

IMPRESSIONS OF SANAE IV

by D. G. Torr
(SANAE IV)

(This year marks the 10th Anniversary of Sanae IV)



Pack ice breaking up.
(Photo: T. G. Schaefer)

On the 27th December, 1962, the *R.S.A.* left Cape Town harbour with her course set for Sanae, Antarctica. Within a matter of hours the 'land-lubbers' were distinguished from the 'sailors'. In fact, two of the thirteen members of Sanae IV spent the entire voyage in their bunks. Steadily the *R.S.A.* made her way through the 'roaring forties'. On 4th January, 1963, we sighted our first iceberg and we experienced that thrill of really being on our way to Antarctica. On and on we sailed, through the 'furious fifties' and into the 'screaming sixties'. At times the ship appeared to roll up to 40°. On 6th January we entered the pack ice. The ice became more and more dense as we nosed our way southwards. Eventually on 12th January the ship became icebound and all we could see from horizon to horizon was snow and ice. Immediately Shackleton's plight came to mind and how the *Endurance* was crushed by the ice. I remember having had misgivings at the time about the wisdom of my decision to go to Antarctica. One American observer was heard to wail, "Oooh! If only I had stayed in sunny California!"

However, we had no cause for alarm because the ship was in the safe hands of Captain McNish. Also on board was an expert in navigation in ice conditions — Commander Jack Netterburg. It was with disbelief, after a few days in this state, that we heard Commander Netterburg announce, "Tomorrow the pack ice will open up." To our surprise it did. Travelling through the pack ice was a strange experience. There

is hardly a ripple on the surface of the water and unusual colours are reflected off both the water and the strange ice formations. The pack ice has an indescribable beauty of its own.

Suddenly we broke free of all ice and for the last fifty kilometres travelled in calm open sea. The cliffs of the Antarctic Ice Shelf loomed ahead and on 16th January we set foot on our new homeland.

It was amazing how little we each knew of conditions at Sanae. I was surprised to find all the buildings covered with snow already, as they had only been erected the previous year by Sanae III. I could not believe my eyes when the driver of our Muskeg caterpillar announced, "Well, here we are!" All I could see were wires and poles with a few pipes standing out of the snow. The only real landmark was the meteorological tower.

As we clambered through the hatch and down the ladder into the snow passage below, I was assailed by misgivings again about the wisdom of my decision. There seemed to be a strange dank odour about the base, and I could not see how I would ever grow accustomed to it.

During the next two weeks everything was a mad rush. Duncan Baker, the upper atmosphere geophysicist of Sanae III, had to have his appendix removed. Others worked furiously to offload the ship. Finally on 23rd January at 2 a.m. we waved farewell to Sanae III as the



Back row, L. to R.: *Otto Langenegger*, geologist; *Anno van der Meulen*, senior diesel mechanic; *André du Plessis*, geomagnetist; *Johan Joubert*, diesel mechanic; *Doug Torr*, ionosphericist.

Middle row: *Gert Vermaak*, radio technician; *Chris Wagner*, medical doctor and deputy leader; *Andrew Venter*, leader; *Franco du Toit*, meteorologist; 'Lappies' *Labuschagne*, senior meteorologist.

Front row: *Emil (Bessie) Bester*, meteorologist; *Gerry Reynolds*, meteorologist; *Julian Randell*, radio operator.

(Photo: E. Bester and J. Randell)

R.S.A. sailed out of Polar Circle Bukta. It was at that moment that the stark reality of the situation struck me. We were stuck at this desolate outpost of civilization for the next twelve months, and come what may, we would be entirely on our own for this time.

We soon grew accustomed to living under snow and the base took on a very cosy atmosphere.

It may come as a surprise that the bitter temperatures, the long polar night, and other physical problems of Antarctic living, are not the most significant stresses causing human adjustment problems. The physical deprivations and dangers of Antarctic living are remarkably well tolerated by almost everyone. It is the isolation — with its related social and psychological stresses — that requires the greatest adaptive effort. It has been repeatedly stressed that men in Antarctica are in danger of becoming demented through the 'endless' months of inactivity during the long, dark cold, confined winter months. This appeared to be true of Sanae IV to some extent, but was highly ameliorated by the various hobbies and activities that the men resorted to to keep themselves fully occupied. In fact, these aspects of life at Sanae made 1963 one of the most memorable of my life.

The men became very sensitive to their social situation. The most serious problem is that of adjusting to the enforced intimacy of a closed, isolated group for the long polar winter. For successful adjustment, a person must have a combination of outer and inner sensitivities.

