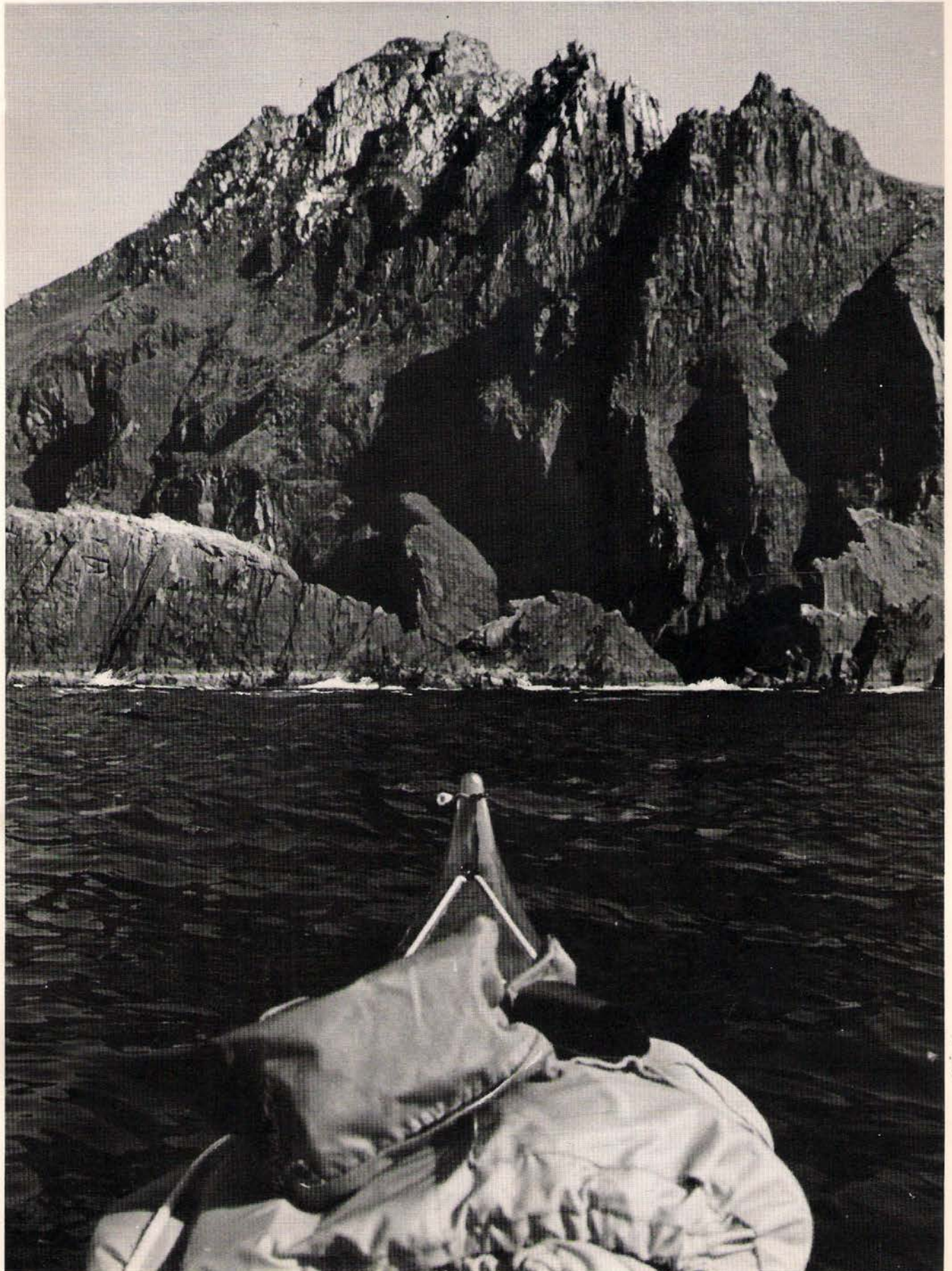
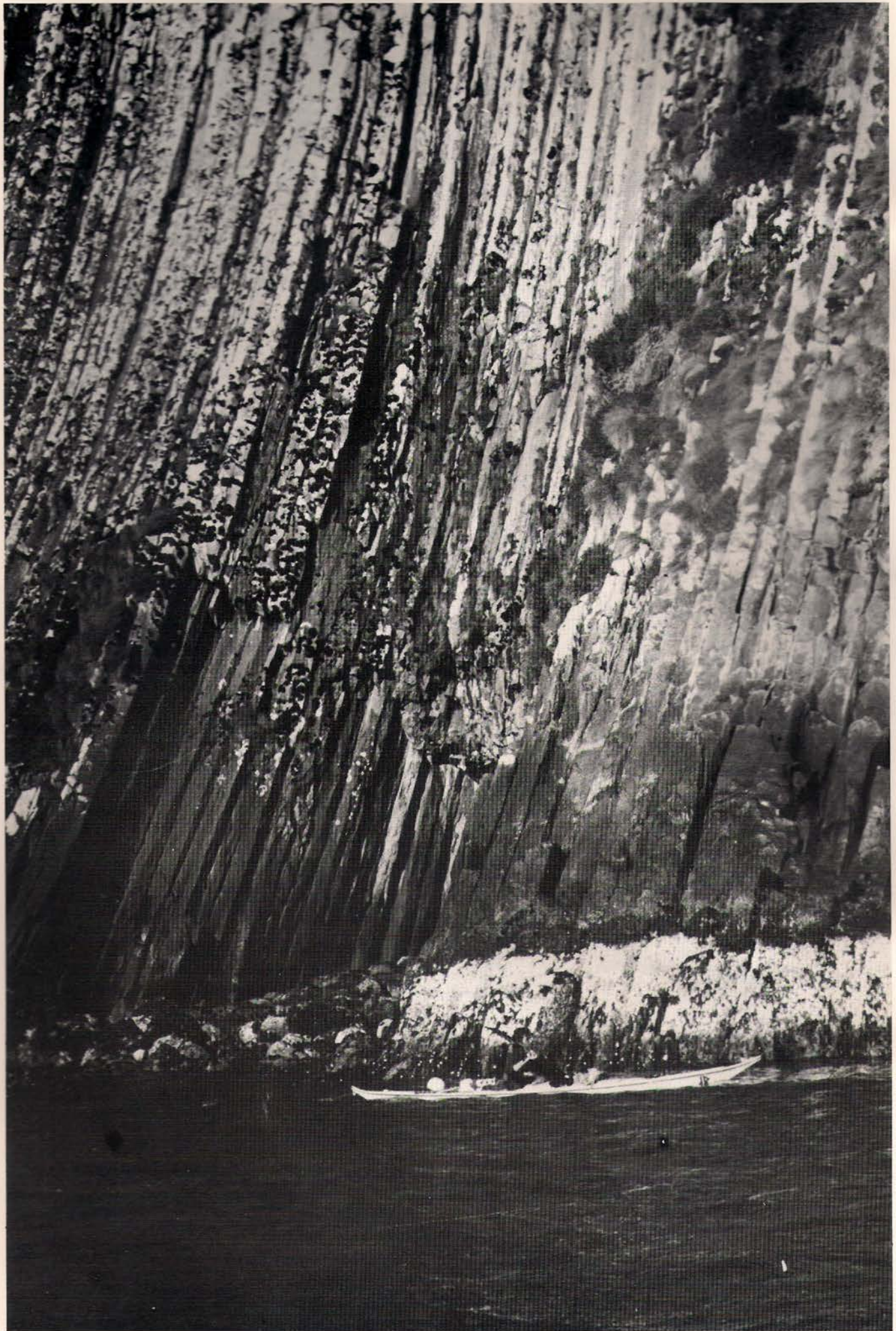


