

The Greenies continued to work on the computer snag. Only to find the test equipment they were using also suspect. However, the computer itself was changed and with the able assistance of Sam Sampson and Roger Wiltshire, who did all the mechanical linkage adjustments, while, I might add, the aircraft was "burning and turning". We would all like to think that that was it, but the aircraft still has it's moments when it just doesn't want to start properly.

By Monday 13 Jan we had completed the somewhat rough crossing of Drakes passage, and had arrived off Nelson Island in the South Shetlands, where we flew both the aircraft to land yet another large survey camp party with all their various pieces of equipment.

With weather permitting we continued our vertical photography work and as we were down the Gerlache Straits and the Bismark Straits, the aircraft were used to take members of the ship's company, who were keen enough, to take photographs of the scenic beauty.

One of the odd occasions when the Flight weren't actually busy flying and when recreational leave was given, was when the ship had sailed into the Bay of Deception Island and dropped anchor. The keen photographers and sightseers were soon ashore there.

The aircraft were also used when the Captain had to go ashore to visit the Russian and Chilian camps that are also on Nelson Island. The following day, Monday 20 Jan the aircraft were involved in a mercy mission flying our doctor Surgeon Lt "Donkey" Bray to USS HERO, a small vessel belonging to the American Survey people, which we had seen while visiting Palmer base. They had got an injured man onboard.

The ships were some distance apart when the message was first received. Both then set a course towards one another. The ENDURANCE managing to do a speed of 14.5 knots, the HERO about 9. Within 2 hours of receiving the message, the ships were within 70 miles of one another, and we launched both aircraft. One carrying the Doc, the other his various first aid kits. Having arrived at HERO, the "Doc" was lowered by winch, to the small deck. The injured man could not be treated onboard, and so patient and doctor were winched back into the one helo, and both aircraft flew to a nearby Russian camp. Due to the shortage of fuel, the aircraft left the Doc to carry out what surgery was necessary, and returned onboard. Back onboard by 1615 the whole operation had taken over 4 hours to complete.

The ship had to return to the Nelson Island area, to pick up several BAS geologists, that the flight had flown to various little islands that morning. They wouldn't have appreciated being left there over night. As happened the very next day.

The weather had deteriorated quite considerably during the night of the 20th. It had become extremely cloudy and the planned "vert phot" was immediately cancelled. Although the seas could be seen to be rough, and the ship was out of limits the majority of the time, it was decided to fly. Firstly to get the geologists ashore and secondly to go and fetch our Doc.

There were 2 parties of geologists. In one there were 2 geologists and Ray Philpott. In the other 2 more geologists and Barry Kelso. The 2 separate parties were flown ashore to 2 little islands. One party had taken a 2 man tent, the other just 3 large plastic bags for protection against the elements, plus, of course, the normal survival packs.

Having dropped them off. The aircraft returned to refuel then launched once again to go to the Russian base, to collect our Doc, who being the only surgeon in the whole of South Shetlands, if not the whole South Antarctic, had carried out an operation on the 79 year old man.

During their absence, the rough seas had become even rougher, and both Lt Cdr Hurst & Lt Swain were forced to make some very precarious landings. Both of whom landed safely and without any incident. A favourite trick F/Cdr's is to bounce the aircraft onto the deck when he touches down. Even he had no need to attempt that, it happened whether he liked it or not. The weather continued to deteriorate to force 8 gales, winds of 50 knots were recorded, whistling across the flight deck. The ship pitched and rolled like nobodies business, even when she was turned to go with the storm.

By 2200 that evening, the winds had dropped quite considerably, but a mist had fallen to obscure all sight of land, and the seas were still extremely heavy. A weather forecast had not promised any change in the weather for at least the next 2 days.

All afternoon it had been hoped that a break in the weather would allow us to launch at least one aircraft to recover the stranded geologist parties, but with the mist our chances were nil and we were resigned to the fact that those ashore would have to remain there over night at least. I should imagine that everyone's thoughts were on those unlucky people. Especially Ray and Barry whose experience in survival in the ice was nil.

Wednesday 22 Jan dawned the weather was much the same as it had been the day before and the mist still remained. Mist can have quite a detrimental effect on an aircraft engine's performance, especially in the freezing conditions that we are liable to encounter while down in the ice. The speed at which air is drawn into the engine, drops the temperature a degree or so, centigrade, and in mist, the minute droplets of water can form ice, and consequently damage the rotating compressor blades inside the engine.

The morning dragged on and on, concern for the safety of the people ashore mounted. At 1200, a decision was made that one aircraft should make an attempt to launch and recover the parties.

In seas, worse than those experienced at Shag Rocks, one aircraft was slowly and painfully moved from the hangar on to the deck, every inch of the move the aircraft was secured to the deck by 4 lashings, should the ship lurch suddenly sending the aircraft sliding across the slippery deck. Eventually the aircraft, piloted by Lt Cdr Hurst, took off and quickly disappeared into the mist. He made 2 very precarious landings bringing back the 2 parties.

