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A VISIT TO CAMPBELL ISLAND

by Hon. T.L. Macdonald, M.P.

(We are greatly indebted to Mr. Macdonald, New Zealand's Minister of Defence and Minister in charge of Civil Aviation, for the following account of his recent visit to New Zealand's furthest south occupied territory. Ed.)

I have been asked to write something about a recent visit to Campbell Island, made in March last, when the "Holmburn" took stores down to the five men at the weather station there. Years ago, I heard mention of Campbell Island fairly frequently as I knew some of the people who had been there in the days when it was functioning as a sheep-run. They told tales of the hard life of the shepherds there, which are more readily appreciated after one has seen the place. There was no radio in those days and the men who worked there were entirely cut off. One group went down, ostensibly for six months, but this dragged on to two years. They had every opportunity for the development of personal initiative in respect of their own welfare during their enforced stay. In earlier years sealers and whalers made Campbell Island a temporary base and the name crops up through the recorded doings of those hardy seamen. A romantic touch has been added by references made to an exiled Scottish princess but there has been an inclination towards "de-bunking" that in recent years.

During World War II attention was paid, although little publicity was given, to Campbell Island, for a group of coast watchers was established there. Two groups were also located on the Auckland Islands, where evidence was found indicating that an enemy ship had filled her bunkers with rata to supplement her coal. The official history of the Cape Expedition, as it was known in the interests of security, makes interesting reading.

Early this year, while on a visit of inspection to the Civil Aviation premises at Shelly Bay, Wellington, I saw various tins being packed with items of stores, soldered down and addressed to "Campbell Is." Memory stirred and the idea came "Why not go down and have a look at the place?". A further incentive was provided by the fact that a report a year or two earlier had suggested that conditions were not of the best. A chance to see for oneself was too good to miss.

The idea soon became reality and the 11th March was fixed as a sailing date from Dunedin. Man may be able to foretell the weather but he can't control it as yet, so the 11th and 12th went by with little opportunity for the "Holmburn" to work cargo, owing to rain. Friday the 13th March saw everything cleared up on board and about midday we were chugging down the channel. Friday the 13th? Of course that doesn't mean a thing today. Old superstitions are dead. This is a scientific age where things can be explained. Or pretty well explained, anyhow.

We were a party of seven and we swung our hammocks in the poop. Not five-star accommodation but it could have been a lot worse. Dr. Ritchie Simmers, Asst. Director of Meteorological Services, led a group of five, Ted Garlich and Vern Gerard from D.S.I.R., Jim Dunn and Graham Neville from Civil Aviation and Barry Marshall, an architect from Ministry of Works. We did not know how long it would take us to get our sea-legs but we soon found out that we would be tested very thoroughly, for on nearing Cape Saunders, speed had to be reduced because of a dirty sou'westerly. During most of the

afternoon we went up and down in the one place. A line on the lighthouse to the hill behind showed little sign of progress. Captain Matheson's decision to return to a sheltered anchorage at the Heads was received with approval by his passengers. The anchorage was reached, an anchor was dropped - and so were fifteen fathoms of cable, because of a defective shackle. There was only one thing to do; return to Port Chalmers and ship another anchor. Did anyone refer to Friday the 13th? Most of us did at that stage but the scientific explanation wasn't available.

To shorten the narrative, we finally sailed on Sunday morning, found conditions a little better although still unpleasant outside and hugged the coast to Kaka Point near the Nuggets where we anchored for the night. Six a.m. on Monday 16th March saw us heading almost due South. For two days we had the wind to contend with and at times could only make four or five knots. A fair sea was running and as the second mate put it, it was a case of "one hand for yourself and one hand for the ship" most of the time. The passengers had turned to as stewards, as the previous steward had signed off in Port Chalmers. It was fortunate for us that he did, as it gave us something to do. The mates and engineers didn't appear to suffer unduly because of it, and the cook showed a nice degree of understanding. His efforts, in difficult conditions, were very satisfying.

Wednesday the 18th saw a change of wind and "Holmburn" romped along as if she were keen to get there. Unfortunately the nor'westerly brought thick conditions and visibility was down to approximately three miles as we neared the island in the evening. Despite the fact there had been no "fix" that day we made a landfall that took us within a mile and a half of Bull Rock at the north east corner of the island. From there, down the east coast to Perseverance Harbour, it was a race with darkness which was fairly dense when the anchors were let go under Mt. Beeman. Lights set up ashore by the men of the weather station were a great help.

We had heard over the radio that cigarettes were scarce at the Island, so were not surprised to receive an early visit, despite the darkness, from three of the lads, Pat Sewell (their leader), Rob. Stanley and Terry Bannister. They all sported beards, in accordance with local custom. The two left ashore were Ralph Hayes and Trevor Talbot.

Perseverance Harbour has a reputation for sudden and violent winds, usually referred to as "williewaws". Soon after our visitors came aboard, one of these developed and became so strong that their dinghy and outboard motor had to be hauled on to the deck of the "Holmburn". We hunted up spare blankets and they stayed the night.

Daylight gave us our first real look at Campbell Island. We had seen the coast line the evening before, rugged, precipitous and forbidding. Now we could see tussock clad hills running up to rocky tops, not unlike parts of New Zealand's back country, or the tops of the hills between Lyttelton and Christchurch. Odd patches of dracophyllum scrub are scattered here and there. There is no manuka and no New Zealand trees. In some respects the country resembled parts of the Highlands of Scotland. We were told and soon were to see for ourselves that there is no soil on the island, only peat. Even on the tops of the ridges and among the rocks there is peat. The growth of tussock, with finer native grasses in between, is strong, but careful shepherding must have been necessary to minimise sheep losses in the earlier days.