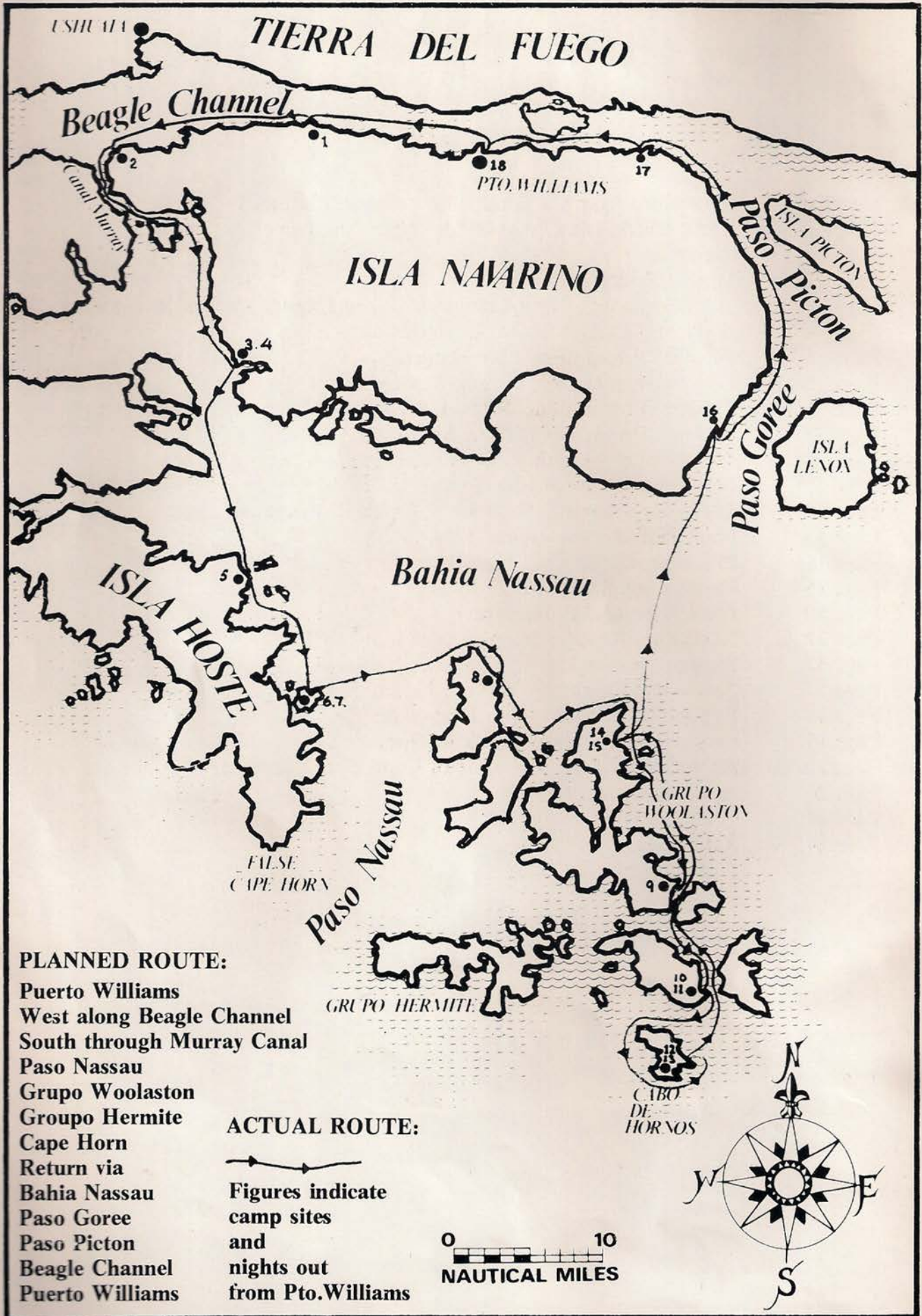
**BRITISH KAYAK EXPEDITION  
CAPE HORN  
OFFICIAL EXPEDITION REPORT**





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## THE BEGINNINGS *Nigel Matthews*

After the Nordkapp expedition of 1975, Colin Mortlock and myself decided to make another journey by kayak. No firm decision as to the area was made but we had already decided that four would be an ideal number for the next expedition. Frank Goodman and Barry Smith were invited to join us.

Finance, the bane of all expeditions was uppermost in our minds. What was the secret of raising sufficient funds to get us all there and back? Would the public be prepared to donate to an expedition? The answer was certainly not, unless the objective of the expedition caught their imagination. What we needed was a household name, an Everest or Cape Horn.

Cape Horn, why not indeed?

What had been intended as a flippant comment was taken up. Charts were pored over. The route had to be planned. Maybe a circumnavigation of Tierra del Fuego? Too far for the time we had available. Punta Arenas out into the Pacific round Cape Horn and into the Atlantic? Endless possibilities. Other considerations finally dictated to us. The political differences between Chile and Argentine made a trip entirely in Chilean waters the least complicated. The political relations between Britain and Chile were also strained but in retrospect we saw little of this: only friendship and hospitality.

Eventually we decided that our starting point was to be Puerto Williams, a purpose built Naval base in the Beagle Channel on the Island of Navarino and served by a small airstrip. Through the generosity of the Chilean Navy we could be flown in and our kayaks shipped the last 150 miles to the base if we could get them to Punta Arenas.

From Williams the round trip taking in the Horn would be almost 250 miles. Notoriously bad weather and extremes of temperature reduced our proposed daily mileage to 10-15 miles. We could carry food for thirty-two days supplementing this along the way with fish and fungi, berries, other wildlife and shellfish. To allow time for the journey out, a two month maximum was worked on, our departure to be in early December. While this period of the year, the Chilean summer, would not give us the calmest weather at least the temperatures would be at their highest.

More detailed planning of the route, thorough searching of the pilot, for sheltered bays, exposed crossings and tidal rates took place in the cramped confines of a Bude caravan during the National Surfing Championships. It wasn't that we were dedicated, the surf was poor!

Further local information was gained from Commander Pugh at the offices of the Chilean Naval Attache in London, and William Gardiner who had been headmaster at the English School in Punta Arenas and was himself a canoeist. Slides William Gardiner was able to show us gave a great deal of encouragement. The sea was occasionally calm and the coastline sometimes flat enough to take a tent. About the same time we were sent an article from a boating magazine making reference to landing points on the Horn. Perhaps it was possible after all! Armed with this meagre information the route was committed to the chart, later to be followed almost exactly.

Out of the blue came the news that Colin Mortlock had decided to withdraw from the venture. There was little doubt that the three remaining members would carry on. Colin opting out brought about a major change in the basic structure of the expedition. We would continue as a democratic unit without a formal leader. Background experience was similar, each had strengths and weaknesses: hopefully we would compliment each other. Decisions would be "committee".

Four still seemed the best number, a replacement was needed. From a short list, Jim Hargreaves was invited to join. He had been a member of the first British expedition down the Colorado and no newcomer to big water. He was also elected to the onerous task of quartermaster.

While each had some special area to look after, we worked with the underlying principle that we would obtain whatever we could. Barry worked wonders amassing a huge pile of equipment ranging from radios to plastic knives and forks. Frank had the job of secretary and trying to raise financial support while I had the photographic and medical side of things. However as the months passed jobs overlapped.

Money was a constant worry particularly the air fares out there. When it seemed as if we'd never get to Gatwick let alone Punta Arenas, the eternal optimism of Frank encouraged us all with, "I just know we'll get there".

## THE JOURNEY *Frank Goodman*

Although many people have passed around Cape Horn, few people have explored the intricacies of the channels between the Horn and the Magellans. Information about this area is very scarce indeed, and what was available seemed to be aimed at the larger vessels likely to use the area, and therefore much of the information was not relevant to canoeing.

It is the almost total lack of information of course that makes the Cape Horn archipelago such an exciting challenge to the canoeist. We had only a small scale chart and the scant information contained in the South American Pilot when we left England. Talks in Puerto Williams with the Chilean Navy and the local crab fishermen produced only conflicting reports about tide races. The Chilean Navy was able to provide some tidal information giving times of high water and the range for the first few days of our journey.

The essence of sea-canoeing can be summarised under 4 headings:

1. Tides.
2. Weather.
3. Landing places.
4. Escape routes.

The tide range never exceeded 3 metres on springs, and this, coupled with our experience of a 3 knot north-going stream in the Murray Canal on the ebb convinced us that tidal movement would be the least of our problems. This indeed was the case, and apart from an occasional check for drift, we found that we could safely ignore tidal effects.

Although the South American Pilot spoke of instantly changing weather conditions, we did not believe this until we had experienced it! Twice we witnessed calm conditions change to full gale in less

than ten minutes. Several times the wind backed through 90 degrees instantly, with no change of cloud pattern and often visibility would reduce from over thirty miles to half a mile in a matter of seconds. Thus the weather completely dominated our thinking throughout the journey and all decisions were made only after a very careful appraisal of likely meteorological events.