One must develop a sense of understanding and tolerance towards others. Difficulties tend to arise in cases where individuals exhibit insecurity and suspiciousness. One has to be careful under these circumstances never to let slip any words which may have a double implication, and the best defence in such cases is absolute honesty and sincerity in one's dealings both with oneself and others. Confidence in one's own ability goes a long way in circumventing these problems.

In the beginning, the extroverted people seem to cope admirably with the environment and problems, but it is necessary to be able to retreat into one's own private world to recuperate from the stresses of continuous group living. It is the quiet, retiring types who seemed to be more successful at coping with the situation in the long run. The 'life of the party' finds his popularity worn thin after a few weeks or months of isolation. However, it is also surprising how the extrovert can adjust and how the 'life of the party' can become quite introvert.

A sense of humour plays a vital role in adjusting to an intimate group and this enables release of tension and hostility. Closely related is a sense of proportion, which enables a person to retain objectivity and to differentiate important from unimportant issues. Gradual impairment of this sense of proportion appears to be a characteristic in an isolated group. In fact, much depends on local emotional issues rather than on the usual values of the outside world.



Calm open water, approaching the Antarctic ice shelf.
(Photo: T. G. Schaefer)

The basic stresses to which members of Antarctic wintering parties must adjust include the sameness of the environment; the absence of customary sources of satisfaction and gratification. Substitute activities are essential for successful adjustment to these deprivations. Adequate stimulation can be obtained from one's work, available social relationships, intellectual resources, or even such mundane joys as food, movies, etc. Those who seemed to do best seemed to enjoy such unsophisticated and superficial social activities such as 'bull sessions', food and movies. To the outside world much of our amusement would have seemed trivial.

Some of the highlights of our year included an attempted trek to the Bukta on skis — we only travelled a few kilometres before the Muskegs saved the day. On 1st February, one of the husky puppies swallowed a handful of nuts and bolts voluntarily. Despite all ingenious ideas, nothing we could do could save his life. On 7th February there was great excitement when we received our first telephone calls from home. That same day we were paid a visit by a beautiful penguin, but the event ended in tragedy when a husky bitch managed to unleash herself and killed the bird in a most pitiful way. The next day saw the departure of the field party for the mountains. One occasion for concern was the day the dog sledge arrived back without its two occupants. Fortunately, however, one could just distinguish two black dots on the horizon and all turned out well. Apparently an experiment at remote control did not work properly.

Birthdays were usually the highlight of the month and tremendous effort and thought went into the preparations of the food for the occasion. Two major projects were undertaken in March. A new tunnel was hand dug to house the huskies during the winter. During the construction of this, the 'Pickinin', a small caterpillar with mechanical shovel, caught fire. At that moment Franco emerged from below and in his typical emotionless manner remarked to the driver in passing, "By the way, that thing is on fire!" By the time the word fire had been uttered, the vehicle was driverless and other team members arrived on the scene with handfulls of snow.

The second achievement in March involved the hoisting of a huge Bolinder diesel generator to the surface at the old base, 'Norway Station', which is located about 20 km away from Sanae. At that stage the old base was forty feet under snow.

On 14th April we experienced the beauty of our first aurora. And on the 16th André won the rather unusual 'April competition', as we termed it later, by passing eight litres of water over 24 hours. On the 20th, Julian contacted comrade Oleg at Novolazarevskaya for the first time. Most evenings were spent playing darts, or bridge, but some occupied themselves with hobbies. Naturally reading constituted a popular pastime, and home photography proved to be very rewarding for all.

One rather severe disturbing factor at Sanae is insomnia. This apparently is something common to all wintering parties in Antarctica. Nearly everyone reported significant problems in either falling asleep or staying asleep. Another disturbing phenomenon that occurred to practically each individual at one stage or another was a feeling of depression — despondency and sadness with lethargy and a sense of hopelessness. These were most evident during the winter when the general degree of irritability increased. Fortunately no cases of open hostility were experienced. Perhaps in some cases what might have erupted into direct confrontation was handled passively, usually by severe withdrawal.

By 25th April the dieseline had almost turned to grease and the 30th saw the inauguration of a microwave link to the sub station located a few kilometres from the Bukta.