Our first day there was given over to getting the cargo ashore. This was made easier because of the excellent surf-boat that we had brought with us. By evening, there was not a great deal left for the following day. Food, coal, oil and petrol, personal gear and, perhaps most important, mail, came ashore steadily. Hens, a rooster - a fine-looking bird who looked as if he appreciated being lord of Campbell Island - and three Cheviot rams were also landed in their turn. The rams were for introduction to the dwindling flock that has survived from the sheep-run days. I had hoped to see some of the local animals but they were too far away from us to be reached in the time available. Campbell Island covers 44 square miles. The Cheviots, because of their hardiness and active nature should prove a useful cross to introduce down there. An even better one might have been the Highland Blackface whose home among the glens and bens of the Highlands is not unlike Campbell Island, but none of that breed is available in New Zealand. The present flock supplies the occasional bit of fresh mutton to the men down there.

To get it, they have to go out and stalk a sheep as we would a deer.

The main camp, a short distance in from the head of Tucker Cove, is partly a legacy from the Cape Expedition days, but is reasonably comfortable. It will not last indefinitely, of course, and its replacement is even now under consideration. Campbell Island is no place for anyone who is not prepared to help himself and those with him to make the best of things. I would consider the five men there at present have done very well in this respect and there were many examples of the handiness and nattiness which make all the difference as between comfort and misery.

On our second day I climbed the Col to the anemometer. A straight track to the summit leads from the camp and Pat Sewell said forty minutes was average time to the top. I went very well for thirty minutes and thought I would do better than the average but the last abrupt stretch was what told, so I admired the view, studied the local plants and took photographs of nesting royal albatrosses as I zig-zagged my way up without reference to my watch. The anemometer must be in one of the windiest spots in the world, with little between it and the South Pole and the whole sweep of the Southern Ocean for the wind to gain velocity. Some of the members of the Danish expedition on the "Galathea", who visited New Zealand two or three years ago, had carved their initials on the wooden framework. North West Bay with its sandy beach was clearly seen, and in the other direction North East Harbour with the large tussocky basin at the head of it.

There were many nesting albatrosses near the crest of the ridge on the way to the Col. They were quiet enough and were not disturbed by a near approach. Right on the top of the ridge they were assured of an easy take-off because of the wind. A full stretch of the wings, then up on tip-toe and they were airborne. A calm day, if such a thing ever occurs there, must leave them feeling a bit silly.

The weather had improved as I went back to the camp and the periods of sunshine had some warmth in them. The local residents told us the weather there, in their experience, was not as bad as they expected. Hours of sunshine are about 700, and the rainfall is about 60 inches but is spread over a great many days. Their heaviest frost is of the eight degree variety and their occasional snowfalls do not lie for any length of time. The wind is usually in evidence, however, and a windproof parka is an essential item of equipment, like the beard, which saves the face a good deal of windburn.

That afternoon we went over to Camp Cove, where I expected to see an acre or two of Scotch heather, because of what had been written about the place. The heather is there but is limited to one small plant, which seems to be having a struggle. Some New Zealand flax-bushes just above it are doing very well. The overgrown remains of an old camp site are there, also. The only tree on the island, a variety of spruce, is at the head of Camp Cove, but the unrelenting wind has not permitted much upward growth, and it has a stunted bushy appearance.

Nellies (giant petrels) were feeding on a dead sea-elephant on the beach at Camp Cove. One was so gorged that a take-off was beyond its powers. It thrashed and crashed along the beach but just couldn't get airborne. There were many skua-gulls there also, cheeky, tough-looking customers with a very confident look in their eye. There are numerous stories about their predatory pranks and their willingness to tackle anything, even a man.

In Tucker Cove and in Camp Cove there were plenty of sea-elephants, mostly bachelor bulls, lying around on the tussock or in mud-wallows. The wallows are incredible, being pools of black liquid mud which smell like a badly-kept pig-sty. In these the bulls apparently lie for several weeks at a time when they come ashore, and in some cases, cannot get out because of the slippery sides of the wallow. A little help with a shovel on the part of some of the weather station staff has prolonged the life of one or two old veterans. The young sea-elephants are likeable little chaps, extremely helpless on land, with very large dark eyes that are full of innocent curiosity. The old ones grow to a great size. We stepped one as being 15 ft. but they grow even larger than that. When two disagree and rear themselves up in anger, the ground shakes for a chain or two around, when

they thud down again.

Little remains of the old homestead and sheep yards. A pile of bricks, a rusted double-oven coal range, and odd bits of timber mark the site. The wires and iron standards in the old fences are corroded through. Most of the wooden posts are rotten at ground level. Where the tussock has been tramped out by concentrations of sheep in the yards, little grass has replaced it, just mosses and lichens.

Contrary to general expectations, one cannot live on fish at Campbell Island. All the fish caught are affected by a worm which embeds itself in the flesh. A piece of filleted fish held up to the light will show a number of these worms. Even the small flounders caught in the shallows round Perseverance Harbour are affected in the same way. The black cat at the camp has a fish meal now and then, but the flounders are cooked first as a health precaution.

To many people, the idea of life on an island as isolated and as far South as Campbell would be most unattractive, yet the five men there at present find it full of interest. The various birds, the sea-elephants, sea-lions, seals and penguins are fascinating subjects for study. The grasses and plants of the hillsides carry a story for the botanist. Isolation is reduced to a minimum by the radio-telephone. When the circuit is good, the process of conversation with New Zealand is little different from that of a suburban 'phone call here. A good variety of stores on the shelves ensures meals to suit all tastes. Each member of the party in turn has a week's duty as cook, which means that the critic can be told to do better when his week comes along. Bread is made, recipes are tried and I am sure some of the culinary experiments would arouse envy among Home Science students. To men who are hardy and willing, there will be no flavour of exile about such a life. The routine duties of the weather station require regular attention but there is time for camp improvement and hobbies. Photography is popular and at the moment will be more so than ever, because an enlarger went down with us on the "Holmburn". It was set up ready for operation just before we left.