Soaked through to the skin and looking cold, to say the least, the geologist parties were ushered off the flight deck into sickbay, where the Doc and Scouse Mainwaring expertly examined the patients for signs of exposure and frost bite. Happily they were all okay. A good indication that Ray was okay was when we heard his first words "Give us a fag - anybody got a fag?" It can be safely said that his rock collecting days are over.

Thursday and Friday saw even more gales and heavy seas before the weather began to improve. On Saturday the weather had subsided and the ship was able to drop anchor, and the flight hastily recovered the survey party and their storm battered equipment. They hadn't gotten away lightly with the bad weather, having experienced 100 knot winds and exceptionally high tides, James Caird meeting her doom during the spell of rough weather.

During the recovery of the survey party, assistance now once again required by USS HERO, the injured man had had more troubles, and Lt Cdr Hurst (Biggles) flew the Doc to the Russian base once more.

The recovery of the Survey party was completed by midday the ship weighed anchor and proceeded south to meet John Biscoe, the BAS ship, to transfer the geologists. The flight flew in the afternoon, to carry out vert phot of the Grahamland coastline. To give an idea of the amount of film we use in 6 hours, 430 frames (9 inch square) of film was taken.

On Sunday, another 4 hours were spent doing more vert phot, before the ship began to head across Drakes Passage back towards Stanley. That marked the end of the survey work for this season. Not that that meant the end of our work. We continued to fly, keeping the aircrew's hand in at flying. We have stacks of routine maintenance to do on the aircraft almost daily. Jan Pearce can be seen puffing at his pipe, finding jobs for everyone and plenty of paperwork to plough through himself.

Joe Fallen, the flight buffer, is always on the look out for greasy spots on the hangar floor and chipped paintwork that needs the almost constant attention of a paintbrush.

We reached Stanley on Wednesday 29 Jan. A quick stop for mail, and fuel. Sailing that same day for Montevideo to pick up the new RN Party 8901. On the way up there we managed to do some missile drills. Oh how we just love those. Some flying, and plenty of painting. Arriving a day early, off Montevideo, the whole ship's company, or very nearly all, turned-to to paint the ship.

During the passage back to Stanley with the Royal Marines the seas got up, and it became quite rough everywhere one looked one could see dead or dying Royal Marines. We flew the aircraft on Wednesday 5 Feb, the intentions to carry out "troop drills" with the new Royals. They didn't really want to play, and with 3 of the poor souls onboard the CO made 3 unsuccessful attempts to land on deck, and so the idea was scrubbed round.

We arrived in Stanley on Friday 7 Feb. We flew the both aircraft on Saturday to take stores to Moody Brook and airlift old ammunition back onboard for return to UK. The ship weighed anchor at 0835 on Sunday 9th to begin His Excellency the Governor of the Falkland Islands tour. We had to carry out a check test flight on one aircraft on the morning of Monday 10 Feb. In the afternoon, that same aircraft was flown by the CO to Stanley, then 58 miles away.

It took 25 minutes to fly there, with the strong winds behind him, and 1 hour 55 minutes to fly back with 7 bags of mail. The wind being up in the region of 30-40 knots. HEGFI's tour had to be cut short because of bad weather and the ship sailed north around the top of the Falklands before heading back into Stanley, arriving at 1010 on Wednesday 12 Feb.

We flew one aircraft in the afternoon, to take a party of 6 to do some survival training. The 1st Lt, the CO, Lt Edwards, Ray Fairbanks, Pete Rendell and Ken (postie) Souch. It was noted that all were keen fishermen and amongst their survival kits, each and everyone of them took some rather expensive aids to fishing, sorry survival?

On Friday 14th we sailed from Stanley harbour at 1035, saying goodbye at long last for this season. We're now heading for home, dear old Pompey, and Gosport and Cornwall and Scotland and Manchester and Yeovil and TIVERTON (That's in Devon) and I have no idea where Lts Crocker and Swain live, but they'll know if anyone cares to ask them.

We still continue to fly. Do missile drills and PAINT, fly. Do missile drills and paint. Even when we finally get to Lee we'll fly, do missile drills and PAINT.

All told the Flight has flown 168 sorties, flown 288 hours and has done 506 deck landings.

OUR POST

ANTARCTIC MAIL

During this seasons trip to the British Antarctic Territories Bases at Adelaide, Argentine Island and South Georgia I drop off philatelic mail, and a few personal letters to have Franked at the various bases. Mail comes from all over the world, from the USA, France., Germany, Italy, New Zealand, Australia, New Mexico, and many others. A few polar philatelic clubs send some, especially from Northern Ireland. Some stamp collectors ask me to get them stamps from our various ports of call, I do so when ever possible, but sometimes it is difficult to make the locals understand what you want, and my Spanish is not very good, though in most places someone seems to have come to my rescue. In an average season I get about 500 letters and cards to post, so I am kept fairly busy. First day covers are a popular item as most will realise. If I am unable to get ashore at a particular base I pass them on to the Post Office in the Falklands or to the RRS John Biscoe or RRS Bransfield, who drop them off for me, as you can imagine I have to work closely with the Mail Staff onboard.