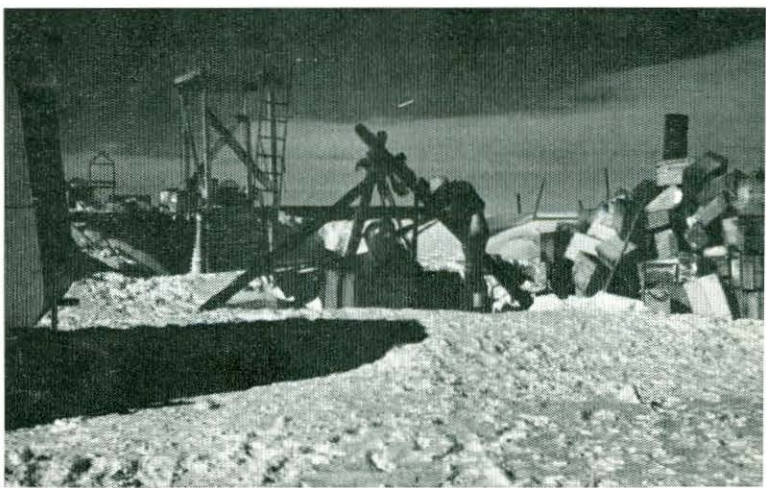
On 10th May a small fire broke out in the Bolinder diesel shack, late at night. The fire drill was to blow the dinner siren continuously to summon all help to the scene. Hardly had the siren been switched on when someone woke up, cursed the 'fool' for putting the siren on, switched it off, and promptly went back to sleep. Fortunately those on duty could handle the fire.

On the 19th, the winter sports season started in earnest. Anno succeeded in hypnotising several team members. At first this was a source of great fun and hilarity, but it was promptly stopped when one member fell under his 'spell' during the normal course of his duties. Later during the month Johan caught his hand in an electrical fan and had to receive fifteen stitches.

On 8th June we saw the first slide show on Gert's home-made projector. After innumerable trials and errors, Bessie and Julian achieved success with our official group photo on the 17th (reproduced in this article). The 21st was the most unforgettable day of the year, the Mid-Winter Festival. Half the year was past,

Lowering of supplies brought up from the bukta down the main hatch.

(Photo: T. G. Schaefer)



and the evening was celebrated with much fun and laughter, dancing with the broomstick and all sorts of antics.

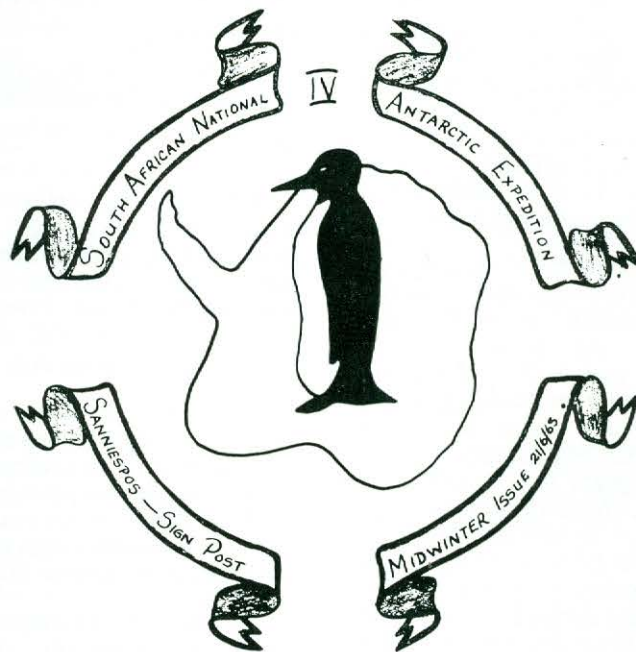
At 6 a.m. on July 6th we experienced our strongest gale of the year at 105 knots. During the night of the 6th thousands of cigarettes were won and lost in a thrilling game of 'Crown and Anchor'. At 11 a.m. on the 22nd, to our great delight, the sun appeared in all its glory, and the following day we recorded a minimum temperature of -46.3°C . On the 27th in a game devoid of integrity, some beetles developed legs, heads and tails at rather fantastic speeds.

Despite the difficulties and stresses of wintering over, few overt emotional problems occurred. We can attribute this to the psychiatric screening through which potential team members were put prior to acceptance. This was an experience in itself which lasted for a full day. The formation and interaction of groups with the 13-man unit has a characteristic that is apparently not uncommon

dictory forces seem to be at work — one force moving the group towards coalescence and another towards disruption. This reflects the conflicts which occur within the individual, who desires to be part of the group, yet paradoxically works at the same time to keep his own independence. Most people were able to achieve a balance between their two needs and gain support from the group and yet at the same time withdraw from it when necessary.

August was a memorable month with the Bolinder being the only engine in operation on the 2nd, supplying the whole base with power. This certainly brought a feeling of satisfaction to those who originally felt it necessary to extricate this engine from the old base. On the 6th, champagne flowed freely after we beat Halley Bay at chess for the first time.

