

TABLE 3

Monthly mean relative humidities at 1m above floor level in two localities

Month	Time	Kitchen/Dining Room		Sleeping Hut Passage	
		0500	1700	0500	1700
March*†	62	63	70	68
April*	59	62	68	68
May	61	67	58	57
June	58	64	55	54
July	63	67	—	—
August	70	76	—	—
September	71	80	—	—
October	70	78	—	—
November	73	81	—	—
December	77	79	—	—

*Observations at 0430 and 1630 hours.

†Values for last 16 days of month.

Humidity: The monthly averages of relative humidity at 0500 and 1700 for March to December and at 1 metre above floor level were obtained by hair hygrometers for two apartments. These values are given in Table 3. The sleeping hut experienced no marked variation over the twelve hours, viz. less than 2 per cent in any month and usually not more than 5 per cent on individual days. The higher values in the mornings were most probably due to the nine men's breathing during the night. On the other hand, the kitchen/dining room values show much bigger daily fluctuations, often between 15 and 20 per cent on individual days. In this case the highest values occurred in the afternoon, obviously due to the increased amount of steam from cooking and from the men's breathing.

Clothing: Approximately twice a month personnel made a list of the various clothing items they wore and recorded the degree of comfort they experienced. Judging by the statistics so obtained (not shown) one finds that about double the amount of heat-retaining clothing is required in the Antarctic winter compared with that in summer. Further, man acclimatises to such an extent in winter that he wears appreciably less after having been there than before it under similar meteorological conditions. On the whole he wears remarkably less in Antarctica than one would expect by comparing the temperatures there with those in a temperate region.

Personnel also kept records of the periods which they spent outside. From these records it appears that, after a few months, those who had spent more time inside the buildings were much more sensitive to outside cold and wind than those who had spent relatively more time outside.

Botanical aspects: In the course of the year 22 single or groups of nunataks were visited. On most of these lichens were found. Those nunataks, on which none were seen, seem to have been exposed at a late stage so that no lichens had been able to settle there. In all cases where they were observed, their concentrations were thicker at the higher levels. It appeared that they did not prefer the sunny to the reverse sides of nunataks. They often grow in places where they will be covered during a snowfall. It is interesting to note under what adverse climatic conditions they grow even during winter.

Zoological aspects: The extent to which climate has a direct influence on the migration of birds is a matter of further research. It is, for instance, not unlikely that, in this connection, the duration of daylight is a more important factor than temperature.

On February 20 about 50 Snow and Antarctic petrels were observed migrating to the north. After the winter, on the 6th October, three Antarctic petrels were seen near the coast whilst three Weddell seals were lying on the bay ice. On the 9th, at 1500, groups of five to ten Antarctic petrels were again seen near the ice front and only two hours later they had increased to about 50 per group. At the station, 20 miles inland, up to four petrels were observed on the 8th. On the next day, at 1600, about 150 of these birds hovered over the meteorological tower and then proceeded south. Altogether some 300 to 500 went south on this day. About 60 miles inland, groups of between 30 and 200 of them were seen flying in the same direction on the 9th. All these dates correspond to fairly rapid changes in the duration of sunshine and in the outside temperature, as is noticed from the monthly averages of the two elements in Table 4.

Birds and seals which visit Antarctica each year for breeding purposes choose the summer season to have and rear their young. Only the emperor penguin hatches its eggs in mid-winter.

TABLE 4

Monthly means of sunshine duration (hours), and temperature conditions (°C) in 1960