MAIL STAFF AND THEIR JOB

Lt Cdr Porteous - Mail Officer MAA McKie and L/S South - Postie

The following statistics may be of interest to all who sent or received mail from the ship whilst we have been away. The mail sent to us starts its journey at BFPO London, Mill Hill, and is sent to the ship on an average of one bag a day, except whilst the ship was in Antarctic regions or around the Falklands, when it was sent weekly so as to arrive on the Monday Mail Plane.

The mail received at Stanley was usually despatched 4 days before arrival, the route being via Bs As then direct to the Falklands. This proved to be one of the safest routes, we would all soon get the 'buzz' on any missing serials. The hardest times were the long drawn out periods at sea, away from civilisation such as trips to South Georgia and into the Antarctic. Despite the lack of incoming mail the crew still found plenty to write home about. The cry being echoed through the ship on the long periods, whilst the gibbet was being erected in the hold, was 'When's mail due onboard' or 'What have you done with my mail postie', but generally everyone seemed to be content with waiting for the return to the Falklands and more letters from families and friends. All of our mail sent whilst on station received the ships Antarctic cachet proving to one and all exactly where we were.

MAIL SENT TO THE UK FROM HMS ENDURANCE 1974/75 SEASON

52 bags despatched total weight 800 lb.

MAIL RECEIVED FROM THE UK

162 bags approximate weight 12 tons.

STAMPS SOLD

Total value £400.

ENDURANCE THEATRE AND WINTER SPORTS

To celebrate the end of the 1974/75 surveying season and HMS ENDURANCE's last visit to the Falkland Islands before heading North, the ship decided to put on a pantomime, organise a charity race and play a fun, charity soccer match.

The pantomime was called "Dick Whittington ON ICE" and was performed in the ship's hangar on Thursday 6 Feb. With a mixture of the survey department's rigging skills, co-ordinated by Petty Officer Jan PRIOR, the labours of the volunteer shipwrights under Chief Petty Officer John LUFF and the handy brushwork of the Marine Engineer Officer, Lieutenant Bernard SWALLOW, and Mate of the Upper Deck, Sub Lieutenant Mike WINCHURCH, the hangar was transformed from a stowage for 2 Whirlwind Mk 9 helicopters into a real live theatre. The Captain (Captain Noel BEARNE), the officers and all the ship's company, except for those on watch, attended and the numbers in the audience were increased by the Royal Marines of the new Naval Party 8901 who were to start a 14 month tour of duty in the Falklands. (Taking passage in the ship).

The pantomime was a traditional affair with 13 eccentrically dressed 'choristers' known as the "West Falkland Mutton Meat Packers Male Voice Choir" leading the proceedings with a selection of well-known and bawdy songs, ranging from "We're Riding Along on the Crest of a Wave", through "I'm a Lumberjack" to "We've Just Been Sent Down From Eton", in all of which the audience were vociferously encouraged to join. Star of the show was Richard Whittington, played by LEM(A) Steve TOMLIN, though as he kept repeating, "My Friends all call me Dick!", to which the chorus replied, after he consistently asked why this should be so, "Because he prefers Dick!" His faithful cat, Stephen, played by AA1 Chockhead SAMPSON (in a diving undersuit complete with whiskers and tail) followed him wherever he went and this, in the pantomime, led from a house in North End, Portsmouth to the Lord Mayor's house in London.

The pantomime thus told the story of how Dick and his cat leave their master's house in Portsmouth, where Squire MacErrington CB, Nutty and 2 Bars, played by Lieutenant Roger EDWARDS, and his evil beadle 'Wackie-Mackie', played by Lieutenant Simon HILL, have been cruelly treating them for a number of years, and head up the road to London to seek their fortunes. On the way they are helped, and hindered, by the Mutton Meat Packers until they meet the Fairy Queen, played with vast wand, steaming boots and "frilly" cardboard skirt, by Leading Seaman Dodger LONG, who tells his fortune and warns him of the man they must fear when they arrive in the Smoke. Just outside London they are stopped for a minute by a "useless layabout without a job" played, without difficulty, by Leading Airman "Snaps" TIMKEY and then for a much longer time by "a man of decidedly dodgy disposition", a man about town called Baron Stax. This character was played by OEM1 Piggy MARKHAM who stretched all his words and mannerisms to the limit and even offered Dick and his cat a ride, though carefully adding "Who said anything about a car?" He also raised the biggest laugh of the evening when he left off the stage and "chatted up" an Army officer, also taking passage, who was sitting in the front row. It was generally agreed that this pongo had never had the surprise of a 19 stone Baron sitting on his lap before!

In Act II 'Bad' Baron Black ("... kind and honest, not a crook, 'tween Salvador and Moody Brook ...") played by Lieutenant Art SWAIN, decided he will try for the post of Lord Mayor but the Fairy Queen thinks otherwise and announces that honest Dick will be the next Lord Mayor of London. In the Mansion House the Lord Mayor, played with beer-can-top chain of office and cocked hat, by AB Duds DUDLEY, decides that he is shootin', thro' and retiring to "a little pad in Stanley", but before he does he makes Dick, Sir Richard Whittington, Lord Mayor of London. The one-time apprentice then asserts himself and decides to get rid of his arch rival Baron Black by making him join the Royal Navy for "3 score years and 3". Taking the Bad Baron by his ear, and accompanied by loud booing from the chorus, he boots him off the stage with the words:

"The first ship where you'll get you fun,
Is known to all as the RED PLUM (ENDURANCE),
So, Bad Baron, get this truth,
You'll join next week in Portsmouth!"

