesdae opgemerk. Dit beteken dat ons ons moet voorberei vir 'n strawwe winter waaraan nie een van ons gewoond is nie.

Gemiddeldes vir die maand:

Druk	1 012,7 mbs
Temperatuur	10,9 grade Celsius
Vog	81 persent
Reënval	380,9 mm in 25 dae
Sonskyn	75,9 ure.

Sanae Newsletter for June, 1971

June was a very good month for the upper-air programme. Only on the first of June was an ascent not possible. Very good heights were obtained after dipping the balloons in diesel oil.

The mechanics are still working "full steam ahead" repairing sledges for the summer programme which will include trips into the mountains. We have also finished painting the living quarters, while individual offices such as the geomag., the hospital, the met. office and a part of the engine room have also been finished.

The midwinter festival was held in the true midwinter tradition and a great day and night was had by all. The chess games with Mawson and Halley Bay are still in progress. As far as the game with Halley Bay is concerned, we're in a pretty good position. Unfortunately the same

cannot be said for the Mawson games. Never to fear, we have not lost heart yet - hope springs eternal in the human breast, etc.

The Borga team are enjoying themselves immensely as can be gathered from the fact that their midwinter festivities started on the 20th and ended on the 24th. The winds at Grunehogna have been playing havoc with the equipment and installations. Their hut was almost blown over and their toilet was, in fact, blown away. Fortunately nobody was occupying the said abode.

June has been a very quiet month and everyone is looking forward to the summer season.

- Sanae XII

Marion Newsletter for June, 1971

Our second month on Marion is now history. But, as yet, we do not think in terms of how many months are left. Considering the past month, we find that we have accomplished a fair amount besides the normal duties. Cleaning up and re-organizing the base has been carried out during fine weather of which there has been very little.

The highlight of the month was the mid-winter celebrations. Len prepared a meal to the best of his ability and although the French menu baffled the boys, they did not waste much time in consulting a French dictionary. The only complaint was one of over-eating.

A braaivleis was held on Gamtoos Point one evening. A friendly fire was started, but unfortunately this attracted the inquisitive night birds. Swooping low over the fire they periodically collided with someone engrossed in his piece of meat. One unfortunate bird crash-landed in the fire but could not be rescued in time. John mercifully wrung it's neck, but not wanting it to go to waste, he cleaned and roasted it. According to him it tasted fishy.

John also thought there was something fishy about the way his crawfish cage disappeared. Convinced that there must be crawfish around Marion he constructed a special cage and baited it with meat. However, when the line was pulled in the next day, the cage was missing. "It must have been a big crawfish," said John.

Snowfalls occurred on six days of the month and on the first occasion Allen built a sledge. However, the snow was not deep enough and none were more disappointed than Allen and "Percy" the sledge.

Koos and Fanie performed an excellent job on the fowlrun and with the VIP treatment the fowls started laying again. The early risers amongst the boys have formed a breakfast club. Koos, however, resigns every time his turn to make breakfast comes around. However, he is allowed to rejoin if he washes the dishes. This suits Koos because his own post toasties club was not a success when he had to compete with succulent steak, eggs and toast.

A funny thing about Koos is his sleeping capacity - any time, anywhere. When Fanie wakes him in the morning, the only thing that keeps him awake is plenty of fresh air followed by a cigarette being popped into his mouth. Without this formula Koos sleeps on.

Greetings to everyone at home and comrades at Sanae and Gough.

Gough Newsletter for June, 1971

This month has been an exceptionally busy one with quantity-checking, order-writing and tidying-up in preparation for our relieving team. Most of this work has now been completed, thanks to the co-operation of the whole team.

Despite the sometimes depressing weather conditions during the month, spirits are still high and much energy is worked out on table-tennis and darts, of which the latter seems to be more popular at the moment. Fortunately, radio-reception is excellent and Saturday afternoons are set aside for listening to the rugby commentaries - beer included, of course. On the few fine days which we have had, fishing trips were made but the efforts were not worth the results, much to the fishermen's disgust. Our breadmakers have finally perfected their recipes and are having consistently good results. „Flops“ are severely dealt with, the last being hung on the wall as an example of what bread should *not* be like.