Although there were many areas where the coastlines are cliff-bound, we never experienced much difficulty in finding suitable landing places. This was a combination of careful scrutiny of the coast line ahead of us and a level of fitness that enabled us to paddle a few extra miles without fatigue if necessary. The rainfall is such that almost every bay or beach had a rivulet of drinking water available to us.

Although we planned every day on the principle of "Where do we go and what do we do if the weather deteriorates?" there were three major obstacles in our journey where realistic escape routes in rapidly deteriorating weather conditions were not possible.

These were:

1. The ten mile crossing from Hoste Island to Grevy across Paso Nassau (Day 8). This was accomplished by setting out at four o'clock in the afternoon as wind speeds dropped after the passage of a depression.

2. The journey around Cape Horn Island itself (Day 12). This was a fifteen mile, five hour paddle with at least three hours of total commitment on the western side of the island. We began in calm conditions at 5.30 a.m. with clear skies and some approaching cirrus. We landed on the east side of the island at 10.30 still in calm conditions, but by mid-day there was a full gale blowing again. The sky remained clear and there was no indication that the wind would increase.

3. The crossing of Bahia Nassau from the northern end of Woolaston Island to the S.E. corner of Naverino (Day 16). This was the most committing crossing of all as it involved a sixteen mile paddle (almost the equivalent of the English Channel) with no land at all to the east. Also we had achieved our main objective by this time, which meant that it was easy to under-estimate the danger as we were 'on our way home'. We set off in calm conditions about ten o'clock in the morning after an hour-long discussion with regard to its feasibility. A vicious day previously had left an early morning legacy of cumulonimbus clouds that cleared away to the south east. We finished the crossing in a force five/six with some relief!

All members of the team tackled Cape Horn in an entirely different way from their normal approach to sea-canoeing, which often involved looking for testing situations in the form of long crossings, difficult tide races and overfalls and testing wind conditions. Our approach was one of caution, and a healthy respect for the unknown. Although none of us felt that we had been pushed to our physical limits, the heavy blow at the end of the second day, the huge swell and tricky clapotis off Cape Horn and the aches and pains we all experienced after our third day on the water made us realize that our margins were quite small. One minor piece of bad luck, a lapse in planning or a little less stamina could have easily spelt out another story.

Mentally, we were all under a long term strain owing to the extreme unpredictability of the weather but this was amply compensated for by the tremendous feeling of remoteness and grandeur that we all experienced.

## DIARY

### August 1977

Four kayaks, packed with dehydrated food, camping gear and ancillary equipment, leave London by sea for Punta Arenas, Magellanes, Chile.

### November 1977.

Chilean Navy trans-ship kayaks to Puerto Williams on the Beagle Channel.

### November 28th

Expedition team gather in Nottingham for fitness tests at the University Medical School, and for last minute preparations.

### December 1st

Team fly from Gatwick for Punta Arenas, via New York, Miami and Santiago.

### December 5th

Team arrive in Punta Arenas.

### December 7th

Special arrangements by the Chilean Navy allow the team to fly on to Puerto Williams, the expedition start-point.

### DAY 1 December 11th

Two kayaks severely damaged in shipment, had to be repaired, and all gear including radios and filming equipment packed into the boats. The team left at 1.00 p.m. Camp made after a ten mile paddle against the wind. Nigel's kayak discovered to be severely twisted, and handling badly.

### DAY 2 December 12th

Nigel's kayak repaired by heating over camp-fire, straightening, and re-glassing into shape. A sixteen mile paddle into strong head winds finishing with a bad force 8 blow before landing for the night.

### DAY 3 December 13th

Wind north westerly, and helpful as the team moved south through the Murray Canal against a three knot tide race. Good eddies each side of the channel. Wind slackens and Centolla (King Crab) fishermen give us a large crab, which is fastened to Jim's canoe. Wind increases from N.W. and we decide to run for Caleta Douglas. Jim and Frank miss the narrow entrance and finish three miles south of planned destination. Short-wave radio used to establish contact with Nigel and Barry, who are in the right place but worried. Jim and Frank complete a 28 mile day with a hard push back into force 6/7 winds. The crab is washed away!

### DAY 4 December 14th

Rest day. All team members have slight physical problems after the rigorous paddling. A bright day gusting 8. We feed on goose eggs and fungus, dig in Yaughan Indian beach middens and see Condors.

### DAY 5 December 15th

Set off in force 3. Crossed Murray Canal and mouths of several inlets. Cold. Made lunch-stop into night-stop as weather worsened. Camped on bog in forest. Rain and wind all night. 17 miles covered.

### DAY 6 December 16th

Broke camp in wet and paddled to Isla Yellow ready for the crossing to the Woolaston Group. Early camp after only eleven miles. Dried out in perfect evening. Early bed, woken at 10.00 p.m. by gale from the N.

### DAY 7 December 17th

Set off in calming seas, but returned to the same campsite as weather worsened, gusting 40 knots by mid-

day. Slept.

**DAY 8 December 18th**

Awoke to bad visibility and a blow. Wind moderated slowly during a day spent exploring the island on foot. Set off in force 2/3 westerly about 4.00 p.m. Hit 6 ft. breaking sea on crossing but arrived on the Woolaston Group in 2½ hours. Made a late camp after 17 miles paddled.

**DAY 9 December 19th**

Calm. Set off in perfect conditions but whales in the bay upset our route planning. Made for an island but six whales cut us off! Carried on after whales moved out to sea. Paddled 22 miles and stopped at a radio hut. Big welcome from the Chileans who had heard us on their radio. Gale in the night.

**DAY 10 December 20th**

A difficult launch off rocks in a force 5/6. Crossed to Hershah Island and landed at Copihue Radio Hut for coffee. Eight miles paddled. Wind increased to gale. Decided to stay put. Cape Horn Island looks gloomy across the spray-streaked sound.

**DAY 11 December 21st**

Blowing full gale and gusting to 45 m.p.h. outside the hut which was sheltered. Difficult walking. Slept.

**DAY 12 December 22nd**

Up and on the water by 6.00 a.m. Wind force 1 to 2. Paddled south and then west. Crossed to N. shore of Cape Horn Island in very long low swell. The N.W. corner of the island is magnificent with huge stacks and an arch, detached from the main cliff. A huge swell of 15 metres height became difficult as the clapotis from the base of the cliffs was superimposed. Awesome, with spray drifting 10 metres high along the shore and the breaking waves sounding like howitzers. Two hours of this to get to Cape Horn itself. With the swell running along the face of the cliffs of Cape Horn things became easier and we managed to get slides and movie. Rounded Cape Horn, 9.15 a.m., 22nd December, 1977. Another hour and we were in the shelter of the east coast and we landed. Lay in the sun, but gale again by 12.30. Bad camping. Put up fly-sheet only and bivied on the boulder beach. 14 miles paddled.

**DAY 13 December 23rd**

Rest day. Climbed to top of Cape Horn, 400 metres. Very hard going in either dense vegetation or bog. Wind indicator jammed at maximum - 70 m.p.h. Lot of penguins, most with pair of chicks. Also eagles, cormorants and albatross.

**DAY 14 December 24th**

On water by 6.00 a.m. Last of gale blowing out. Made good progress north and called at radio hut on Isla Woolaston. While ashore the radio operator saw an Orca (Killer Whale) in the channel. One of the marines fired at it several times and missed, but it went away. Continued north. Paddled 24 miles.

**DAY 15 December 25th**

Xmas Day. Stayed put on beautiful sandy beach called Caleta Middle. Looked for shell-fish but found none. Very bad blow after lunch. Slept. Rain in night.

**DAY 16 December 26th**

Boxing Day. Nottingham Radio Ham picks up a message from the Falkland Islands saying we have rounded the Horn. Away at 6.00 a.m. Lots of cumimbus about. Paddled to Cabo Ross at north end of Woolaston. Decided not to cross Bahia Nassau. After an hour changed our minds as weather improved quickly from the N. First hour calm, then force 3 from N.W. slowly strengthening and backing west. Finished the 16 miles crossing in force 6 after 4¾ hours. Another large

whale close. Continued along east coast of Navarino, but wind backed S.W. and helped us. 24 miles paddled to a sheltered campsite.