It was with regret that we embarked for our return to New Zealand. Our hosts were good types and we were sorry to leave them. A few more days would have permitted visits to outlying parts of the island, but with the "Holmburn" on charter that could not be arranged. Still, it was good to have spent some time ashore and to have seen what we did. As we steamed down the harbour, the wind rose suddenly. By the time we reached the open sea, spray was rising like clouds of dust. Perhaps a typical Campbell Island farewell on the part of the elements.

The return trip was uneventful, with the final day's run made in bright sunshine. The early morning scenes on a dead calm Otago Harbour as the "Holmburn" moved up to a berth at Dunedin furnished an appropriate climax to a trip that will live long in the memories of those who made it.

F.I.D.S.

All F.I.D.S. bases have been successfully victualled and the personnel exchanged in the course of two voyages by the "John Biscoe". H.M.S. "Snipe" has visited the northern bases as has been the habit each season recently.

On the 4th February at Admiralty Bay, King George Island, in the South Shetlands group a party of four F.I.D.S. men were caught in a sudden storm when in a small open boat. Forced to land at a point inaccessible from their base, it was fortunate that they were seen by the base wireless operator who reported their position. After being exposed without tents or equipment for four nights they were picked up by H.M.S. "Snipe" and returned in good health to their base.

From Hope Bay on the 8th February a subsidiary meteorological station was established by a sledge party at View Point (63°32' S; 57°27' W). This provides observations on the Weddell Sea side of the peninsula and gives an interesting comparison with the permanent station at Hope Bay (Base D).

From Hope Bay a sledge party has again travelled round the South side of James Ross Island and visited Nordenskjöld's old hut on Snow Hill Island. This party has completed the survey of this area except for a small part south of Cape Gage where open water prevented travel. Geological work was also done during this journey.

Other journeys from Hope Bay are in progress but reports have not yet arrived.

The "John Biscoe" damaged her rudder in the Falkland Islands and this delayed the relief of bases A and F at Port Lockroy and the Argentine Islands respectively. She has now returned to the Falkland Islands.

In February two huts which had been placed by the Argentines and Chileans close to the British base on Deception Island were removed. Only the Argentine hut was occupied at the time, and then by only two men. These were arrested by the British Civil Authorities and removed from the island. They were later sent back to the Argentine.

(Information by courtesy of Falkland Islands Dependencies Scientific Bureau.)

AUSTRALIAN EXPEDITION PLANNED

The Australian Minister for External Affairs (Mr. R.G. Casey) announced in the House of Representatives on March 20 that Australia would send an expedition to the Antarctic continent next summer to establish a scientific research station in Australian Antarctic Territory. The expedition is to leave Melbourne about 11th December, and proceed via Heard Island to set up a station on the continent, somewhere in the Western section of Australian Antarctic Territory, between longitudes 55°E and 80°E, most probably on the coast of MacRobertson Land or Kemp Land.

Negotiations are proceeding for the chartering of a suitable ship.

Sir Douglas Mawson, who is a member of the committee planning the expedition, said that it was intended to begin with a small party, and after preliminary investigation to extend the scientific staff to cover a wider field of research.

It will be necessary first of all to set up solidly-built/meteorological huts. A preliminary survey of the surrounding country will then be made and weather information sent to Australia. In the second year the station will, it is hoped, be operating at full strength with several more scientists and their specialised equipment and more elaborate meteorological apparatus.

Most of the men selected for the first year's party have already served on either Heard or Macquarie Islands. The winter party will probably comprise:

1. Surveyor and Office-in-Charge.
2. Medical Officer/Biologist/Administrative Officer.
3. Geologist/Assistant Surveyor.
4. Technical Superintendent.
5. Meteorological Observer/Photographer.
6. Engineer/weasel-driver.
7. Radio Operator.
8. Carpenter/storeman.
9. Cook.

The programme of work for the first year is to build the station, carry out exploration and mapping of the surrounding country, survey the Antarctic coast from the ship, make routine meteorological observations, carry out preliminary biological and geological investigations, and do certain preliminary measurements in magnetism and gravity while the ship is at the station site.

It is expected that most of the programme in physics, geophysics and biology will commence in the second year.

In announcing the plans, Mr. Casey referred to the meteorological data necessary for accurate weather forecasting, the deposits of coal and many valuable minerals already known to exist, strategic considerations especially with regard to trans-Antarctic flying, potential food resources, and the complete mapping and geological survey of the Australian Antarctic Territory.

Planning and organisation are being carried out by Mr. P.G. Law, Director of the Antarctic Division of the Department of External Affairs, and his staff.

Commenting on the forthcoming expedition in an interview for the Adelaide "News", Mr. John R. Rymill, leader of the British Graham Land Expedition of 1934-1937 and now farming in South Australia, said there was great mineral wealth in the Antarctic just waiting for development. "In Greenland, mining operations are carried out in the summer", he said, "and the winter period is used for maintenance of equipment. A similar thing could happen in Antarctica. It's by no means a man's country alone. Women could live there in settlements."

Hazardous Relief.

During the changeover at Heard Island this year, the "Tottan" narrowly missed being wrecked twice.

On the first occasion a sudden gale sprang up during the night. Though the ship was anchored, it drifted over a mile in five minutes dragging its anchor and was only 120 yards from the rocks when the engines at last began to respond. However, the anchor winch broke under the strain and the anchor itself had to be jettisoned.