Weather statistics for the month are as follows:

Pressure	1 017,4 Mbs
Temperature	9,3 degrees Celsius
Humidity	84 per cent
Sunshine	52,4 hours
Rainfall	211,3 mm in 24 days.

Marion Newsletter for July, 1971

This month of July was not unlike any other month of July on Marion. The usual rain, snow and wind was experienced with occasional high swells when the wind swung easterly. The days of fine weather, however, were few and of such a nature that all-day excursions were not possible. However, everybody is thinking of the months of October and November when long walks will be possible.

With the above conditions prevailing, the team was limited mainly to Marion House where the usual snooker and billiard championship, book reading, film shows and house duties carried on. At this point mention must be made of Koos and his hobbies. Everybody has hobbies, but Koos has hobbies which constitute an integral part of his day. These comprise the following: sleeping, smoking and snooker or billiard challenges. The first is divided into dozing, napping and contemplation. All hobbies receive his very sincere attention. One thing must be said of Koos, however, he manages to stay awake when it comes to drum-carrying. Many of the empty fuel drums which littered Boulder Beach have been removed, perforated and committed to the Deep via the Chute. It was on one of these drum removal operations that John's mangled crawfish cage came to light. One of those huge waves had cast it up on the beach. Nobody quite understands how the dead mouse came to be found in the cage.

This "there must be crawfish here" scheme of John's led to another crazy scheme in the minds of other team members, namely to harpoon and capture a killer whale from Gunner's Point and land it on Boulder Beach. This, according to them, would be a great advance in the field of fishing. But let the reader not think that serious work is not being done while such hare-brained schemes are being planned.

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BP ANTARCTIC MEDAL, 1971

The BP Antarctic Gold Medal for 1971 has been awarded to Mr. Henry Fulton of Pretoria. The award is made for qualities of leadership displayed during three years in Antarctica and the vital supporting role of establishing the four-man team at Borga Base in the mountains 350 km due south of Sanae.

In 1962 he was appointed Junior diesel mechanic with Sanae 3. His cheerfulness and willingness to undertake any task, no matter how menial or arduous, did much to foster the spirit of comradeship which characterised Sanae 3 during the establishment of the first truly South African base in Antarctica.

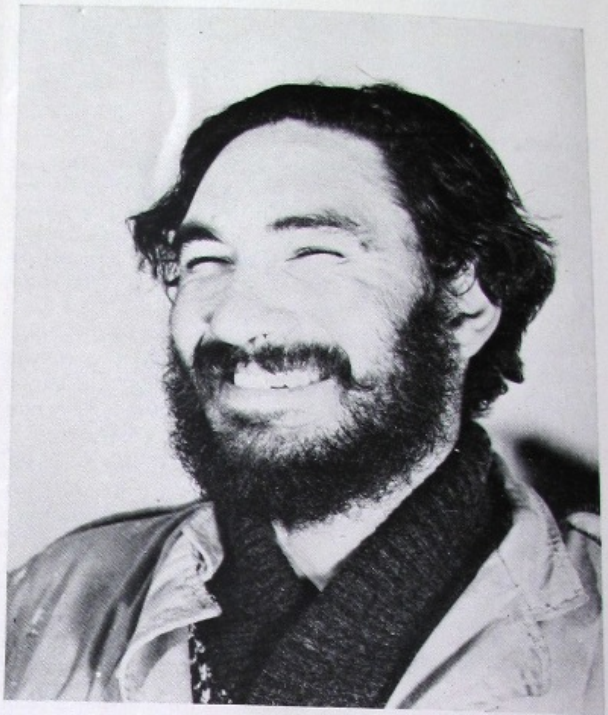
During 1966 he again returned to Antarctica as Senior diesel mechanic with Sanae 7 and displayed qualities of leadership which resulted in his being approached by the Department of Transport to accept leadership of Sanae 10 in 1969.