**DAY 17 December 27th**

Relaxed after the major crossing, but psychologically wanted to get back to base. Hard paddling as we gained the Beagle Channel and headed west into the wind. Rained all day. Paddled 25 miles.

**DAY 18 December 28th**

12 miles to go for Puerto Williams. Tents dry, but rain started as we launched. Hard work again in force 6 head-wind. Short seas. Lots of spray. Rounded headland and saw Pto. Williams three miles away. Sea dropped off as we gained the shelter of the bay. Williams seemed deserted, but as we neared the harbour people tumbled out of houses and lined the jetty. We had a marvellous welcome with ships' sirens and water hoses. The whole population of the town met us on the beach. The Naval Commander said "When you left, I thought you were loco. Now I think you're only half loco!"

Cable sent to England to say that the expedition was successful and safe.

Number of nautical miles covered . . . . . 227

Number of days on the water . . . . . 18

**December 31st**

Flew out of Puerto Williams in light plane after packing up canoes for shipment home.

Some trouble with visas in Chile but eventually arrived at Gatwick, mid-day January 12th, 1978.

## PERSONAL PREPARATION

*Jim Hargreaves*

The fact that I work as an instructor in outdoor activities, specialising particularly in canoeing, means that my daily work helps to keep me in a fairly good state of canoeing fitness. My work is mainly with adults, and I am therefore able to undertake longer, more taxing canoe journeys than if I dealt only with young people. In addition, I also go canoeing frequently in my spare time. To be perfectly honest I did not feel disposed towards special training or physical preparation of any kind, I felt this would have made canoeing a chore rather than a pleasure, and I therefore decided to follow the philosophy of one eminent expeditioner and ".....Get fit doin' it".

Despite the amount of canoeing I do in the course of my job, I felt very guilty when I discovered how much preparatory work the others had put in. Perhaps I was being unfair to myself in actual fact, as Frank's business commitments did not allow him to canoe as frequently as he would have liked. This coupled with the fact that he was the oldest in the group and thus felt, unfoundedly, that he would therefore be the weak link, drove him into a masochistic training schedule which reduced him to a mere wafer of his former, rather portly, self. Barry is also a very active instructor, and did a great deal of paddling before he went. Nigel, due to an unfortunate football injury was unable to grip a boat for many months before departure, and probably suffered, physically, more than anyone else. I undertook, therefore, no special training of any kind, preferring to face the event with a degree of residual fitness, hoping that this, along with a little 'mind over matter' would carry me through.

All of us found it very gruelling at times, though rarely concurrently, and will was often taxed as much as muscle. By the third day, for the first time in ten years of very active canoeing, I suffered from the dreaded Teno-synovitis. My left wrist (I am right handed) was creaking like a retired celibate monk's bed on his wedding night! Starting each subsequent day's canoeing was a very painful ordeal, and after two more days I couldn't even stuff my sleeping bag into its waterproof outer without considerable discomfort. I even contemplated taking 'Fortral' tablets, a strong analgesic, but resisted, and luckily, after three more days my wrist returned to normal. In my experience Teno-synovitis is normally treated with strict abstention from exercise, in my case this was impossible, but for some reason the condition improved, despite arduous paddling. I will never know if the onset of this condition would have been rendered less likely by a more comprehensive training programme. I doubt it.

It is very important to be fit, both physically and mentally, for any expedition which may make demands upon the body's reserves. Although sheer strength may in itself carry you through a trying situation, there have been many occasions on exploratory expeditions in the past when men who were endowed with very little strength of arm, have out-survived others of herculean frame. This can only be attributed to mental determination, and it is this which, if developed, can make the difference between living or dying, succeeding in your ambitions, or failing. Not that our will to live was at any time tested, but our determination to succeed was, and our unity in this respect was so strong that we never really anticipated failure. On the odd occasion it was necessary, when morale was at a low ebb, or strength was wanting at the end of the day, to get a transfusion from one of the others who was not in the 'Doldrums' a joke or some cheerful remark was always forthcoming, and your weakness, hidden from view by pride, would never become apparent.

To conclude, one of the most difficult aspects of any fitness training programme for a specific event, is to plan your training schedule so as to reach a coincidental peak. Having said that, any training is better than none, and if you prefer the trauma of unusually hard work being thrust upon a totally unprepared, bewildered body, that's up to you.

If you prefer to get fit doing it, don't expect any sympathy.

## PERSONAL PREPARATION

*Frank Goodman*

There are two types of dream that people are apt to indulge in. One is the pipe-dream, where the brain conjures up a fantasy that is so manifestly beyond the possibility of fulfilment, that no positive steps are ever taken to try and achieve realisation. The other is the dream that stimulates action because its substance is not completely beyond the bounds of possibility.

The dream of rounding Cape Horn by kayak was never a pipe-dream to me, because I was already deeply committed to sea-canoeing, and knew that with a bit of luck the journey was possible. Certainly the idea stimulated me into action in terms of making it a reality, and I had no qualms about the logistics. My only real concern was to make sure that I was physically capable

of making a committing journey. At forty seven I felt that I was too old to start a really vicious training programme, and I decided to cut down on food, as I was definitely over-weight, and to start running at lunch-time. A convenient distance was just over a mile and a half, and although in theory, I wanted to run every week-day, on average I managed three times a week. I don't enjoy running and the only consolation was that my time for the run slowly got faster and my heart-rate slowly reduced. To improve my stamina I decided to force myself into a twelve mile paddle on the Trent twice a week, but I soon became utterly bored with this, and eventually decided that the most interesting way of getting reasonably fit was to take up slalom again. I had not done any slalom at all since 1970 when I had reached the dizzy heights of 1st. div. I also had never paddled a low profile slalom canoe. Much to my surprise, I found that I was utterly hopeless at getting through a slalom gate, and I really enjoyed working away at my lost slalom skills and learning the new ones that were pertinent to low profile boats. I am still convinced that practice through slalom gates, whether on still or moving water is the best and quickest way to gain both skill and confidence for any sort of canoeing. In addition to competing in slaloms and gate practice, I also paddled 7½ miles on the Trent every Sunday afternoon, this was harder than it sounds as the Trent is flowing quite fast above King's Mill near Castle Donnington, and I slowly increased my speed until I could paddle upstream, 3.75 miles to Swarkestone in one hour, and make it back again in half an hour. At school I had spent five years learning algebra. At last I found a use for a minute portion of what I had learnt ... such is the price of education! A simultaneous equation can be applied and the answer was that I was paddling at a speed of 5.25 miles per hour on a river with an average flow of 2.25 m.p.h. This pleased me more than the hard work of paddling! Although the above sounds a rather low profile of training, I found that I did get much fitter, and that I was able to burn off a few youngsters who paddled with me on occasion. My weight did not reduce, however, and prior to leaving for the Horn we all had a fitness test and I was still 25% fat!

## PERSONAL PREPARATION

*Barry Smith*

Training is a necessary element in all competitive sports. That it has been so slow to infiltrate activities where the aspect of competition is less overt is perhaps surprising. To rock climb at a high standard and succeed on difficult new routes for most people requires practice on artificial climbing wall, weight training etc. Sea canoeing comes further down the competitive ladder. In spite of the caustic regional rivalry which sometimes appears to characterise this sport, paddling is essentially a team effort. Vivid memories are often made of near epics in helping other parties or in concern for other members of your group. Thus personal fitness can be quasi-competitive in that one perhaps wishes to be the strongest member of the group, or at least not a weak link in the chain, but on a committing journey in an isolated area it is a vital safety factor.

Two factors determined my attitude towards training for the expedition. We were flying to our starting point, involving an inactive period of only



about ten days during which our body condition would deteriorate very much. Furthermore, we anticipated no easy build up to the paddling, no walk in to base camp, and a high level of physical and mental fitness was considered vital to cope with difficult water and unknown terrain during the early days.

Working at a college of physical education I was fortunate to be able to draw upon some valuable resources. As part of a science project a cine film was made of me paddling in a range of strenuous and exhausting situations. This provided the visual basis for a limited analysis of paddling technique, and resulted in a multi-gym weights programme with exercises specifically relating to strength and stamina in kayaking.