The second time occurred four days later when an attempt was being made to recover the anchor. Its position had been marked on the previous occasion by a floating petrol drum tied by a hawser to the anchor's cable. In spite of accurate steering the hawser became twisted round the ship's rudder and the ship again drifted towards the rocks. The spare anchor could not be used as it might have been lost like the first, and so despite the great risk of fouling the ship's propeller, the engines were started. Luckily the blades cut through the hawser and the ship got under weigh.

The accident unfortunately prevented the chance of landing on the unexplored McDonald Islands which lie about thirty miles west of Heard Island, and are also owned by Australia.

Since the departure of the "Tottan", members of the Heard Island party have been busy settling into their new quarters and growing beards. Some spectacular ice avalanches and vivid aurorae have been seen. Two severe magnetic storms have blacked out radio communications for a total of 25 days.

Four of the sheep have died of exposure, but the rest are thriving on Mount Drygalski sheltering in a cave. An ingenious ice house for storing meat has been constructed by Dr. Gwynn which can keep half a ton of meat. The 80 dogs at the island require 200 lbs. of seal meat a day.

The major task of the party has been the erection of Rawin apparatus on the lava flats above the Station.

The tents made by the party are most successful. A party including Bechervaise, Gwynn, O'Brien, Elliott, and Fox, has recently made a four-day biological excursion which included Laurens Peninsula, Red Island and the Vahsel and Abbot Smith Glaciers. The party lived principally on a diet of penguin steaks. The penguin rookeries were full of moulting birds, and ringed penguins, which are rare at Heard Island, were banded. Some other antarctic species - giant petrels, sooty albatrosses, sheathbills, and skuas - were banded and fur and leopard seal counts were carried out.

(Antarctic Division)

A reporter of the Melbourne "Age" on board the "Tottan" adds that the ship called at Kerguelen and then encountered a hurricane 1500 miles south-west of Perth. At 2 a.m. Friday, 6th March, the barometer sank to 28.1 inches, fifty-foot waves bent ventilators and snapped a wireless aerial, while seamen

worked on decks sloping 40 degrees to secure fuel-drums that had broken loose. The "Tottan" had to heave-to for 22 hours in what experienced officers described as the worst storm they had ever encountered. However, no one was injured and the "Tottan" reached Melbourne on 18th March, only a few days behind schedule.

For the thirteen "reliefs" required at Heard Island, it is reported that this year there were 300 applications.

The Macquarie Relief.

The fourteen members of the relief party for Macquarie Island left Melbourne on the "Tottan" on 23rd March.

During the changeover new cosmic-ray gear was installed and a new auroral hut erected at Hurd Point on the southern tip of the island. The setting up of this new post was described by Mr. P.G. Law as the toughest job the Antarctic Division had faced in five years of work. The only approach to the site from the sea is up the face of a 1,000 foot plateau. After the relief party landed on the island twenty of the strongest men from both old and new parties were selected to carry out the building task. A winch and ropes were used to hoist stores and building materials to the top of the plateau.

The new observatory will be a two-men outpost for auroral and meteorological observations. It will be used for the taking of photographs of the aurora simultaneously with photographs taken at the main base. The two men will have to tramp 22 miles from the main camp and will be relieved every fortnight.

The Antarctic Division reported on 28th May that the new post is now working to routine though no spectacular displays have yet been recorded. The new party as a whole have been busily engaged in cleaning up and getting everything in working order.

Mr. R.F.M. Dalton, a former R.A.A.F. Group Captain, has been appointed Curator of Macquarie Island, to supervise and control the collecting of birds' eggs, birds and animals.

(Antarctic Division and Press Reports)

Thirteen scientists and technicians returned to Melbourne on April 19th after twelve months on the island. The leader, Mr. J. McCarthy, said the island was "rough, wet and windy, but not too cold". The lowest temperature was 24 degrees and the highest 51. He already wants to go back, although he had spent a year on Heard Island before going to Macquarie.

On one occasion a pontoon laden with supplies and 10 44-gallon drums of oil capsized. Most of the supplies were recovered. A member of the expedition was thrown into the water when the ship's motor-boat was dashed on to rocks. He was swimming for about 15 minutes in freezing water before being rescued.

(Melbourne "Age")

The "Tottan", which brought the party back to Australia, sailed for Norway on April 21st. She has made six Antarctic voyages during the last two summers with French and Australian parties.

KERGUELEN

France's Antarctic Outpost.

When some of the men from Heard Island visited the Frenchmen at Kerguelen with whom they had been in radio contact, they expressed themselves as "stupfied" by the standard of comfort at the French post. What sort of a place is this bit of France in the sub-Antarctic?

"Les Iles de Kerguelen" lie approximately in lat. 50°S. and long. 70°E. roughly half-way between South Africa and Australia, about 3,000 miles from both, but only 300 miles from Australia's Heard Island. There is one main island and about 300 smaller islets. The big island, some 87 miles long, is largely composed of a series of great peninsulas, separated by deep bays and gulfs. The comparatively small central portion consists of a high

plateau, rising in the south to the peak of Mt. Ross (6,430 ft.) and in the west to the great Cook Glacier.

The Great South Land at Last?

The island was discovered in February, 1772, over 180 years ago, by the Chevalier Yves de Kerguelen, a Breton, who was searching for the Unknown South Land, and who was firmly convinced that now, at last, he had found it. On his return to France he wrote jubilantly, "The lands which I have had the good fortune to discover appear to form the central mass of the Antarctic Continent; a fifth part of the world ..." He proudly named his discovery France Australe, South France, and waxed lyrical about its importance and value to science, and to France. He returned to "South France" two years later, and was soon a sadly disillusioned man. Here was no continent; only a desolate weather-beaten island. He took formal possession of it; but then France forgot all about it for nearly a century.