On 23rd August the only near-tragedy of the year occurred when the ice-shelf broke away under the feet of a



at Antarctic stations. The social groups form in three stages. In Stage 1 the group is open; the people are sizing each other up. Some pairs form as persons find common interests and backgrounds. Stage 2 is that of clique formation, in which two-men pairings develop into small groups of three or four or more. The common ground on which these groups form varies considerably. Sometimes they form according to age, sometimes according to occupation. Sometimes they form around recreational interests, with a drinking group and a non-drinking group. Musical inclinations can also influence the formation of groups; those who like pop or rock, and those who enjoy classical music. Stage 3 is that of coalescence, in which the whole group organizes around a social core. Always at least one member is isolated from the group, or a peripheral clique forms even though most of the team members are in the core group. The group, however, is never completely stable. For example, a group that has coalesced may well regress into clique formation or fluctuate. Two contra-

field party of four. Preparations were being made to lower Otto over the shelf to take samples at various levels and to examine the sea ice. Just as he reached the edge, a sound was heard which sounded like the deep rumbling of thunder. Suddenly the foremost three feet of the ice shelf vanished from view over an extent of about 100 metres. Otto disappeared with it. Thanks to Anno's incredibly quick reaction, Otto's life was saved. He flung himself at the last few feet of rope that were snaking towards the edge at terrific speed, wrapped it around his limbs and dug in his heels. By this time the other two had also managed to assist. They pulled with all their might, and as they did they heard creaking and cracking noises along the ice shelf. Slowly the rope began to move as Otto was pulled from under the tons of snow that had fallen. After what seemed like hours, with muscles being strained to the limit and searing with pain, Otto's face appeared at the cliff's edge, but the rope had worn a slit almost a foot deep into the ice edge. There was no way to lift Otto. So they pulled and

pulled as they watched his jaw plough a furrow through the snow and ice.

Finally he was safe but unconscious. The Muskeg was started and with engine screaming they set off for Sanae Base. They had hardly covered 5 km when smoke began pouring into the front cab. The engine was on fire! The men scrambled madly out onto the snow, scooping up handful upon handful of snow. Finally the fire was put out and by the Grace of God, Anno was able to get the vehicle started again. This time they travelled slowly. Finally they arrived at the Base and Otto was lowered gently down the hatch. Apart from having broken most of his ribs, it turned out that his condition was satisfactory.

With September came spring. From the 1st to 5th Otto succeeded in developing 320 colour slides with a set intended for only 120. On the 9th we exploded a red balloon which was followed later by a most fascinating display of fireworks.

On 10th October Bessie won the Sanniespos Bisley. It is incredible how it is almost impossible to shoot accurately in the Antarctic. Another accident occurred on the 22nd when Anno mangled his hand in a Muskeg fan. Chris immediately initiated a full scale operation and with Doug and Andy as his assistants, he amputated

the first and second fingers and a sizeable section of his hand.

On the 30th the geological field party set off for the mountains.

On 30th November President John F. Kennedy was assassinated in downtown Dallas.

December was spent in a state of fervour and in anticipation of the arrival of the *R.S.A.* while preparations were made for the takeover by Sanae V.

The success of Sanae IV can be attributed to a tremendous spirit of friendship and enthusiasm that prevailed throughout the year. One cannot but mention the part played by the leadership factor in such an undertaking. Quality and type of leadership are of utmost importance and in this we were most fortunate. The most important qualities of leadership at a small station appear to be (i) ability to tolerate intimacy and levelling of status without losing authority and respect of the group, and (ii) self reliance in the lonely responsibility of command. He must have great inner security, self confidence, and flexibility. Even with these assets he will still be prone to significant depression and other symptoms.

It is doubtful that the rigid and authoritarian methods of large military command would be successful at small stations. The semi-democratic system appears to be the most successful.

One of the amazing things that emerges from wintering over in Antarctica is the discovery of man's amazing adaptability. Regardless of the stresses, symptoms and group problems, the men did amazingly well to live and work in this inhospitable environment under difficult conditions of isolation, deprivation and confinement. It is really encouraging and cheering to find that under real stress, emotional strength is indeed the human norm.

Acknowledgements

The basis of the diary aspect of this article came from the local Sanae monthly newspaper — Sanniespos Signpost. Gerry Reynolds was the editor for Sanae IV and we are grateful to him for the excellent work he did in this respect.

Many of the ideas presented in this article were based on a paper by R. E. Strange and S. A. Youngman entitled 'Emotional Aspects of Wintering Over' published in the *Antarctic Journal of the United States*, November-December, 1971, pp 255-259. They tied in so closely with opinions that I had formed about Sanae IV that it was hardly necessary to even modify many of the points of view presented.