I paddled irregularly, but whenever possible, on the local waters of the Firth of Forth, although time seldom permitted for long distance stamina to be improved. Running, with limited interval training, was used to improve general fitness, but I was not particularly successful nor sufficiently determined to overcome this pain barrier.

## PERSONAL PREPARATION

*Nigel Matthews*

As I am based in a county in the middle of England, about as far from the sea as you can get, regular sorties to the coast were difficult, especially as work commitments left very little spare time. Before I undertook the Irish Sea crossing I had paddled at least once a day on the sea almost every day for six months because at that time I lived on the coast. My hands had become hard and my legs and backside were accustomed to the confines of a sea-boat cockpit. Unfortunately while paddling thirty mile stretches in all sorts of sea conditions became easy, training in general became very boring.

This mental aversion to training meant that no special preparation for the Nordkapp expedition was undertaken other than a circumnavigation of Skye at breakneck speed the Easter before, and competing regularly at slaloms. Retirement from the slalom scene, and less involvement with coaching, however, reduced paddling to a minimum. Easter 1977 saw an abortive attempt on Cape Wrath where the only conditioning was a lengthy portage across the headland — much to the amusement of the lighthouse keepers who knew of our plans to attempt the rounding of Cape Horn the following Christmas.

The summer was more successful and we made a leisurely circumnavigation of Mull. While obviously being aware of the need to be fit I felt that as long as there was a general level of fitness the ability to paddle day after day depended more on a sound mental attitude. General fitness was achieved and maintained by playing squash as often as possible, by playing football once a week, by spending one night circuit training in the gym and one night on the ski slope. I made no special effort to build up strength or stamina in the upper body.

Medical tests before and after the expedition showed no great variation in fitness between team members. Experience would seem to count as much as fitness assuming that a reasonable diet and adequate sleep throughout the expedition helped us to maintain

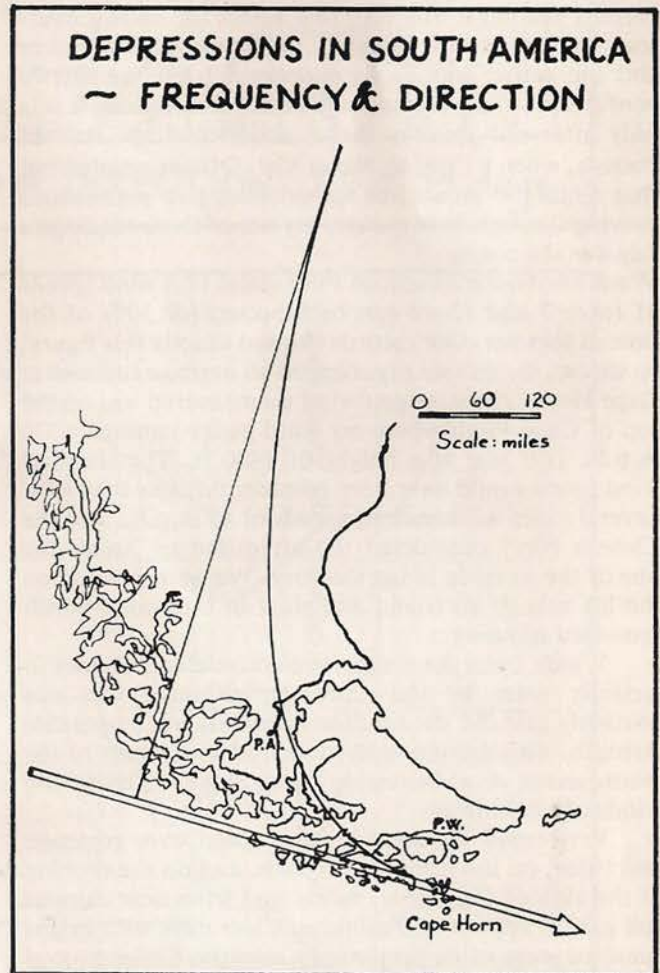
the fitness we had built up. In similar circumstances I would follow the same training programme, keeping actual paddling to the minimum for maintenance of skill levels, then work on a general fitness scheme of running, circuit training, squash and a major game. A factor which must not be overlooked is the ability to sit in the boat for long periods. The seat should be designed for comfort and it should be tested by each individual paddler.

It must also be borne in mind that no two persons are going to be entirely happy with the same programme, but training in company is usually more interesting than training alone. On the other hand the only way to build up the confidence required to undertake expeditions of this degree of challenge is to be psychologically prepared, to know that even though you are one of a group you must be completely in control of yourself in terms of self rescue, because we were in situations where we were separated in very dangerous situations which can be quite an unnerving experience off the Horn!

## THE WEATHER

*Frank Goodman*

Contrary to the impression gained by a cursory glance at a world atlas, Cape Horn is not as far south as most people suppose. In fact it's latitude south of the equator is comparable to the latitude of Edinburgh and the border counties.



Taken from: *The Human Geography of Southern Chile*. Gilbert Butland, Inst. of British Geographers Pub. No.24, 1957.

This places Cape Horn just as surely in the latitude of the westerlies as are the British Isles in the northern hemisphere. As atmospheric circulation is reversed in the southern hemisphere, Cape Horn is subjected to a series of depressions moving in a direction just north of west, whereas our's approach from the WSW.

Since depressions are essentially areas of low pressure with the winds spiralling in towards the centre, it is clear that the idea so commonly held, of winds circulating for ever around the southern ocean cannot in fact be true. While the centres of the depressions move ever eastwards, the winds associated with them move around the low pressure areas from all points of the compass. Why then is the weather of the Roaring Forties so feared? Is it worse than the weather of the northern hemisphere? And if it is, why?

The answer seems to be that the southern ocean is indeed more windy than the comparable latitudes in the north and the reason for this is two-fold. Firstly, the huge area of Antarctica to the south has no counterpart at the north pole and this keeps the pressure gradient of the south very steep, and also injects masses of very cold air into southern hemisphere atmospheric circulation. Secondly, the lack of land surface to the north of Antarctica allows the pattern of depressions to develop without upper atmospheric distortion, and this means that the depressions move much faster from west to east, and are usually smaller and more vigorous than northern hemisphere depressions.

We kept a record of wind-speed, barometric pressure and temperature during our journey, but this was usually limited to early morning, mid-day and evening readings. The resulting tables are shown overleaf. A comparison between the barometric pressure and the actual conditions experienced left me utterly confused ... there seemed to be little correlation. It was only after our journey that I understood the lack of pattern, when a Chilean Naval Met. Officer pointed out that since the area often experiences five depressions moving through in two days, my net of three readings a day was too coarse.

**Wind** The South American Pilot states that wind speeds of force 7 and above can be expected for 30% of the time in summer. Our records showed exactly this figure, so we can assume we experienced an average summer at Cape Horn. The strongest wind we measured was on the top of Cape Horn where my wind gauge jammed at 70 m.p.h. This was at a height of 1400 ft. The sea-level wind speed would have been considerably less than this. Several times we measured speeds of 45 m.p.h., and the Chilean Navy considered the afternoon of Xmas day one of the worst in living memory. We were camped on the lea side of an island and slept in our tents, which remained standing.

Winds from the north were considered preludes to westerly gales by the Chileans, although our one northerly gale did not result in a westerly of comparable strength. This pattern was associated with winds of the warm sector of a depression being followed by strong winds of a cold front.

Very rapid increases in wind speed were common and twice, on the morning the 14th, and on the evening of the 19th of December, winds rose from near calm to full gale in approx. ten minutes. Clear days with bright sunshine were often very windy, and the Chilean naval personnel spoke of: "The brighter the day, the stronger the blow". Sudden changes of wind direction sometimes took place with no indications in the atmosphere. We could only assume that these were small depressions not

associated with fronts. Warm fronts, with their classic cloud pattern, usually gave steady increases in wind speed as they moved eastward. Cold fronts and occlusions seemed quite unpredictable as to the winds associated with them. Temperature inversions over the cold water formed during the night on occasions, giving a shallow layer of calm air over the sea at dawn, even though the overcast could be seen rushing past above. As the day progressed, the inversion would suddenly sweep away and the normal westerly would descend to sea-level very quickly. We took advantage of these conditions by rising early and getting on the water by 6 o'clock. Usually by 9.00 a.m. the inversion had lifted and conditions changed from calm to a force three or four almost instantly.