The ever-questing Cook visited it during his third voyage in 1776. He says he might well have dubbed it "Isle of Desolation", but as a tribute to its discoverer he gave it the name "Kerguelen Land".

Ross in 1849, and the "Challenger" expedition and British and German observers of the Transit of Venus in 1874, were among the few scientific visitors before the end of the century, but they were by no means the only visitors. American sealers were busy at Kerguelen soon after its discovery, and the hunt for whales began in the middle eighteen-hundreds. But the sealers and the whalers were not men of many words, and the records of their bloody activities are scanty.

In 1893 a provision depot was placed on the island. In the early nineteen-hundreds two French naval officers, the brothers du Baty, one of whom, Rallier, had been in the Antarctic with Charcot, made a survey of the whole archipelago in a tiny 40-ton vessel which they named the "J.B. Charcot". According to veteran George Leggett of Melbourne they also got a profitable cargo of oil.

Any Money in it?

In 1908 the brothers Henri and René Bossière of Le Havre obtained a 50-year concession from the French Government for the exploitation of the islands. By 1911 they had introduced 1000 sheep, but their "Port Couvreur" sheep-run on the east coast was abandoned in 1914 and the sheep dwindled away. Another attempt to farm sheep was made in 1927, but this effort lasted only till 1932. To maintain sheep it would be necessary to store feed and provide shelter for the animals during the desolate winters.

The Bossières also tried whaling and sealing and with a Norwegian team set up a shore station at Port Jeanne d'Arc in 1908. After a break during World War I the station began operations again and was in use till 1928. Then came the day of factory-ships and in 1931 systematic whaling ceased, though sporadic visits have been paid since by other whalers, chiefly from Australia.

A Man and his Wife.

M. Aubert de la Rue has been chiefly responsible in more recent years for putting Kerguelen in the news. In November 1928 - February 1929, and again in 1931, accompanied only by his wife, he lived on the island, exploring it from end to end. A scientific expedition on the "Bougainville" visited the island in 1939, and M. de la Rue returned in December 1949 on the survey vessel "La Pérouse" as geologist to a reconnaissance expedition, sponsored by the French Government, under Lt. Col. Sicaud, Chief Administrator for the Colonies. Between 11th and 28th December some 130 tons of stores and equipment were landed and a shore station was established. During this time the indefatigable de la Rue made geological investigations in the vicinity. When the "La Pérouse" left for Madagascar in January 1950, fifteen men were left at "Port aux Français". On 5th April 1950 the "Commandant Charcot", back from Adélie Land, took all the members of the shore party on board en route for France.

A party of some 45 scientists and technicians led by Martin de

Vivies reached Kerguelen on the "Italo Marsano" towards the end of December, 1950, with building material and engineering equipment for the construction of a weather station and airfield on Presqu'île Courbet (Courbet Peninsula). The weather station began transmissions in January 1951. In October a party of 50, including Madame de la Rue, left Marseilles on the liberty ship "Vercors" to complete the installation and to construct roads etc. This was the beginning of a long term scientific programme which is still being developed.

The latest relief party, 43 men under M. A. Prues, reached Kerguelen on 26th December last on the "Vercors". The Administrator in Chief of La France Outre-Mer, M. Sicaud, is also in residence on the island. 1200 tons of equipment and stores were landed in ten working days. By the end of March an insulated metal building 55 ft. by 26 ft. designed for living quarters, two store-rooms (65 ft. x 33 ft. and 39 ft. x 33 ft.), an observatory for the study of atmospheric electricity, and two masts each 52 ft. high had been erected despite unfavourable weather conditions and without any interruption of the regular routine of technical and scientific activities which comprise, in addition to general geographical research, geology, mineralogy, biology, the study of terrestrial fauna, ornithology, entomology, and marine biology. The radio-station transmits to Cape Town not only the weather observations (continuous from 0000 to 1800 G.M.T.) of the Kerguelen staff but those from the island of Nouvelle Amsterdam further north and certain of those from Heard Island. It is planned this year to extend the work on Kerguelen to include research in botany, ionospherics, atmospheric electricity, magnetism and seismology.

All Home Comforts, but -

Life on Kerguelen is hard, but the French party is well prepared. The chief drawback of course is the weather. Kerguelen is abnormally cold and desolate for its latitude, with a mean summer temperature of 43°F and winter 33°F, a little over 37°F. for the year (in New Zealand it is about 53°F.) Fine days are rare, three or four a month as a rule, and the almost constant westerlies not infrequently reach 125 m.p.h. Torrential rain is varied with fog and snow.

Travel in the interior of the island is made difficult and unpleasant not only by the tempestuous weather conditions but by the many icy bogs and frequently-flooded rivers. Further up are rock-strewn areas slippery with ice. The high inland plateau is practically devoid of life, but near the coast the usual sub-Antarctic fauna abounds: penguins and other birds, including the savage and rapacious skuas, ponderous, sleepy sea-elephants and such introduced wild-life as rabbits, dogs and mice, which speedily invade any camp site.

There are no trees on the island, and few plants save low-clinging mosses and lichens which hug the ground like little cushions. A unique feature is the famous "Kerguelen Cabbage", a rather bitter but edible plant which has been much used as an anti-scorbutic.

But Kerguelen is not without its charm. Its fiords and the background of soaring heights have a stark grandeur of their own, and when the sun does shine it is a land of many colours set off by the dazzling whiteness of the thirty-mile long Cook Glacier in the rear.