Month	Sunshine	Daily mean	Mean max.	Extreme max.	Mean min.	Extreme min.
Jan. ..	—	— 5.4	— 2.1	+ 5.0	—10.3	—18.3
Feb. ..	6.5	—11.4	— 7.1	— 1.2	—17.6	—31.3
Mar. ..	3.9	—15.5	—11.7	— 4.3	—20.8	—28.5
April ..	3.2	—22.5	—18.1	— 8.6	—28.5	—41.4
May ..	1.0	—20.5	—16.0	— 4.7	—24.9	—43.2
June ..	0.0	—24.2	—19.3	— 7.0	—30.2	—42.2
July ..	0.1	—26.3	—21.8	— 9.6	—31.9	—43.6
Aug. ..	1.2	—28.2	—23.3	—14.4	—34.0	—47.8
Sept. ..	4.2	—29.2	—23.7	— 9.8	—35.6	—45.8
Oct. ..	5.4	—18.6	—14.3	— 6.5	—24.9	—32.4
Nov. ..	8.1	—11.7	— 8.1	— 1.1	—17.1	—29.5
Dec. ..	12.5	— 5.9	— 1.6	+ 2.1	—10.7	—15.3
Year ..	—	—18.3	—13.9	+ 5.0	—23.9	—47.8

NUUS VAN SANAE EN DIE EILANDE

SANAE—30th November:

At present SANAE is a veritable hive of activity with the relief only a month- and-a-half away. The Base is being given a spring-cleaning. All members are hard at work rounding off various stages of their programmes. It is a pleasure to do outside work now, but the summer warmth has its disadvantages as well, since the soft snow surface is often very difficult to negotiate. There is a constant dripping of water in all buildings and snow passages are slippery. Recently a temperature of plus three degrees Celsius was registered.

However, come summer or winter, it remains the same routine for our radio operator, George Bentley. His radio "skeds" keep him busy from six in the morning until seven at night and is often to be seen in his office late at night, making radio amateur contacts with different countries. The major contact with South Africa is, of course, Jan Smuts Aeradio Centre, through which scientific results, meteorological data, administrative traffic, as well as the private correspondence between members and their families are passed.

Besides these "skeds" he has regular daily "skeds" with other bases in Antarctica for the purpose of passing on meteorological data and other information. Contact is made four times daily with Mawson and once daily with Halley Bay. Phone contact is extremely useful for the geophysicists here for discussing various aspects of the ionospheric, magnetic, cosmic ray and other programmes with their counterparts in South Africa.

Contact was made during the year with most other bases, including Davis, Wilkes, General Belgrano, Eighties, Stonington Island and Roi Baudouin. Monthly contact is made with Derdepoort Radio Station near Pretoria for private radio-telephone conversations and fortnightly telephone calls to enable the scientists to discuss pertinent questions with their programme co-ordinators. Furthermore, when parties are out in the field regular skeds have to be maintained with them.

On entering either the radio office or George's cabin, his neatness and handiwork are immediately apparent. Earlier in the year he built a small sledge from old skis to be drawn by three huskies.

He had a lot of fun from it but his choice of leader dog proved disastrous. George is also our typist and printer of the "Sankrant", our local newspaper.

During November we all passed through a thorough medical examination under the close scrutiny of Doctor Tollie Traut and stand-in dentist Koos Pretorius. Koos and Noel Jay made various tests with their self-built prototype toboggan, which was drastically modified to prevent slipping and digging into the soft surface. Although all problems were not completely solved, valuable experience was gained on this type of transportation

SANAE, 4th January, 1965:

The departure of the RSA from Cape Town harbour on 29th December for Marion Island and thereafter Antarctica has been met with sighs of relief by us here at SANAE. We all look forward to parcels and letters from our families and friends. A pool in which the time and date of arrival of the RSA at the Bukta has to be guessed was started.

Meanwhile the fellows at the Base are packing their personal belongings in anticipation. At times like these one is confronted with a larger than usual amount of work. Besides the normal daily routine, reports and stock lists have to be compiled by those in charge of programmes. Valuable scientific data which accumulated through the year has to be carefully packed for transportation back to the Republic.

Since the old meteorological tower was leaning over ominously the mammoth task of its reconstruction was undertaken by Franco du Toit and Fanus du Preez and it was completed before Christmas. We now have a strikingly erect triangular tower.

On Boxing Day an excursion was arranged to the old abandoned Norwegian base for the benefit of those who had not yet been there. The fellows enjoyed the outing immensely and the way in which the weight of the overlying ice has bent and shattered the woodwork within the base was very instructive and at times a bit frightening. On this occasion the old Base route was re-marked to facilitate future trips.