Strong katabatic winds descending from the mountain peaks are notorious in this area. They are known as 'willawaws' and have de-masted vessels lying in supposedly sheltered anchorages. Fortunately, we did not experience this type of squall. The bad blow we experienced at the end of our second day was the rapidly increasing wind associated with the passage of a front, and several other squalls we encountered seemed to be caused by downdraughts from cu-nim clouds.

**Temperature** The air temperature ranged between 5 and 7 degrees C, which was decidedly cold when associated with a strong wind. Temperatures rose rapidly once the sun came out to shine through the unpolluted atmosphere. My thermometer was of the bi-metal strip type, and seemed to suffer from a 'greenhouse effect' if it lay in the sun, giving a hilarious reading of over 100 degrees F. one day! We guessed that we had temperatures in the 70's F if we could find a sheltered spot in the sun in the early afternoon. These were rare occasions!

**Rainfall** Cape Horn lies in the rain-shadow of the islands to the north and west. Rainfall decreases very rapidly from the 200 inches known to fall on the west coast of Chile. We guessed that it could well be as low as 30-40 inches, judging from the size of the streams and the dryish nature of some of the bogs we explored.

**Clouds** Warm and cold frontal systems were accompanied by their classic cloud types, of course, but the speed of approach often meant that the nimbo-stratus of a warm front was upon us almost before we had noted the high cirrus! Cumulo-nimbus clouds were often present, but I cannot recall hearing any thunder. Two points were outstanding. Firstly, the high proportion of lenticularis clouds was very obvious. These often formed below the overcast racing above, and their smooth outlines hanging stationary below the ragged stratus often gave a sinister feeling to the sky. Lenticular clouds are associated with vertical waves within the air-flow and we presumed that the vigorous movement coupled with a mountainous terrain accounted for their prevalence. Secondly, the air was very humid, and a very small lowering of temperature was sufficient to condense water-vapour. Thus peaks could spawn clouds so that they looked like active volcanoes with smoke pouring away in the wind. Often clouds would form in situ without any up-lift due to the land, and visibility of over thirty miles could be cut to a mile or less as cloud formed over a wide area in a matter of seconds. Although this cloud was often very low, it never reached sea-level and we never experienced fog. Really poor visibility at sea-level was always due to rain.

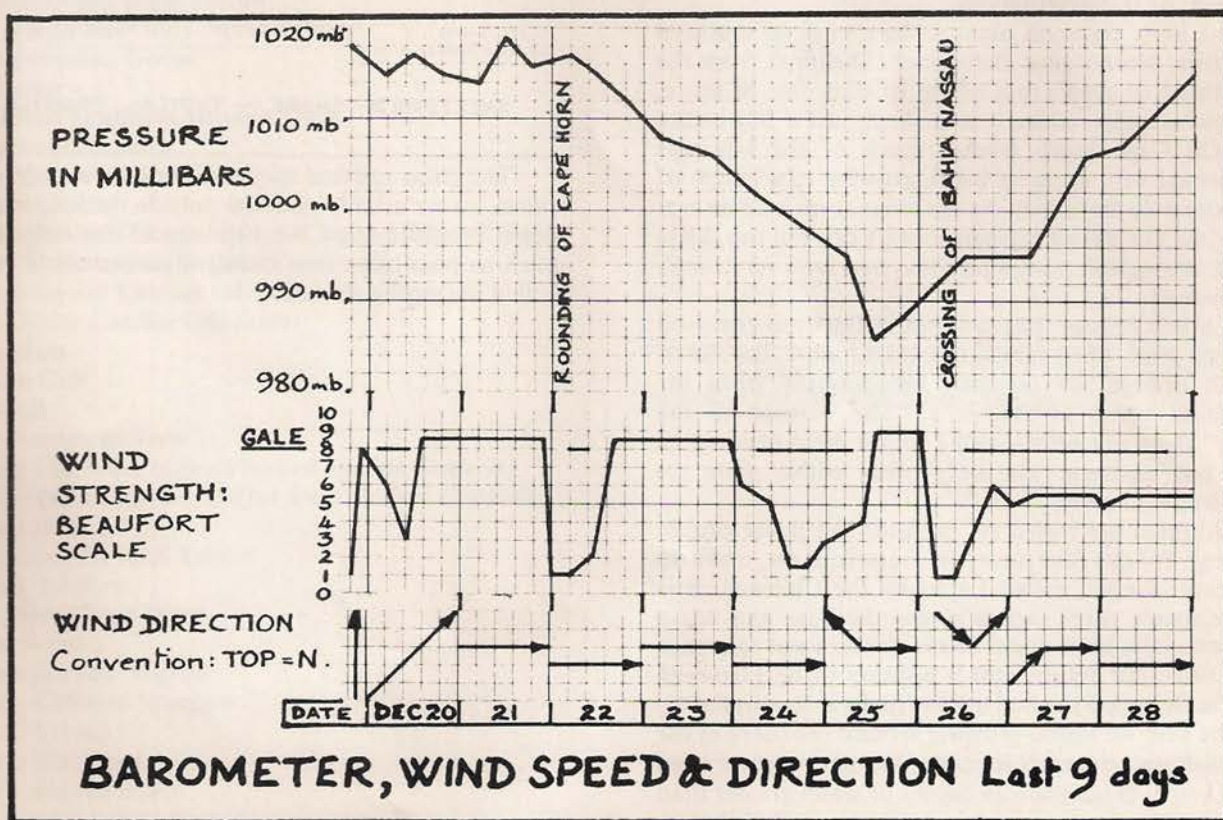
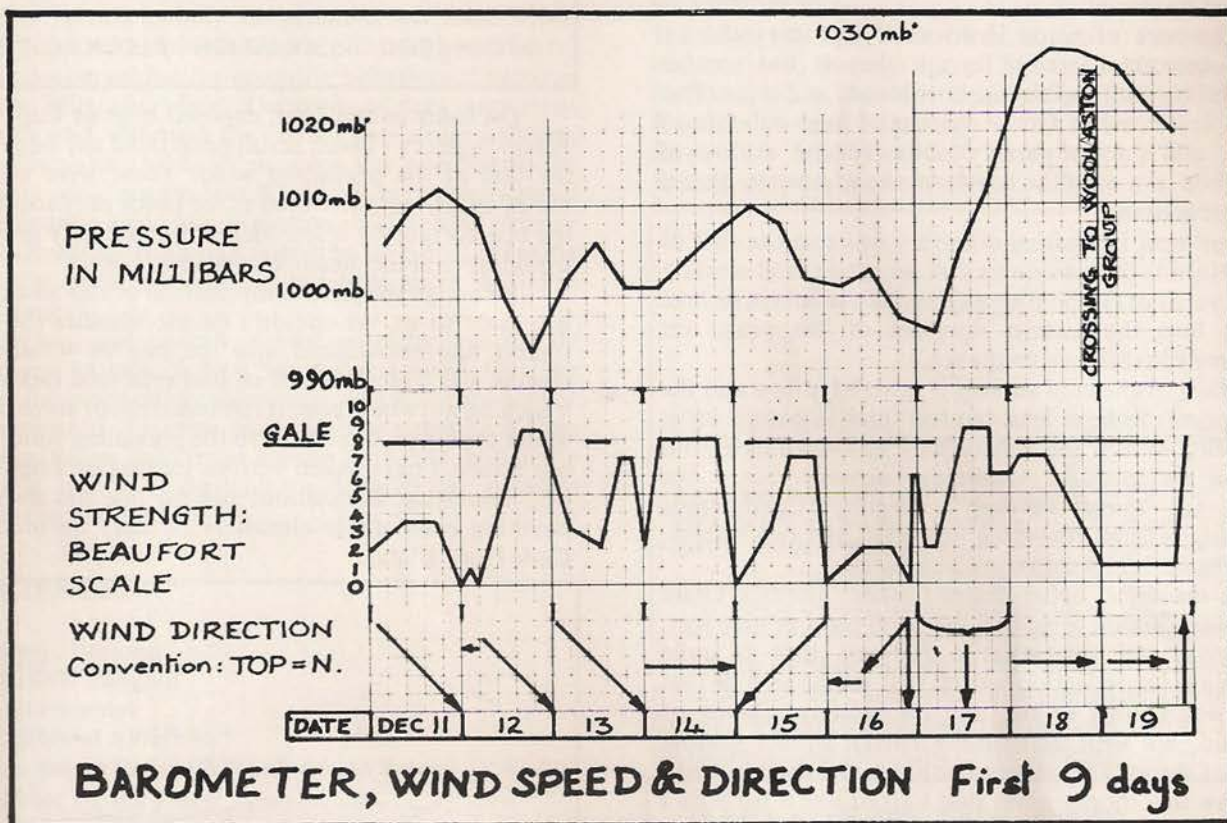
The extreme unreliability of the weather was underlined by the naval meteorological service which

would not give a forecast, but issued synopses that were only good for four hours. Unfortunately our radios were too weak ever to pick up even this help, in spite of special broadcasts for us by the Chilean Navy.