Despite two arduous and rigorous years in Antarctica, Mr. Fulton and his family were prepared to sacrifice much of their personal life to enable him to accept the post. It speaks highly of the Department of Transport, which administers the Antarctic project, that people such as Mr. Fulton, who are willing to go down to Antarctica for another year of hardship, isolation and the attendant risks that living in Antarctica bring, can be found.

Under his drive and perseverance Borga Base was successfully established. It was here that four members of Sanae 10 spent an isolated winter so that they would be able to avoid the long hazardous trip from Sanae and to explore hitherto unmapped terrain as early as possible in the coming summer.

With typical modesty Mr. Fulton has accepted the award as reflecting not on his own abilities, but rather as a tribute to the high level of comradeship and co-operation in the teams with which he has served.

Mr. Fulton was born in Pretoria in 1930 and is now resident in Erasmia, Pretoria (Telephone Pretoria 66146). He married Freda Gouws in 1950. They have six children of whom one is married.



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Every time it snows John dreads the burst or leaking water pipes which result. Fanie is also always at the ready to nurse, sooth and comfort the injured team members. Allen had a neat hole eaten into his finger by caustic soda. When blood failed to come out of the wound he got such a fright that Doc. had to give him an injection. This put Allen to sleep, but when Doc. checked on him later, Allen awoke and mumbled something about his mother leaving his light on.

We send greetings to all our families, friends and comrades on Gough and at Sanae.

Gough Nuusbrief vir Julie 1971

Dié afgelope maand is terdeë geniet deur al die manne, ten spyte van die ongunstige weerstoestande wat ons beweegruimtes baie beperk het. Ons het vroeg gedurende die maand ons eerste sneeu waargeneem, maar tot die manne se groot teleurstelling was dit slegs van korte duur. Almal geniet goeie gesondheid en die moraal van die span is nog steeds baie hoog.

„Shorty” Moolman, Steyn Basson en Johann Coetzer (almal leerling tegniese, weerkunde) se aansoek om nog 'n jaar op die eiland deur te bring is goedgekeur. Groot planne word beraam om die RSA in Oktober te verwelkom. Heelwat van ons „Groot” take is gedurende die maand afgehandel, bestellings is geplaas vir die volgende span en die bruinstoor is in gereedheid gebring vir die groot aflaai wanneer die RSA hier aandoen.

Na 'n beskrywing van die nuutste modes onder die vroumense, „Hot Pants” ingesluit, oor ons radio-program „Ver in die wêreld”, kan die manne nie wag om dit van naderby te beskou nie. Ons radio-ontvangs is redelik goed en die rugby-toer word met die grootste belangstelling gevolg. Mislukkings kom deesdae min voor wat koskook en broodbak aanbetref want daar word nou hardhandig met 'n man tewerk gegaan en nadat hy goed deurgeloop het moet hy net eenvoudig langs sy mislukte poging poseer terwyl die kameras fluts. Visvangs is tydelik afgestel en daar word meer gekonsentreer op snoeker en veerpyltjies terwyl die „Beatles” in die agtergrond blêr en goed bygestaan word met byklanke deur Dries en Peet.

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ANTARCTIC SCIENCE

Brief Reports from the Literature

Triassic Tetrapods from Antarctica: Evidence for Continental Drift

During the austral summer of 1969-1970, bones of Lower Triassic vertebrates were excavated from coarse quartzose sandstones forming stream channel deposits of the Fremouw Formation at Coalsack Bluff, in the Transantarctic Mountains of Antarctica. This is the first assemblage of fossil tetrapods of significant geologic age to be found on the Antarctic Continent. The fossils include labyrinthodont amphibians, presumed thecodont reptiles, and therapsid reptiles, including the definite genus *Lystrosaurus*. This genus is typical of the Lower Triassic of Southern Africa, and is also found in India and China. *Lystrosaurus* and associated vertebrates found in Antarctica were land-living animals; therefore their presence on the South Polar Continent would seem to indicate the contiguity of Antarctica, Africa and India in Early Triassic times.

from *Science*, 169, 1197, 1970

Ice Caps - Selenium Pollution?