The task of bringing all stores of diesel, paraffin and petrol to the surface has at last been completed. The greatest difficulty was experienced with the diesel which was buried under six feet of snow on the average.

As soon as possible in the New Year a final reconnaissance of all the bukkas which hold any potential for offloading purposes will be undertaken. At present it seems as if the choice will rest between Polarbjörn and Tottanbukta. Both have certain disadvantages. However, the transfer of the two new Muskeg tractors poses problems as a strong low wall will be required. Polarbjörnbukta has a low wall of questionable strength, whereas Tottanbukta has a strong wall which may be just too high for the RSA. Furthermore, Tottanbukta is very close to the sub-station. After the final choice has been made the route to SANAE will be clearly marked by diesel drums and marked poles.

Christmas was celebrated in great style with a grand dinner prepared by Skroef van Zyl. In the course of the day contact was made with other Antarctic bases, such as Roi Baudouin, Mawson and Halley Bay to exchange seasonal greetings and good wishes.

MARION, 1st December, 1964:

The weather was very bad here during November. On the 14th the pressure rose 13.3 mb in 3 hours with winds gusting over 90 miles per hour. The rockhopper penguins returned to the station on the 3rd. We caught a fish which seems to be a snake mackerel but with an additional set of fins underneath its body halfway between head and tail. Actually we did not catch the thing—some birds were struggling with it in the water and Christo Wolfaardt took it from them.

MARION, 31st December, 1964:

December has been a very busy but enjoyable month on Marion. Our Christmas dinner will long be remembered, especially Loutjie de Beer's sheep steak, prepared by a process which he should patent. Unfortunately our beautiful Christmas tree caught fire during the celebrations and in the ensuing scramble for fire extinguishers the dinner came to a rapid end. A dove was trapped which we could not identify. We are keeping it for the ornithologist of Prof. van Zinderen Bakker's team to identify.

MARION, 3rd January, 1965:

On the afternoon of 3rd January we sighted the first iceberg of the year and at 9 p.m. on the same day the RSA also arrived with the team of scientists under the leadership of Prof. van Zinderen Bakker. The bird, animal and plant life of the Island is going to be studied and a geological survey carried out. The elephant seals had to get used to a strange being swimming with them under the water—the marine biologist brought along a special diving suit. Some albatrosses now have thermometers in their nests and the old inhabitants of the base can only hope that they are not also being studied at the same time.

GOUGH, 4e Desember, 1965:

Die afgelope paar dae was die weer aan die kalm kant hier op Gough, maar soos ons deur die handelsradio so dikwels vertel word sal die son môre weer skyn. Dit is dan ook wat gebeur het en saam met die sonskyn het die seldsame windstilte gekom. Op sulke dae word die plate albatrosse wat hier digby die kus wei op ons eie manier vertolk, d.w.s. waar albatrosse wei is daar vis. Kort voor lank lê die blinklywe dan op die rotse en hap-hap vir oulaas na die blou lug voordat hulle panwaarts gevoer word. Dat die klassieke vistermanstorie van die grote wat weggekom het voor die aand om is gaan volg is so seker as die feit dat die MCC moeilike klante is. Dit gebeur darem nie altyd nie. Hiervan getuig die twee blouvisse van 55 en 25 lbs. onderskeidelik wat saam met 20 of wat kreefsterste ons 8 kubieke voet yskas so ylbevolk laat voorkom het soos 'n miernes.

So tussen die geblaf van die terugkerende robbe word die skril geluid van die seeswaeltjies dikwels gehoor. Hulle kom drie of meer bymekaar voor en dit wil voorkom asof in hulle geval die spreekwoord "two is company, three is a crowd" nie steekhou nie. So van skares gepraat, hier is nou eers 'n skare hoenders op die werf. Behalwe die grotes kom en gaan hier sowat 63 kuikens wat wissel van dagoud tot stokoud.