Although all the team had considerable experience of predicting weather by keeping a careful watch on the sky, the lack of warning signs meant that our skills could not be called into play, and when patterns were detectable, the subsequent changes were very rapid indeed. In spite of this state of affairs keeping a high level of adrenalin in our blood stream, we felt that the

weather was probably kinder to the canoeist than the yachtsman. The hour or two of light winds that mark the passage of ridges of high pressure between the depressions allows the canoeist to sneak forward at regular intervals, whereas the same respite from the recurring gales can be of little compensation to the yachtsman out in the ocean.

The huge depressions of the northern hemisphere have pinned me on the shore for a week or more in Scotland, whereas two days was the longest we were delayed in the south. This may not be typical, of course.



## THE LAND

Frank Goodman

Heavy glaciation has occurred at least four times in this region, and within a few miles of our route, the higher mountains bordering the Beagle Channel to the west spawn huge glaciers that reach sea-level in many places. The almost mathematical precision of the straight sides of the Beagle Channel suggest a fault widened by glaciation.

The rock of Cape Horn itself is a grey diorite, which resembles granite except that it has smaller crystals. It contains feldspar, hornblende and mica. Part of the west coast of Grevy consists of huge columns of basalt, and on the shore of Isla Yellow, a flow of Pahoehoe lava onto the beach speaks of not too distant volcanic activity.

Our most interesting discovery was that the cliff of Cape Horn is in fact one face of an arrete, and nestling within yards of the Southern Ocean is a small corrie lake tucked into the eastern shoulder of the peak, yet completely invisible from the sea.

Much of the land surface is covered in bog and the peat appears to be at least ten feet thick in places. Most of the bog mosses and lichens were unknown to us, but we had no specialist knowledge anyway. Since our return we think we can recognise *Colobanthus Quitensis*, a small flowering bog plant and two lichens, *Parmelia* sp. and *Xantharia Candelaria*.

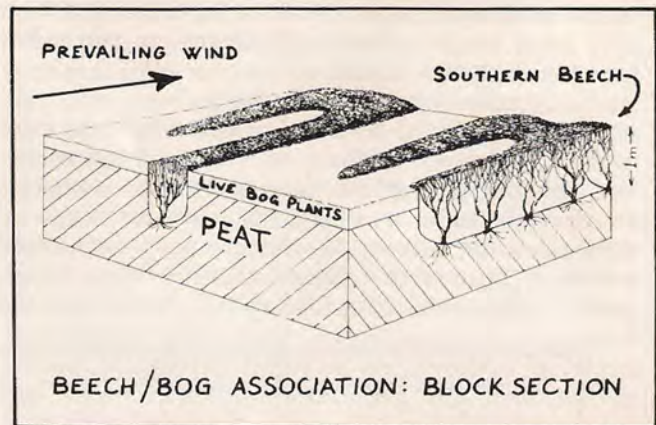
In the drier, better-drained areas, Tussock Grass grows luxuriantly, often to a height of eight or nine feet. This gives the vegetation a lushness that is quite surprising. On reflection we felt that it may well be that areas well-known to us, like the western islands of Scotland, are kept unnaturally barren by the grazing effect of sheep. The undergrowth was not thorny, and I only saw one thorny plant that looked like a berberis I had in my own garden. This was probably *Berberis Buxifolia*, or *B. Heterophylla*.

The most common plant is the evergreen southern beech tree, *Nothofagus Betuloides*. Sheltered from the wind, this tree grows to a height of sixty feet or more, but exposure can reduce it to a shrub just a few inches high. On Cape Horn Island, much of the bog was interspersed with areas of beech growing to a height of approximately three feet. As the twigs form a dense mat that is just not strong enough to walk on, but too dense to walk through, it makes progress overland very tough going indeed.

A bright orange fungus *Cyttaria Darwinii* grows on the beech trees. The brightly coloured sphere, the size of a small orange are instantly recognisable from the description given in Darwin's "The Voyage of the Beagle" these are edible, and I found them pleasant to chew, but tasteless. The only other edible plant we found was wild celery.

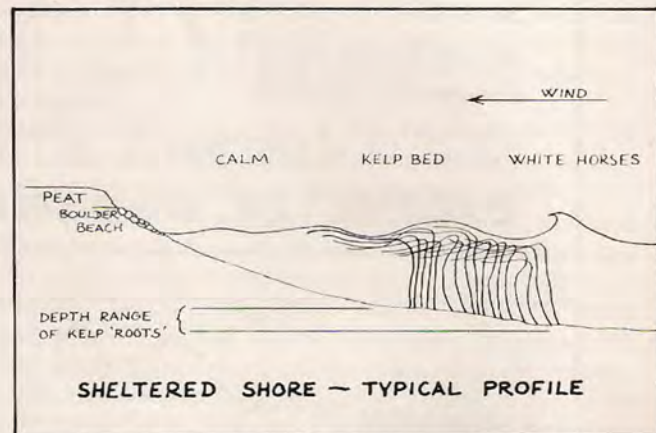
Although we fished on occasion we never caught anything! We did find plenty of mussels to eat, and also a delicious limpet, called *Lapas* by the Chileans. It is approximately three inches across the base and has a  $\frac{1}{3}$ " diam. hole at its apex. I have checked out reference books since our return and it appears to be *Fissurella Costaria*. It is easily prised off the rocks at low water.

The kelp we found growing around the shore in the more sheltered channels is edible, though we never tried it. The kelp will not grow in depths of water greater than 8 fathoms.



On some of the drier, exposed bogs of Cape Horn Island fingers of beech scrub penetrated the bogs along the line of the prevailing wind. These were effective booby traps, we discovered as the beech only rose above the bog surface by a few inches, but actually grew in a trough several feet deep. We fell in!

Although the general mechanism of this association was clear to us, we couldn't decide whether the beech fingers had encroached into the bog or whether the reverse was true. None of us had ever seen this sort of trenching anywhere else. It reminded me of some deserts where the ridges lie parallel to the prevailing wind. Since our return I have asked various experts on bogs about this interesting association, but no one has ever seen anything comparable elsewhere. It may be unique to Cape Horn Island.



The calm inshore of the kelp took us a long way round, so we usually paddled outside the kelp even if it meant breaking seas. We kept out of the kelp beds as much as possible, as we didn't think we could Eskimo Roll in the strong strands.

## THE BIRDS

Barry Smith and Frank Goodman

In view of the large number and varied species of birds found in the islands south of the Beagle Channel it is unfortunate that no member of the expedition could lay claim to expertise in the field of ornithology. Kayaking provides a unique mode of transport into the less accessible habitats, and our journey was often punctuated by new and unexpected sightings which contributed greatly to the enjoyment of the day's paddling.

The nesting colony of penguins on Cape Horn Island provided us with an opportunity to spend several hours photographing the eccentric behavioural patterns of these delightful birds. The birds of prey were most dramatic and, although the condor was a rare sighting, there was no mistaking its awesome size and disdain for energetic wing movements. Until we grew accustomed to the chaotic and clumsy motion of flightless steamer ducks retreating from our boats the turbulent breaking water was often mistaken for beasts of another kind in the distance!

Because our interest in bird watching was strictly subsidiary to canoeing, it must be stressed that the species list is not comprehensive and its accuracy cannot be guaranteed. In some instances the passage of time and insufficient field notes are the problems, and in the others it has been difficult to differentiate between similar marked birds.