From the purely scientific point of view the relative permanence of the major ice caps is one of their most endearing properties. For much of the ice which formed perhaps many thousands of years ago still lies buried beneath subsequent annual layers, each of which is in some way typical of the age in which it was produced. Each layer will, for example, have sampled the atmospheric fallout appropriate to the time of its formation. The analysis of dated ice samples thus means that today's atmospheric pollution can be compared with that of the recent past or even with the "standard" atmosphere before the industrial revolution. As a result, it is now known that the quantity of sulphur entering the atmosphere as a consequence of fossil fuel combustion is about the same as that arising from natural causes such as volcanic activity and the oxidation of organic matter.

Although sulphur may be the most severe of the polluting chemicals, what of lesser elements? An ice sample analysis of 14 different ages from 800 BC to the summer of 1965 shows that selenium, which is also emitted during the burning of fossil fuels, has not entered into the atmosphere to the same extent as sulphur, implying that selenium hardly circulates at all.

from *Nature*, 231, 218, 1971

Glacier Sounding in the Polar Regions

For many years radio echo sounding techniques have formed an important part of the scientific programme of URSI (International Union of Radio Science) and its national committees. Such techniques have been used with success in the investigation, for example, of the troposphere and of the characteristics of the ionosphere on a world-wide scale as well as its vertical structure.

Until now, URSI has not been particularly concerned with the sounding of glaciers and ice sheets by means of radio waves, but notable progress in this field has been made in recent years in several countries that are interested in surveys of the Arctic and Antarctic regions. There are certain obvious similarities between the propagation of radio waves in ice and in non-ionized media. For this reason, an informal link has been established between URSI and the Scientific Committee on Antarctic Research, SCAR. Besides the use of radio waves for sounding glaciers and ice sheets, the possibility is being considered of investigating the characteristics of pack ice by illuminating the ice with radio waves and studying the radiation scattered from the rough surface. This technique is already being developed for making surveys of crops on land and the characteristics of ocean waves.

from *URSI Information Bulletin*,
no. 175, 21, 1970

Observations of Ice Stalactites in McMurdo Sound

Dayton and Martin have reported observations that have been made of ice stalactites with lengths of 1.5 to 6.0 meters and diameters of 10 to 25 cm, growing under pack ice in Antarctica. These stalactites form channels through which brine drains from the ice to the water. This has important implications for studies of the natural desalination of sea ice. Little is known about the way in which sea ice becomes less salty; furthermore, most models of this process take place far too slowly to account for the observed rate of salt loss. The presence of these channels must certainly be considered in future models of the desalination process.

from *Journal of Geophysical Research*,
76, 1595, 1971

Chairman's Report, 1971

Ladies and gentlemen, it is my privilege as your present chairman to present the Tenth Report of the South African Antarctic Association.

As laid down in our constitution, the chief aims of the Association are to promote and maintain interest in Antarctic research, exploration and developments, especially concerning our own efforts in Antarctica. To achieve this requires constant dedication by a relatively small group of actively interested members who organise meetings, talks and film shows and edit our journal, the *Antarktiese Bulletin*, which is sponsored by B.P. Southern Africa Limited, and who are responsible for its distribution.

Your committee has been rather successful in attaining these objectives in the past year. A total of five meetings excluding the dinner, were arranged during the course of the year. Of these, two were held in Johannesburg where they were well supported. It would be as well to keep in mind that Johannesburg and area provide a potentially large and interested audience and that we should direct more efforts to gaining new members from this region.

In particular we were privileged to see films taken by Captain Alfred Ritscher's Neu Schwabenland Expedition. These films were shown through the courtesy of Mrs. Ritscher, his widow, and we thank her most sincerely for her interest in the Association.

In addition to these meetings we undertook no less than 26 slide and film shows for various schools, church groups, scout troops and other interested groups. The lion's share of the credit for this remarkable achievement goes to Mr. Chris Muir.