"Port aux Français"

The base, Port aux Français, today centres round two large wooden buildings, 180 ft. x 28 ft., with sleeping accommodation which includes eleven one-man cubicles, living rooms, two large laboratories, a bakery, a ciné-photo laboratory, kitchens, bath-rooms, and a three-ward hospital complete with tiled operating theatre, dispensary, X-ray room, etc. Strategically placed at convenient distances from the two main buildings (the French have not forgotten the Adélie Land fire) are an upper-air meteorological station, two independent insulated buildings designed for living quarters, a food store and two other wooden store-rooms, a workshop, a power-generating plant, an ionospheric station, a radio transmission station, an incubator house, a hot-house and a building for soil-less gardening.

The whole camp is supplied with hot and cold water and central heating, and there are 600 metres of metallised road from the landing-place to the camp.

A priest is attached to the station - also a bar-man. And there is French cooking.

A correspondent of the Melbourne "Age" who accompanied the ANARE party which recently visited Kerguelen reports Col. Sicaud as saying, unofficially, that Australia may one day be able to share with France the use of a new naval air-base being developed on the islands. Col. Sicaud, the correspondent says, admitted that maintenance of the outpost imposed financial strain on France. If Australia or South Africa contributed towards the expense, they would gain in return "invaluable meteorological, radio, harbour and aerodrome facilities." France is at present building two major air-fields on the main island. Plans for one of them include two international-standard intersecting air-strips of 3,000 and 2,000 metres. Hangars are to be dug into the hills and facilities for sea-planes are being pushed ahead. This work should be completed by 1956.

A specially-built 86-ton motor-vessel, carrying sails, is to arrive shortly to facilitate topographical, geological and oceanographical surveys, and a Catalina flying-boat will give added assistance.

Within a year the settlement hopes to be self-sufficient in food, by employing chemically-augmented stock feeding. Already the farm-yard boasts a mule, milking cows, fowls (with chickens in incubators), pigs, goats and rabbits, with vegetables growing in greenhouses.

France seems determined at last, in a fine spirit of co-operation with other nations at work in the sub-Antarctic, to exploit the resources of her tempestuous southern isles to the full. If determination can win through, Kerguelen's "South France" may yet prove a prosperous outpost of La Patrie far down in the Southern Seas.

(Information by courtesy of French Legation in New Zealand and Ministère de la France d'Outre-mer.)

THE ADELIE LAND EXPEDITION.

Expéditions Polaires Françaises have kindly sent us the following note.

The third party came back to France at the beginning of Spring, 1953. Five men arrived by air in February, two others by ship with the equipment, the sledge-dogs and two penguins.

After the fire of January, 1952, the base at Pointe Géologie became the main base. The party under the leadership of Mario Marret, included Jackie Duhamel, Georges Lepineux, Jean Prevost, Jean Rivolier, Roger Vincent and an Australian representative, Robert Dovers. The main task was a full study of the Emperor penguins. Several long-distance journeys were accomplished. In particular, they returned to Fort-Martin (the original base. Ed) to recover material. A journey across the Antarctic plateau permitted the siting of the most westerly rocky group on the Adélie Land territory: so we can now in Paris establish an excellent map of the coasts of Adélie Land.

The third party is now in Paris, preparing the publication of their scientific results.

A correspondent in Paris of the "Sydney Morning Herald" reports that only two of the 10 Emperor penguins brought from Adélie Land last year survived the journey. They were sent on to Switzerland, to the Basle Zoo, one "with his head between his legs."

The 21 returning huskies were more fortunate. A few weeks before the Mekong's arrival at Marseilles, the director of the Expedition remarked over Paris radio that homes were required for the dogs. About five thousand French men, women and children telephoned, wrote or went in person to the Expedition's Paris office in hopes of becoming husky-owners. One lady wanted a gentle husky puppy to play with her four young children! Many anticipated housing their dogs in small Parisian flats.

When two of the dogs which had been taken by Expedition members arrived at the Gare de Lyon in Paris, some of the members of the first and

second groups had come to meet their comrades of the third year. The station platform resounded with delighted cries of "It's the old boss." Boss was an original member of the Adélie Land expedition; he had spent three years in the Antarctic, beloved by each successive party.

"DISCOVERY II"

In a congratulatory speech following Dr. H.F.P. Herdman's address to the Royal Geographical Society on 9th June, 1952, on "The Voyage of Discovery II, 1950-51" Mr. W.R.J. Cook, Chief of the Royal Naval Scientific Service, said that the data collected by Dr. Herdman and his party of scientists (which included for the long summer cruise in the South Pacific, Messrs. Bary and Dawbin of New Zealand) would, with what had gone before, enable a reasonably consistent survey of the Southern Ocean to be written. This would take several years, and during that time it was not expected that the Discovery II would make a further voyage to the Southern Ocean. Instead, the vessel would try to further the understanding of some of the basic processes which influence the physical conditions of life in the sea.

DUNCAN CARSE EXPEDITION RETURNS.

(See "Antarctic News Bulletin No. 9")

The six-man expedition to South Georgia led by Duncan Carse and (according to a newspaper report) "backed by the Geological Society and the Colonial Office" arrived back in England in May last year on the tanker "Southern Opal".

The expedition, which Carse had estimated would cost £2,500, aimed at a geographical, biological and meteorological survey of the island. It left Glasgow in September 1951 and was in the field for five and a half months. The longest period they were away from a sub-station which they had set up was 30 days. Most of their travel was by dog-team. The leader claimed that the expedition had been "moderately successful". They succeeded in finding and negotiating a route across the island, the first to do so since Shackleton, Worsley and Crean in 1916, but starting - unlike Shackleton - from the inhabited side of the island.

(Information chiefly from "Western Mail")

BYRD OFF AGAIN?