The Fairy Queen then offers Sir Dick a wish, and in a rash moment Dick wishes that his ageing cat could be turned into a girl. With a great shout, a wave of his wand and a few notes from a squeaky trumpet it is announced that, "your pussy's now a piece of crumpet". Before the girl arrives though Sir Dick decides to get some new clothes and calls in 8901, the Bernards Rep, played at a mince and in dark glasses by Leading Seaman Jonah JONES. The latter though is more interested in Baron Stax and to celebrate they dance together whilst the chorus serenades them. The 'girl' then arrives and, transformed with a mophead wig, Stephen, the cat, has become Stephanie, Dick's beloved. Squire MacErrington then appears to perform the marriage ceremony and after the wedding they all depart to live happily ever afterwards.

The pantomime ended with the whole company singing a song dedicated to the South Atlantic, "Whalemeat Again", which featured a traditional chorus by 'Miss Vera Lynn' played on this occasion by Steward Graham SUMNER in Union Jack shift, auburn wig and a clay pipe'. Throughout the show the musical and lighting effects were directed by OEMechL1 John COPE and the music for the songs provided on an electric organ by the Weapons Electrical Officer, Lieutenant Yamaha DAVIDSON. The whole production was, in his own words, loosely written, loosely put together and even more loosely narrated by the Supply Officer, Lieutenant Commander Roger PAINE.

The second and third events took place 2 days later on Saturday 8 Feb when the ship arrived in Stanley. The first of these was the Round Stanley Harbour Race. This race is over a distance of 6 miles and 1975 was the third year in which it had been run. There were 29 runners who had spent the previous 2 weeks canvassing the ship for others to sponsor them. There had been no opportunity at all for any sort of training for the ship had been at sea for the preceding 5 weeks so that there were some fairly unfit, fat, shapes that lined up at the start.

Although called a road race, anyone who knows the Falklands also knows that all the roads finish about 1 mile outside Stanley. The race therefore was over open country, the route following a disused narrow guage railway track through scrubland, scattered with rocks and boulders. Fortunately it was a fine sunny day with the wind neither hindering or helping the runners. Within a mile though some of these were already walking but there was only one way back and that was around the track, down to the head of the harbour and round into Stanley. First into the lead was LAM 'Moccasins' MAGEEAN who held this for the entire race finishing with the exceptionally fast time of 40 minutes 13 seconds. Another of the ship's flight, NAM1 'Mad Jock' McGREGOR was second, and Marine 'Hurricane' HUMPHRY third. The race ended on the Stanley Football Ground where the last runner finished some 12 hours after the start. First home amongst the over-35s in 10th position was Lieutenant Commander Rodney de F BROWNE, but the biggest cheer was kept for AB 'Rats' RATCLIFFE who, towards the end, couldn't find his way to the finishing line. In error he turned into the drive of the Governor of the Falkland Island Residence, and his Excellency reported later that he and his wife were most astonished to look up from their tea and muffins and see a dishevelled and distraught runner limping frustratedly amongst their rose bushes!

With all the runners home the Captain presented the plaque to the winning Department team and announced the great charity soccer match between the Cheeseboard Wanderers (in yellow, of course and an HMS ENDURANCE XI (in red, naturally). First though a white coated LA 'Trevor the Weather' HADLAND led the assembled crowd of weary runners and spectators in a traditional rendering of 'Abide With Me'. Before the kick off too, the Cheeseboard Wanderers led by CPOWTR Ray 'Caephilly' FAIRBANK were given large pieces of this 'yellow gold' by PO Caterer Tom SAWYER and this must have had the required effect for within 6 minutes this assortment of Senior Rates and officers were one up against their juniors. The lead changed several times after this whilst the referee, Leading Seaman 'Clubs' TIPPETT dispensed fines of 10p to every player who disobeyed his whistle, and to members of the crowd who became too enthusiastic with their support. Strengthened at half time by 2 substitutes, the Reds went on to win by 3-2.

By now the wind was blowing strongly and the light failing and there was scarcely time to present another plaque before it was time to call an end to the day. The total sum raised for charity from both events, including a 'Golden Goal' and 'Forecast the Score' competition, plus lucky programme, etc raised £240. This will be added to that already gained from other events and divided equally amongst 3 nominated charities when the ship arrives home in Portsmouth on 20 Mar.

THE BRITISH ANTARCTIC SURVEY

THE BRITISH ANTARCTIC SURVEY DIVING PROGRAMME

The British Antarctic Survey has 2 biological bases - namely King Edward Point, South Georgia and Signy Island in the South Orkneys. The marine research is largely aimed at producing a comprehensive picture of animal distributions and to determine why certain animals are found in particular habitats. Animal types and numbers are related to substrate, broadly divided into mud, sand and rock; food availability, usually determined by chemical analysis of the sediments to establish the nutritional value of the 'soil', which in turn controls all the animals living on or in it, and, finally, exposure to wave action and tides which is closely related to depth.