Furthermore, we have, through the kind offices of the vice-chairman, Mr. Pat Turner, been able to interest various newspapers in the use of articles on Antarctica. The first article by Miss Lin Menge appeared in the Rand Daily Mail on the 28th November, 1970, and I should like to extend the grateful thanks of the Association to Miss Menge on a fine piece of work. The Sunday Times has commenced work on a colour article to appear in their colour supplement in the next few months. It is also likely that we may be able to motivate an article on natural history in Antarctica.

We extend our sincere thanks to the various speakers for their interesting and informative talks, to the various embassies for the loan of films on the Arctic regions and Antarctica; to the Museum for Science and Industry and to the University of the Witwatersrand for providing us with excellent facilities for the meetings; and to the general public who supported our numerous slide and film shows so wholeheartedly.

For financial reasons we did not embark on the essay competition as proposed by the previous committee under Dr. L. Kent and we leave it to the next committee to decide whether they should proceed with this, possibly after approaching the Department of Transport, various

newspapers and the sponsors of the *Bulletin*, B.P. Southern Africa Limited.

The annual dinner was held in July, when our guest speaker was Mr. Morkel van Tonder.

Mnr. van Tonder het ons verbeelding gebind met 'n toespraak oor Scott se laaste reis en die dryfveer wat hom en sy makkers so lank aan die gang gehou het. Mnr. van Tonder se boek, *Want die Sneeu is Altyd Wit*, is nou beskikbaar en is die moeite werd om te kry.

Een van die hoogtepunte van die jaar was die vergunning van erelidmaatskap sonder verpligting op lidmaatskapfoote aan lede van die Antarktiese Klub, behalwe 'n vrywillige bydrae van individue indien hulle dit wenslik ag. So volledig 'n stel van die *Bulletin* as moontlik is aan die klublede wat ons kon opspoor, gestuur. Ons vertrou dat dit sal lei tot 'n groter belangstelling deur klublede in die doen en late van die Vereniging aangesien sommige van hulle vir talle jare al die kern vorm van aktiewe lede.

Ooreenkomstig met beslissings betreffende die druk van kaarte van Antarktika met die Greenwich meridiaan bo, is dit besluit om, waar moontlik, die beoogde das, baadjie en lapelwapens sodoende te wysig. Die nuwe ontwerpe is alreeds vir u goedkeuring voorgeleë.

Die redakteur van die *Antarktiese Bulletin* is nog steeds Dr. Doug Torr, bygestaan deur sy vrou Marsha. Namens die Vereniging wil ek hulle bedank vir die moeite wat hulle aangaan om die *Bulletin* aantrekliker te maak. Ek het vir twee uitgawes van die *Bulletin* as redakteur ingestaan en verseker die Doktors Torr dat ek terdeë besef wat 'n ondankbare taak die is. Die *Bulletin* verdien die steun en bystand van al ons lede aangesien dit een van die hoofmiddels is waardeur die mikpunte van die Vereniging bereik kan word aangesien dit ook as bylaag van *Spektrum* verskyn.

Ek kan ook nie versuim om die borge van die *Bulletin* en die Antarktiese Goue Medalje, naamlik B.P. Southern Africa, hartlik te bedank vir hul ondersteuning en aanmoediging nie.

Ook is dit vir my 'n genoë om Henry Fulton hartlik geluk te wens met die Vereniging se toekenning van die B.P. Antarktiese Goue Medalje vir 1971.

Ten slotte wil ek beaam wat 'n voorreg dit was om as voorsitter op te tree en die lede van die komitee, mnr. Pat Turner, Ferdie Viljoen, Anton Aucamp, Leon Wolmarans en Hans Loots hartlik te bedank vir hul ondersteuning en bystand en mnr. Marten du Preez vir sy onoffisiële bystand en deurgaande belangstelling.

Ek wys finaal daarop dat 'n Vereniging totaal afhanklik is aan die belangstelling van sy lede en die publiek, en moedig lede dus aan om 'n aktiewer rol te speel in die Vereniging se werksaamhede.