On May 26th Rear-Admiral R.E. Byrd announced plans for another Antarctic Expedition as soon as the war in Korea ends. He said he did not want to request aircraft and ships while they were needed in Korea. But, he said, "There is a land area in Antarctica as large as the United States that, so far as is known, has never been seen by the human eye. It is a vast, untouched reservoir of natural resources. As we recklessly squander our natural resources in this country, we will come to need these new resources. It is imperative that they do not fall into the hands of a potential enemy."

The projected expedition would be Admiral Byrd's fifth visit to the Antarctic regions.

In the "Weekly News" D.J. Exley describes an interview with Admiral Byrd, in which the Admiral said "I would like to send my affectionate regards to the citizens of New Zealand and wish them continued prosperity and happiness." He revealed that he has been working for the past three years on a secret project in connection with Arctic naval defence. The huge American air-base recently established at Thule, Greenland was one outcome of his work on defence strategy in the Far North, says Mr. Exley.

ARGENTINA AND THE ANTARCTIC

Ships of the Argentine naval task-force relieving the various Argentine posts in the Antarctic this year encountered unusually severe weather conditions with extremely low temperatures. Pack ice was met with much further north than in previous years, and the ships were unable to force their way beyond 67°S, where there was very thick ice 137 miles north of Marguarite Bay.

All the bases, however, were relieved except the furthest south one on Marguerite Bay itself. On 20th March an Avro-Lincoln of the Argentine Air Force, the "Cruz de Sur", left Buenos Aires on the first stage of a flight

to carry food and medical stores to this base, "the General San Martin detachment"; where the personnel, numbering nineteen under Colonel Pujato, will have to spend another year. It was planned to drop supplies by parachute during a non-stop round flight between Rio Gallegos in South Patagonia and Marguerite Bay, lasting, it was estimated, 12 hours. No attempt to relieve them by sea will now be possible till toward the end of the year.

A new Argentine base at Bahia Luna (Moon Bay) on the East of Livingstone Island, South Shetlands, established during the recent Antarctic summer, was formally inaugurated on April 1st. It is being manned by a naval officer and five other ranks, and is equipped with a laboratory, meteorological observatory, workshop, hospital, cinema, and a library of 500 volumes.

The transport vessel "Bahia Aguirre" of the Argentine task-force has given medical assistance to three members of the Chilean detachment at "Gonzalez Videla".

Personnel on board the tanker "Punta Ninfas" forming part of the task-force have installed a new light-buoy in McFarlane Strait between Greenwich and Livingstone Islands in the South Shetlands. This new navigational aid has been named "Escarceo".

A Peronist deputy has put forward a bill in the Argentine Chamber of Deputies calling for an extension of Argentine sovereignty to the continental shelf under the South Atlantic and to a 200-mile zone off the coasts of that portion of the Antarctic claimed by Argentina. Another deputy has submitted a proposal that an Argentine-born delegate be appointed to represent in Congress the Falkland Islands and the "Antarctic Dependencies".

At the second meeting of the inter-American Council of Jurists the Argentine delegation made "a vigorous defence of the rights appertaining to all nations with maritime coasts to extend their sovereignty to the under-water "platform" as a natural prolongation of their territory." The Argentine motion to this effect was approved by 9 votes to 6.

(Information by courtesy of the Argentine Consulate in New Zealand)

POOR WHALING SEASON

The 1952-3 whaling season closed on March 16th. Whaling fleets back from the Antarctic report the poorest season's catch since the war. In fact, the Director of Commonwealth Fisheries estimated in Sydney that the Antarctic catch of blue whales was 1020 down on last season, representing a reduction of about 30,000 tons of whale-oil. Rough weather is suggested as the main cause.

A Dutch report estimates that the combined catch of the sixteen expeditions operating was no more than 15,000 of the permissible 16,000 blue whale units. The "Willem Barendsz" realised 16,965 tons of oil, compared with 15,500 tons in the previous season.

The "Abraham Larsen", first of the British factory ships to return this year, also reports a scarcity of whales. All catches are below expectation and the entire Antarctic fleet caught about 1000 blue-whale units less than the 16,000 limit, said one of the ship's officers. The "Abraham Larsen" carried home about 9,000 tons of whale and sperm oil.

The Russian Tass news-agency reports that the Soviet fleet killed 2,800 whales. One harpooner killed 532 whales to win a "socialist competition".

The U.S. Department of Agriculture estimates the total Antarctic output for the season at 350,788 tons of whale-oil (8 per cent less than in 1951-2) and 21,209 tons of sperm oil (29 per cent less).

It is reported that the helicopter of the Norwegian factory-ship "Norhval" on one occasion found 200 whales within 100 miles of the ship.

Japanese vessel sunk.

Reports from Tokyo in the Australian press confirm the loss (see March Bulletin) of the 9,329 ton Japanese refrigerator-ship "Settsu Maru", estimated to be worth £1,000,000. The vessel sprang a leak on March 6th and the following day it was reported that water was pouring into the engine-room. High seas prevented the transfer of her 3,800 ton cargo of whale products to other ships, but all the crew were saved. The vessel sank after the crew had fought for four days to save her.

Australian Whaling Interests Anxious.

Australian whaling companies are disturbed by the threat of Antarctic hump-back whale-catching. The industry, which now reaps a £2,000,000 harvest each year from humpback products, fears that continued hunting of humpbacks in the Antarctic may annihilate the species. It wanted Australia at the International Whaling Conference in London in June to press for a ban on the catching of humpbacks in the Antarctic. A ban was in operation prior to the 1949-50 season, when the fixed quota of 1250 humpbacks was exceeded by 867. In the following season the 1250 quota was exceeded by 425 and in 1951-2 by 294. The Australian view, says the Perth "Daily News", is that since it appears impossible to enforce a quota, the taking of humpbacks in the Antarctic should be banned.