Deep sea sampling programmes around Signy and South Georgia have been carried out from the RRS John Biscoe using grabs and trawls. However, there are severe limitations on this type of work and with the decision to expand programmes to include inshore areas other than the permanent sample sites at the bases there has come a greater demand for diver sampling. Diver sampling has many advantages over methods using remote devices such as grabs and trawls since a diver can see exactly what is being sampled and whether the sample comes from a representative location. For example when bottom trawling anywhere near a gulley or trench the trawl will always tend to run along the bottom of the trench hence it becomes impossible to sample even quite moderate slopes. Grabs tend to act similarly, as the most efficient types require a flat bottom to take a good sample. Another problem overcome by diving is that the diver can record a tremendous amount of information just by looking around while he takes a sample and this cannot be achieved in any other way - even television cameras with floodlights produce pictures of only limited value.

Another advantage of diver sampling is that success rates are usually much higher; grabs often fail to close fully hence losing the sample and nets often become fouled. Again divers can sample areas where no other method is possible such as on cliff faces, irregular rocky bottoms and among kelp, all of which usually support very rich and varied animal communities. The prolific kelp found around the shores of the Subantarctic islands provides shelter and food for vast numbers of animals in much the same way as the coral reefs of the tropics. This habitat is of particular interest as it is the home of the young stages of Antarctic Cod.

Inshore regions are usually areas of high productivity due to supply of nutrients from the land, and ample light in the shallow water which give rise to prolific plant plankton which controls the food chains which lead from animal plankton to fish then birds and mammals. It is of particular value to have a detailed picture of this so-called 'ecosystem' since, if we ultimately begin to exploit the fish stock, we will know just what factors control numbers of fish right down all their sources of food and back to the nutrients which allow the essential phyto (plant) plankton to flourish. In addition to the directly useful results of this type of research there are many unexpected offshoots which can be valuable for further application. Various sampling and laboratory techniques worked out for study of the minor animal groups are often used later for applied research on commercially valuable animals.

Diving programmes using corers which take samples of uniform size from the sea bed were run concurrently at Signy and South Georgia last winter (Aug 74) and it is hoped that these can be repeated each year in the same location to give a method of monitoring any changes that are occurring in the long term. Core samples are taken by the diver pushing a tube into the substrate and then capping both ends, the lower cap being pushed down beside the core and put in place before removal. The top of the core has a hole covered with 2 mm nylon mesh which allows water to escape as the core is pushed in but the mesh prevents any animals that we are working on being lost with the water.

The 2 winter programmes were carried out by taking paired core samples at 60 m intervals along a line run out from the shore to deep water. In the case of sampling at Grytviken the line ran from Grytviken jetty out to Hobart Rock giving close sampling stations over a range of substrates along a line 1000 m long. This programme produced valuable results showing a change of substrate from deep soft mud near Grytviken jetty through sandy mud in the middle of King Edward Cove to rocks and gravel near Hobart Rock. Changes of substrate are examined in great detail by analysis of the particle sizes found in the cores. The change in animal types in this case was very marked and closely related to substrate. Animals collected in this type of sampling are identified, counted and weighed to give a figure for biomass for each species present. Biomass is an international standard measurement of living material usually expressed in kilogrammes wet or dry weight per square metre of substrate and allows direct comparison of productivity in different areas.

From the accumulated data of several years it will be possible to record even very slight changes in the quantity of living animals (biomass) in these areas. This is of particular value in terms of monitoring the effects of Man on the environment, namely from the base in the immediate vicinity and the effects of contamination of the oceans. Recent results from King Edward Point show that there is very little pollution in the Cove and it is probable that the effects of whaling pollution are now insignificant.

The diving programme at Cooper Bay is intended to give additional information on the lines indicated above and is particularly valuable as this is an entirely new location and differs greatly from either of the sites at Grytviken or Signy. Previous sampling sites have been very sheltered where stable silty deposits occur, whereas the present site, being subjected to the oceanic swell, has been scoured and offers a very different habitat. The sea bed in Cooper Bay is fine sand and in deeper water gravel with a mobile surface which presents considerable problems for anything living there. Sandy substrates of this type are in many respects analagons to deserts in that the species present are few but those that are have many small shrimps which overcome the problem of turbulence by being adapted to burrow into the sand; this in itself is interesting as most shrimps of this group are free swimming. We can be almost certain that these shrimps have not been sampled before as it is unlikely that they occur in the deep waters sampled on the offshore programmes and no inshore sand substrates have been sampled before at South Georgia.

Another interesting specimen produced is a burrowing sea urchin which again shows considerable modifications for this mode of life. Sea urchins found around Grytviken are more or less spherical with sharp spines and occur on rock whereas the Cooper Bay specimen is heart shaped, thus giving it a streamlined shape making burrowing easier, and has spatulate or flattened spines which are characteristic of burrowing forms. The various other small animals that we have collected will probably show similar modifications when closely examined in the UK.

The survey work on the ecology of the different areas described above is just one part of the research being run by BAS marine biology section and much time is spent on individual projects of a more specialised nature. Each BAS biologist is working on a particular animal or group of animals studying various aspects including population ecology, nutrition, growth, respiration, biochemistry and many others. All these various programmes are, in turn, combined to build up a full picture of the Subantarctic ecosystem.