D. C. Baker

BOOK REVIEW

NEW ZEALAND AND THE ANTARCTIC

by L. B. Quartermain

Published in January, 1971, by A. R. Shearer, Government Printer, Wellington, New Zealand. Price \$5,89 N.Z., 269 pages.

L. B. Quartermain's interest in the Antarctic began as a boy when he witnessed the return of Shackleton's *Nimrod* to Lyttelton in 1908 and the departure of Scott's last expedition in 1910. He has since visited the Antarctic on three occasions, is a foundation member of the New Zealand Antarctic Society and was instrumental in founding the excellent journal, *Antarctic*, of which he was editor from 1956 to 1968. *New Zealand and the Antarctic* is his sixth book dealing with the White Continent, the others being *Into the Antarctic* (1956), *Two Huts in the Antarctic* (1963), *South from New Zealand* (1964), *Down to the Ice* (1966) and *South to the Pole* (1967).

This book is a detailed and most readable account of New

Zealand's associations with Antarctica and the expeditions that have made a New Zealand harbour their last port of call. Quartermain deals firstly with the early European explorers of the 18th and 19th centuries before going on to what he calls the "heroic age", in which he describes New Zealand participation in the great expeditions of Scott and Shackleton and visits to New Zealand by men such as Armundsen and Mawson. New Zealand entered actively into Antarctica with the International Geophysical Year and the Trans-Antarctic Expedition and since then has continued her scientific programmes. Other aspects of New Zealand activity in Antarctica are described in the book, such as an expedition by the New Zealand Alpine Club and the restoration of the historic huts of Scott and Shackleton in McMurdo Sound.

The book contains 62 black-and-white photographs and 11 maps, including a large folded map in a pocket inside the back cover. In all it is a most welcome addition to Antarctic literature.

- M. R. Torr

TYDSKRIF VIR ANTARKTIESE NAVORSING

Op 21 Junie 1971 het die eerste uitgawe van die *Suid-Afrikaanse Tydskrif vir Antarktiese Navorsing* die lig gesien.

Hierdie tydskrif, wat voortaan jaarliks in Junie sal verskyn, beoog die publikasie van resultate van oorspronklike navorsing op hierdie breë gebied, sowel as inligting en nuus oor verwante bedrywighede. Deur artikels op die verskillende toepaslike vakgebiede aldus in een tussen-dissiplinêre tydskrif saam te vat, word getrag om 'n geheel-beeld van Suid-Afrika se Antarktiese navorsingspoging te gee. Bydraes word in Afrikaans of Engels geplaas.

Voorsiening word ook gemaak vir die tussentydse publikasie

van sekere bydraes om belangwekkende resultate vinnig bekend te stel.

Die nuwe tydskrif word uitgegee onder beskerming van die Suid-Afrikaanse Wetenskaplike Komitee vir Antarktiese Navorsing (SAWKA), met mnr. R. W. Vice, Direkteur van die W.N.N.R. se Nasionale Instituut vir Telekommunikasienavorsing, as Wetenskaplike Redakteur en 'n redaksiekomitee bestaande uit dr. S. Meiring Naude, F. J. Hewitt en S. P. Jackson.

Die W.N.N.R. se Publikasie afdeling is verantwoordelik vir versorging en verspreiding van die tydskrif waarvan die intekengeld R2,00 per jaar behoort.



A view from the south end of the base. Part of the dog tunnel and bags of whale meat for the dogs are visible on the right.

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Die hoogtepunt van die maand was die solo-opvoering van die verhoogstuk „Hair”, uitgevoer deur „Pik” Fourie, ons radiotegnikus. Almal sien baie uit na die koms van die RSA en hoop om Kersfees tuis te wees.

Weerkundige gemiddeldes:

Druk	1 014,4 Mbs
Temperatuur	9,1 grade Celsius
Vog	82 persent
Reënval	237,2 mm in 28 dae
Sonskyn	89,7 ure.