This view is re-inforced by preliminary reports on the 1952-3 season Antarctic catch. It would seem that 40 per cent fewer humpbacks were taken this year than last, the total catch being 949. The hunting of humpbacks was allowed over a period of six days, compared with five days in previous years.

Whaling Conference Opens.

The annual conference of the International Whaling Commission opened in London on 22nd June.

WHAT LIES BELOW THE ICE?

In previous issues reference has been made to the "siesmic profile" carried out by scientists of the Norwegian-British-Swedish Expedition which returned to Europe from Queen Maud Land last year. In an article in "Nature", G. de Q. Robin gives further details of this work.

The ice-shelf on which the base-camp "Maudheim" was situated (in lat. 71°03'S, long. 10°55'W) is stated to be floating. Further 'inland' coastal ice hills have been formed, where the ice is grounded. Its profile shows that at points 300 K.m. and 400 K.m. from the sea, the land is below sea-level: in these valleys ice-depths of up to 2,000 metres were measured "showing that the underlying relief must be comparable to the most striking fjord type of country at present known, such as exists on the eastern coast of Greenland". Only in a few places, as at the advanced Base, does the rock actually project above the ice surface, but "the many crevassed patches ... make it probable that in many places peaks and ridges are not covered by any great thickness of ice."

Further inland than 500 K.m. "no rock is visible and the surface essentially becomes that of a high ice plateau formed by the damming of the ice on the inland side of mountain ridges ... but the surface undulations seem to indicate that the rock floor is far from being a smooth basin."

On this route, 600 K.m. S.E. from Maudheim, the surface of the ice-sheet did not rise above 2,670 m. although the German Ritscher flying above the area in 1939 reported heights of up to 4,200 m. The highest mountains only here and there projecting above the ice-surface rose to about 2,000 metres.

THE PRIMITIVE PENGUIN

Dr. E.A. Wilson wrote in 1907, "The possibility that we have in the Emperor penguin the nearest approach to a primitive form not only of a penguin but of a bird, makes the future working out of its embryology a matter of the greatest possible importance." With this aim in mind he set out on

January 27th, 1911, with Bowers and Cherry-Garrard on a terrible journey in the Antarctic winter, during which three embryos were obtained from the Cape Crozier rookery on July 20

It was not until 1949 that Stonehouse collected a series of Emperor penguin embryos from a rookery fifty miles from one of the bases of the Falkland Islands Dependencies Survey. As a result of this expedition we now possess a new series of sixteen embryos collected between June and August and extending from the primitive streak stage to hatching. All the embryos, with one exception, are in an excellent state of preservation.....

Comparison of the development of the external form of the Emperor penguin with that of the chick and with that of other penguins .. reveals a fact not yet recorded and worthy of note. In the earlier embryos the head region is relatively smaller, the neck and tail regions relatively longer, and the curvatures less well marked in penguin than in chick embryos. These features are more marked in Emperor penguin embryos and result in early penguin embryos resembling early reptilian embryos more closely than do early chick embryos

A detailed description of the embryos is being written for publication in the near future in the Falkland Islands Dependencies Survey Scientific Reports.

(Condensed from an article by T.W. Glenister in "Nature", Vol. 171, p. 357, by courtesy of F.I.D. Scientific Bureau.)

MESSAGE ARRIVES AFTER 50 YEARS

On September 7th last year Mr. P. Larsen of Tangimoana, 10 miles from Foxton, New Zealand, found a bottle among sand dunes near the mouth of the Rangitikei River. Inside was a message asking the finder to forward it to the Admiralty. It was one of many "drift bottles" dropped into Antarctic waters by Dr. W.S. Bruce's Scottish Antarctic Expedition on December 1st, 1903. It had probably been undiscovered for many years until exposed by heavy gales. The bottle had travelled at least 10,000 miles. Other bottles dropped by the "Scotia" expedition were recovered on the Victorian coast in 1906 and 1907. These records imply minimum average drift-speeds from West to East in the Southern Ocean of approximately 8½ to 10 nautical miles a day, says Dr. J.B. Tait of the Scottish Home Department's Marine Laboratory in Aberdeen.

The "Tangimoana" bottle is now exhibited in the rooms of the Royal Society of Edinburgh, in the city where the expedition was conceived.

"ANTARCTIC ADVENTURE"

Captain John Giaever's forthcoming book describing the Norwegian-British-Swedish Expedition to Queen Maud Land in 1949-52, mentioned in Bulletin No. 8, is now announced by the publishers, Messrs. Chatto and Windus, under the title "Antarctic Adventure". This is also the title of Sir Raymond Priestley's book on Scott's Northern Party, published in 1914.

PUBLICATIONS RECEIVED

We acknowledge with thanks the receipt of the following publications:

Several numbers of ARGENTINA AUSTRAL a lavishly illustrated monthly magazine produced by the Importers' and Exporters' Association of Patagonia (Sociedad Anonima Importadora y Exportadora de la Patagonia). This attractive journal frequently publishes (in Spanish) articles on the history of Antarctic exploration as well as accounts of contemporary research in the Antarctic regions.

Several numbers of NORSK HVALFANGST - TIDENDE (The Norwegian Whaling Gazette) the monthly journal of the Norwegian Whalers' Association. This publication also gives considerable space to general articles about the Antarctic, in addition to detailed information about whaling activities in Antarctic waters.

Preliminary publications dealing with the work of the Adélie Land expedition sponsored by Expéditions Polaires Françaises. These include several brochures describing the penguin rookery near Point Geologie.