GRYTVIKEN - GHOST TOWN

I suppose there are few things that arouse one's curiosity more than being in a place once inhabited by a bustling crowd of men and now deserted. Standing in the middle of the great wooden plan at Grytviken, or in the tiny focstle of the old whale boat 'Petrel' you might well ask: "What did they do here? Who lived there?"

When I first came to South Georgia in 1953 the scene was very different. Three whaling stations served by 21 catch boats and the repair station at Stromness made a hive of activity in this lonely spot in the Southern Ocean. But already the writing was on the wall - the whale stocks around South Georgia were rapidly being depleted while down at the edge of the pack-ice factory ships, some of them up to 23,000 tons, were hard at work scouring the seas for whales.

Let me tell you something of the whaling as I knew it. Even in 1953 'Petrel' was an old catcher - she was built in Oslo in 1928 at Nylands Mekaniske Versted as a coal burner. Accommodation was pretty primitive - 8 seamen in the focs'le, the skipper - or gunner, as he was always called - amidships (the only man to have a cabin to himself), the mate, engineers and steward aft. Food was cooked on a range in the tiny galley and carried in kits to the foc'sle, the Officers eating in the saloon. No washing facilities were provided, except for the gunner who had a tip up basin in a cabinet in his sleeping cabin, but a bucket and steam pipe on deck sufficed for those who wanted an intermediate wash between bunkering visits to the whaling station. The heads consisted of a china pan and a bucket in a little compartment alongside the steering engine, but most of the crew preferred the more sociable surroundings of the lee-side rail.

In boats like this the crew would live for 6 months at a stretch, passing the daylight hours at sea hunting for whales and at night seeking out some little harbour where they could anchor up for the night or, more probably, lie and drift. Anchor work was not popular on a whale catcher; because of the whale lines on deck they had no anchor winch and all cable had to be won with a claw on a wire shackled to the whale winch drum. This meant you could heave only a couple of fathoms at a time and South Georgia's deep anchorages made this a long job.

It was often the practice for the first boat in to anchor and any others to tie up alongside. The story goes that one night at Larsen Harbour, off Drygalski Fiord at the south-east end of the island, 17 catchers moored to one anchor. The crews had a social evening (though theoretically dry, strong liquer was far from unknown to the whaling fleets) and the anchor watch dozed off. During the night a wind got up from the glacier and blew the little truck of catchers down Larsen Harbour, round it's dog-leg, down Drygalski and out to sea. They were off Cooper Island when they awoke!

When actually whaling the catchers cruised in what their gunners considered likely areas - finding such places was the major part of the gunner's skill - with a man in the barrel at the mast head, a man on the wheel and either the gunner or the mate on the open bridge. Even the briefest acquaintance with the South Georgia weather will make it clear that this was no job for those with queasy stomachs or delicate constitutions.

When a whale was sighted the catcher would alter course to follow it. In the older catchers it was necessary to stalk it carefully without scaring it, for a whale could swim at 16 knots for long enough to loose the catcher, and in these cases the quietness of the old fashioned reciprocating steam engine was a definite advantage. On the other hand, the modern diesel catchers that came to Grytviken in 1958 could make 19 knots and could soon run a whale down. When the catcher neared the whale the gunner would dash down the cat-walk that connected the bridge with the gun platform and take up his position behind the gun.

The gun was always loaded, even in harbour, with a 100-pound barbed harpoon tipped with a grenade containing 400 grams of black powder. Through the slotted shank of the harpoon was a wire stop into which was spliced the 'foregoer', a 4" nylon line which made up the first 60 fathoms of the whale line. The foregoers passed over a fair lead beneath the gun platform, up over the line-blocks, down to the main whale winch and so to the line box which occupied the position of the No 1 hold. The line-blocks were on a wire which passed over the top blocks at the mast-head and passed down to a series of accumulator springs in the hold. The purpose of all this was to take any sudden strain out of the line when playing the whale, as the springiness of a fishing rod enables a man to play a trout on a fine line. Not that the whale line was fine - the foregoer was spliced to about a mile of manilla, first of 6", then of 8" circumference, with the most meticulous long splices that you could see. But whales are much bigger than trout, so the analogy holds good.

The gunner waited on the gun-platform, coursing the ship with hand signals, till eventually (if he was lucky and skillful) the whale surfaced within range. Then there would be a crash, a cloud of powder-smoke and the harpoon burying itself in the massive black back of the whale. A second or two later, as the whale-line screamed out of the line box and the line blocks ran down the mast, there would be a dull boom as the powder charge in the grenade exploded. For lucky whales this was the end and they soon were drawn lifeless to the ship's side. For the less lucky it was the start of a chase that could last an hour or more till the gun had been re-loaded and the gunner could get close enough for a second shot.