Sanae Nuusbrief vir Augustus 1971

Louis, Ray, Theo en Eddie het op 30 Augustus vanaf Sanae vertrek na draaipunt in bitter koue weer van -43°C en is gelukkig veilig terug op 11 September. Mike, Johan (Bothma) en ek sal seker binne die volgende twee dae vertrek om by Borgaspan aan te sluit by Grunehogna.

Die manne se hare en baarde begin al langer word en hoe langer baarde word hoe korter word die tydjie hier op Sanae. Niemand wil dit nou weet nie maar ek is seker ons sal swaar afskeid neem van Sanae waar ons lekker saam gesweet het.

Laaste groot gebeurtenis wat hier op Sanae gebeur het was die vertrek van RSA en dit is ook al ou nuus.

Groetnis,
Gustav Nel en Sanaiete

Marion Newsletter for August, 1971

Again we greet all friends and relations and especially the “Goughs” and “Sanacans”. We hope that they have achieved maximum success in their individual scientific programmes this month.

And at the end of another month there is speculation as to whether we are reaching the halfway mark in our stay or not. The previous team had spent thirteen and a half months on the island. Before the departure of the RSA for Cape Town, Frikkie Loots of the general section had promised that the following relief would be arriving here during March or beginning of April. That means our stay would be eleven to twelve months. Some of us are not so optimistic.

On the 29th Greg celebrated his 20th birthday. Unfortunately our stove was unserviceable and there was no birthday cake. However, everybody expressed the wish that he could spend his 21st in more rewarding circumstances.

On the 27th snow started falling as we had not seen it up to now. The following morning the snow depth was measured at 23 cm. Excitement mounted at the thought of snow sports and beautiful scenery. However, the weather remained unpleasant and not many opportunities were had for photographing the snow scenery. Then came the inevitable rain which all too soon melted most of the snow. For some the melting of the snow

was good news because they had not had a good bath for a few days.

During the month Allen and Len walked a little beyond the East Cape. A walkie-talkie was taken along for testing in preparation for longer walks later. At the Cape numerous cormorants were found making nests. The strange mating dance that these birds perform, like so many other sea birds, was interesting to watch. More visits to the Cape are planned to photograph the birds with their eggs and subsequently the chicks and so to complete a series of photographs.

Again this month excellent work was done in the meteorological programme, the domestic duties and the general clean-up and maintenance of the base. New schemes and ideas are continually being initiated for the improvement and enhancement of the entire programme. We feel that we will leave Marion with the satisfaction of an entirely successful year behind us.

Gough Newsletter for August, 1971

With the term of Gough 16 so close to the end, anticipation of the RSA's arrival can almost be felt in the air. Although not all the members will be returning, enthusiasm towards a smooth change-over is shared by all.

Earlier in the month we experienced the coldest temperatures of our stay, $0,2^{\circ}\text{C}$ above freezing, and we enjoyed the sight of the snow-capped mountains behind the base. There has been a noticeable change in the weather of the past few weeks and this marked the return of much of the bird-life. We hope that this is the start of spring and more pleasant conditions.

The white and black penguins can be seen on the far side of the bay and many white specks dotting the hillside mark the positions of Albatross nesting. The increasing number of sooty Albatross gliding to and fro along the shoreline makes it look very much like a busy airport viewed from a distance. No doubt the seals too will be returning soon, providing awe-inspiring sights (and pungent smells) at one of our favourite haunts, seal beach.

At the beginning of the month we were treated to the visit of a large southern wight whale to the shallows of Transvaal Bay and we watched its antics with great interest for almost a whole day.

The team's activities seem to have centred mainly on preparations for the likely changes and activities which the next two months will bring. The team photographer is also being prepared, much to the trial of the photographer's patience, especially when unfamiliar articles like white shirts have to be scrounged out, washed and pressed at the last minute.

Draughts, reading and music are popular pastimes these days but day-dreaming (of home and mail, no doubt) seems to take precedence in most cases.

We are looking forward to learning about the other members of the 17th relief and take this opportunity of sending our greetings and best wishes for a pleasant journey to Gough.

— A. J. Wannenburg