Once dead the whale was drawn alongside and the carcass blown up with air to ensure that it would float. If there were other whales to hunt it would be cast adrift with an 18-foot bamboo summounted by a flag (and in later days a radar reflector) in it but if it was on its own it would be chained to the side of the catcher. Some of these chains are lying on the plan at Grytviken now - massive chains with links 8" in length and sewed over with rope yarn. These were passed through a hawse-hole in the ship's side, round the tail of the whale, back onboard through another hawse hole and heaved tight with a wire to the winch. It seems incredible but it is a fact that in bad weather (and there was a lot of that it was not unknown for a chain to snap! It was the mate's job to supervise the chaining up, and a dangerous task it was, working over the side of the catcher in heavy weather. The last Norwegian whaler to be buried in the little cemetery at Grytviken, Gunner Larghus, was killed when leaning over the ship's side to pass the bight of the leading-wire over the whale's tail, a sea rose and caught his head between the whale and the gunwale. The gunner's position was just as dangerous - a friend of mine had in the course of 18 years as a gunner been swept off the gun platform by the sea on 3 occasions, each time breaking a leg. His resulting lameness was the cause of the death of another whaling friend of mine, but that is another story.

Towing back whales to the station could be a long job - finding the flags before the days of radar and course recorders was an art in itself (few of the gunners could have taken a sun-sight even if the sun had been shining and with 3 big whales on each side the ship was lucky to make 5 knots if the weather was good. On the other hand, if they didn't get back promptly, the whales would 'burn' and produce a very low grade oil.

When a catcher did glide into the harbour at Grytviken after a successful hunt the whole place would spring to life. The clangs of the mauls as the whale chains were struck off would echo round the hills to be followed by the pop-popping of the old hot bull engine in the motor boat going out to bring the whales to the slip.

The great whale winch at the head of the plan was powered by electricity from the hydro-plant beneath Gull Lake. Its wire was too heavy to be drawn out by hand so a slave winch was used to bring its vast shackle down to the tail of the whale. Slowly the great creature (blue whales of over 100 feet have been flensed at Grytviken, but the largest I ever saw was an 84 feet female fin whale) would be drawn over the slip and up the plan. Meanwhile the head flenser, Ole Buggs, would hold his hockey-stick shaped flensing knife against its side, slicing neatly through the 5 inch thick blubber. While Ole completed the first cuts with a few deft incisions around the jaw another flenser had climbed up the whale's back and was standing, slicing away, 12 feet above the plan.

A strop from another winch wire was fastened in the head end of the side of blubber and the whole flap peeled off as neatly as you would peel a banana. The blubber was towed up to the side of the plan where a gang of men waited to slice it into strips about 18 " wide which were fed through an opening in the deck into a rotary cutter where it was chopped up into thin slices. It was an unlucky blubber boy that slipped on the grease and blood of the plan and fell into the blubber cutter! As far as I know this never happened at Grytviken, but such an accident occurred at Leith Harbour. Shorty, they called him!

The minced blubber was fed by a bucket conveyor into a series of huge puss boilers - vast things about 10' in diameter and 30' high - and there cooked under pressure with steam to separate the oil.

Meanwhile on the plan the whale had been rolled over on its side, using another winch and a wire parbuckled under the carcass, to get at the third sheet of blubber on which the whale had been lying. It was then the turn of the lemmers to cut away the meat. This was dragged away from the backbone by more winches - the whole plan area was surrounded by winches, 18 in all, if I remember rightly, and all running their steam to waste so the gory carcasses on the plan were surrounded by clouds of the whitest white - and hauled up to the meat loft. This was on the opposite side of the plan to the blubber factory. Here the huge fillets were cut up into chunks of about 100 lbs weight, and conveyed by another bucket conveyor to a rotary cutter, similar to that used for the blubber. From this a screw conveyor took it to one of five heat-treatment tubes when the meat was gently cooked with steam. The resulting stew was passed over vibrating screens to separate the solid chunks of meat from the blood-liquor and oil. The solids were passed through a screw press to extract yet more liquid and finally entered a rotary drier. Imagine a steel tube 7 feet in diameter and 40 feet long, fitted with spiral flanges inside and rotating slowly. A huge flame from an oil burner runs down the tube. Into this the meat was dropped. The flanges lifted it up and dropped it through the flame again and again in its journey down the tube. By the time it reached the end of its journey it was dry enough to be ground in a meal and sacked up into 50 kilo sacks. This meat meal was used as a protein additive in compounding cattle foods and the like. It was a valuable product and the sight of the vast guano sheds stacked high with bags of meat meal more than anything else brought home to me how many whales were being taken from the seas.

With the blubber and meat disposed of, all that was left on the plan was the skeleton, the huge skull and the backbone. These were drawn up on to the bone lift, at the head of the plan (yet more winches!) and cut into manageable fragments with steam saws. These were dragged into the openings of the bone puss-boilers. These were slightly smaller versions of the blubber cookers, but more strongly built, on account of the higher pressure used. The bone, after cooking was dried like the meat, milled and bagged and used as fertiliser.

The liquid from all these plants was taken to the separator house where centrifugal separators removed the last drop of the valuable oil. Very little of the whale was wasted at Grytviken - by the end of its days it was one of the most efficient whaling factories in the world, but by then it was too late - the whales had all gone.

Was it worth it? Well, of course not, Whaling was a cruel game but the most exciting one in the World. Despite the discomforts and hardships, crews signed on year after year. There was a tremendous spirit of comradeship particularly on the catchers. Anyone who has served in a small ship will know what that can be like. Pay was good, if there were plenty of whales about, and the pay-off after an 8 month period was a fair sized wage packet but the money was hard to earn. A whaler worked a 12 hour day, 7 days a week for 6 months with a day off at Christmas. Sundays were free if there were no whales, but that was bad news for everyone. Similar hours in the merchant service would have noted as great a return under enormously better conditions.

And now it's all finished. The place where my friends worked and drank and played crib are now deserted. Rusty tin flaps in the breeze and not a wisp of steam rises from the factory. There's still a little oil seeping from the boards of the plan, but a whale will never come up that slip again. And a good thing too, will say the conservationists. But we could have had a properly controlled industry and the time may come when a starving world needs whale products.

The thing that broke my heart most of all was seeing those 3 little catchers' boats on which I have sailed thousands of miles round the fiords and coves of South Georgia, lying stripped, desecrated and rusting at the quayside. Salvesen scuttled his catchers in Stromness Bay. It seemed a waste of time, but I think I now know why!

BRITISH ANTARCTIC SURVEY

The British Antarctic Survey began as a Naval operation - 'Operation Tabarin' in the Antarctic summer of 1943/44 and its original intention was to maintain sovereignty over the Falkland Islands Dependencies (now British Antarctic Territory which was being threatened by competing claims from Argentine and Chile.

The first Base to be established was at Port Lockroy on Wienoke Island and the Deception Island Base followed shortly after. At this time the leader of the party was Surgeon Captain Bingham who had been a member of the British Grahamland Expedition of 1934/37.

When the Second World War ended it was decided to continue British work in the Antarctic but to place it under civilian control and the Falkland Islands Dependencies Survey was created. The overall control of the Survey passed to the Governor of the Falkland Islands and a small Scientific Bureau under the control of Dr V E Fuchs was established in London to supervise the scientific work.

In the immediate post war years the Survey was wholly financed from the whaling dues paid by the companies operating from South Georgia but by 1950 the British Government was also making a contribution.

In the first years the Survey maintained its bases by chartering vessels such as the 'Trepassey' - a Newfoundland sealer, but it soon became apparent that a vessel was needed full time and the first RRS John Biscoe was purchased from the United States. This ship had been originally constructed as a net layer and was timber built. After further strengthening with greenheart sheathing and accommodation of sorts provided she became the first FIDS supply ship.

As the Survey grew in size it became clear that a larger vessel was needed and the present 'John Biscoe' was designed and built in time for the 1956/57 season. The old ship was passed to the New Zealand Government and renamed 'ENDEAVOUR'. The Survey also purchased a small Baltic passenger/cargo ship and renamed it the 'SHACKLETON'. It is fitting that during her first season the John Biscoe had the honour of carrying HRH Prince Philip and his party during their tour of the Antarctic.

Dr Fuchs had by this time begun his historic first crossing of the Antarctic continent and Sir Raymond Priesley who had served with both Shackleton and Scott in the Antarctic agreed to act as Scientific Director during Dr Fuch's absence.

These were also exciting times in Antarctica, as, in addition to the Trans Antarctic Expedition, the Royal Society had established a base at Halley Bay as part of Britain's contribution to the International Geophysical Year. It was also a time when scientists began to appreciate the value of international co-operation and one vitally important result of IGY is the International Treaty of Co-operation which has now been ratified by 14 nations.

FIDS also began to change from being a politically motivated body to a scientific one and when the IGY finished the Survey assumed responsibility for Halley Bay.

This meant that Shackleton and John Biscoe could no longer service all the bases and for some years the Survey chartered from Lauritzens of Copenhagen first the 'Kista Dan' and subsequently the 'Perla Dan'.

As part of its changing image FIDS changed its name to BAS in 1960 and in 1967 became one of the component institutes of the National Environment Research Council.

With the closure of the last of the land based whaling stations on South Georgia the Survey assumed the responsibility for King Edward Point and in 1970/71 the Survey's latest vessel the 'BRANSFIELD' made her maiden voyage South and the SHACKLETON was converted for use by other institutes of NERC as an oceanographic research ship.

This brings us more or less up to date with the Survey maintaining 6 Antarctic stations, 2 ships, and about 100 overwintering scientists and technicians. We have a total staff of approximately 350 and an annual budget of about £1.8 million. A new building is being built in Cambridge to house all our scientific units and the administration and we hope that this will be completed by early 1976. Our scientific programmes range from upper atmosphere physics to marine zoology. In addition to the 2 ships we own 2 twin Otter aircraft which operate throughout the Antarctic Summer from Adelaide Island.

Our role is changing - no longer do we overwinter surveyors and geologists at Stonington but fly them in at the beginning of the season. Our science is becoming increasingly sophisticated requiring highly trained men and expensive equipment. Sadly the era of the long overland sledge journey using dog teams is passing and we are concentrating our field effort in more limited areas using tractors and motor toboggans in conjunction with aircraft.

The need for good people still exists, however, and the standard of candidates applying to join the Survey improves annually.

If any of you readers are interested in learning more about BAS
then write to:

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(Article by Mr W O Sloman - Administrative Officer for British Antarctic Survey).