## SPECIES SEEN

Magellanic Penguin  
Rockhopper Penguin  
Sooty Shearwater  
Black-Browed Albatross  
Fuegian Storm Petrel (Wilson's Storm Petrel)  
Magellanic Diving Petrel  
King Shag  
Black-Drowned Night Heron  
Black-Faced Ibis (Buff-Necked Ibis)  
Lesser Megellan Goose  
Kelp Goose  
Magellanic Flightless Steamer Duck  
Flying Steamer Duck  
South American Green-Winged Teal  
Andean Condor  
Chilean Buzzard (Eagle) (Black-Chested Buzzard Eagle)  
Forster's Caracara (Striated Caracara)  
Fuegian Oyster Catcher (Megallanic)  
Black Oyster Catcher (Blackish)  
Great Skua  
Dolphin Gull  
Kelp Gull  
South American Tern  
Chilean Cinclodes (Grey-Flanked and/or Blackish)  
Bar-Winged Cinclodes and/or Dark Bellied Cinclodes  
Crested Duck  
Dark-Faced Ground Tyrant  
Chilean Swallow  
Cape Horn Grass Wren  
House Wren  
Rufous-Backed Negrito  
Rufous-Collared Sparrow  
Austral Thrush  
Austral Blackbird  
Black-Chinned Siskin

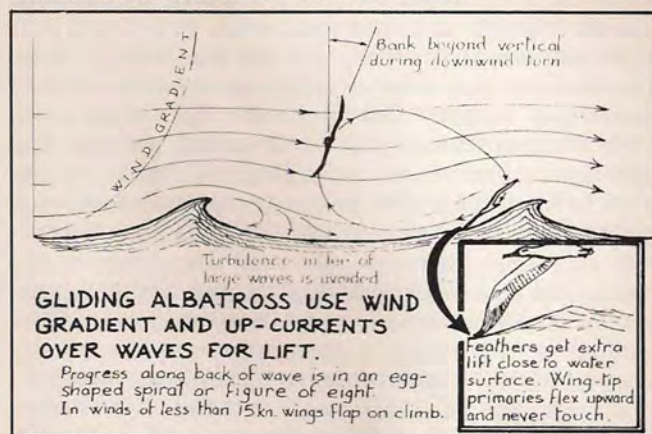
Patagonian Finch  
South American Snipe (Common)  
Giant Petrel (Fulmar) (Southern Fulmar (Petrel))  
Ashy-headed Goose  
Rock Cormorant  
Upland Goose  
? Wandering Albatross  
? Royal Albatross  
? Red-Tailed Buzzard (Rufous-Tailed Hawk)

We would like to thank Mr. Ronald Templeton for his advice and suggestions. The references outlined below provide further information concerning this area.

### REFERENCES:

*The Birds of Chile*, Johnson A.W., private publication, best obtained through Inter-Library Loan or specialist bookshops e.g. Scottish Ornithologists Bookshop, 21 Regent's Terrace, Edinburgh.

*Birds of Isla Grande*, Humphrey P.S., 1970, Smithsonian Institute, Washington D.C.



Some bird-books state that albatross cannot rise from a calm sea, and were thus pinned to the roaring forties. We saw many albatross rise easily from a calm surface with just two flaps of their wings!



The terns just stopped flying and shook themselves in mid-air as they rose from the kelp.

## EQUIPMENT REPORT

*Barry Smith*

We opted for clothing and equipment which was well tried and tested rather than risk new designs and fabrics which may let us down. Past expedition experience and stringent financial economy were factors which determined this, and in the major area where we diverted from this principle — photography — we found that more practice with the cameras and waterproof housings would have saved many slides.

We used Nordkapp kayaks since this is the boat which we are most experienced in, and it is also the best expedition kayak in the world. There were no special alterations for the Cape Horn trip, the modified hull and deck hatches being standard options. We personalised the kayak with our own deck elastics and cockpit storage arrangements, and had the front bulkhead fitted according to our leg length. This provided greater storage capacity in the hatches and a firmer foot support. One of the kayaks was severely holed and another both holed and warped, due to being very heavily loaded and badly freighted during transit from Great Britain. The holes were expertly repaired, and the damaged stern section of Nigel's boat treated with ingenious improvisation under the direction of Frank. The area was heated over an open fire, and then tensioned with ropes in the bow of a tree overnight. This resulted in two twists in the section — fortunately working to cancel each other out! The kayaks weighed 65 lb empty and 185-195 lb on the first day. Thus, in the case of Frank, the total weight was about 400 lb leaving sufficient freeboard for confident paddling. Loading improved stability, and approximately 60 per cent weight in the stern suited most situations. The kayaks handled extremely well in the great variety of wind and sea which we experienced. Obviously no boat will be perfectly equipped for all conditions, but a fine balance has been achieved with the Nordkapp.

For paddling we used wet suit trousers and neoprene spray decks extending into a waistcoat. For this to work, and to avoid a cold back, the trousers need to be high waisted. A suitable alternative would have been a short-armed suit with a conventional neoprene spray deck. With water and air temperatures around six degrees Centigrade and the possibility of a capsize often in our minds, we were not tempted to dispense with this garb. Pile-lined clothing would have been more comfortable for paddling, but we did not feel confident of its insulating properties when being regularly soaked in water or during immersion.

Hard-soled neoprene boots kept our feet warm whilst paddling and were excellent on land when searching for camp sites, boat carrying etc. The patented neoprene 'smittens' were efficient hand protectors on windy days and allowed good contact on the paddle shaft. Both thin pure wool sweater and 'thermawear' tops were used to provide additional warmth underneath a canoe anorak. The heavy gauge 'Gore-Tex' was waterproof and did indeed allow water vapour to pass out without condensing. Neoprene cuffs are compact and do an excellent job in preventing heat loss from a vulnerable part of the body. Wool, and wool-mix hats coming well down over the ears were adequate, although Frank occasionally wore a neoprene balaclava. A waist bag is a useful item for immediate requirements e.g. food, film, flares, dark glasses, face

cream, knife etc., but again it is very much a matter of personal choice how these things are carried.

Our food was double packed in polythene so as to take up a minimum amount of space. Other items, especially clothing, which required additional protection from possible sea water intrusion, were packed in bags.

These were of neoprene-proofed nylon, stitched and taped, and with a plastic clamp clip to make a water-tight seal. Made to fit through the hatch entrance, they provided an excellent safeguard although our hatches were almost always dry. Together with two larger bags they also facilitated moving equipment when camp site and kayaks were separated.

The question of buoyancy aids is an evocative one which is only in part circumvented by saying we rarely wore them. We felt more mobile in the upper body without them. In retrospect there were perhaps moments when we should have worn them, but we were very aware of the need to keep together in the event of an incident. Having them only readily accessible as water breaks on the deck should really only be contemplated after considerable thought over a long experience of canoeing.

Likewise, our attitude towards self-rescue was determined by the experience of the group and the conditions we were paddling in. It is advantageous to practise procedures amongst the team in controlled situations. Unfortunately our training programme did not allow for this and we compensated, especially after our separation at Caleta Douglas, by laying careful contingency plans, and in keeping vigilant and in close company on the water.

The selection of a paddle is another personal decision. Between us we used two all-wood standard slalom paddles (210cm) with spoon blades; one similar but with a slightly longer and narrower blade (230cm); and one fibreglass shafted with wood laminate assymetrical blades (218cm). The slalom blades had the advantage of being built for rough treatment. The sprint paddles lacked this but probably took some of the hard work out of a long day. Until more scientific work is carried out on the physiology and dynamics of paddle action the line between style and technique will remain blurred. 'Whatever gets you through the day' as a result of personal experience is perhaps an answer, and we were content with our selection.

We each carried a variety of flares which provided for maroons, rockets, hand-held and smoke. The nature of the area did little to give us confidence in these.

We knew that for most of the time there would be fire wood available. Consequently we took a one-pint paraffin stove and a half-pint petrol model, together with a small amount of fuel. We were not disappointed in our fires, and a small collapsible grill was well worth carrying to provide a cooking surface.

For tents we used a pyramid design, originally made for the windy conditions of the polar continents. We took two in order to allow for the possibility of one blowing away. They featured linking extensions which we never used due to pitching difficulties. There was plenty of room for equipment and cooking in bad weather, and they stood up very well to the violent squally conditions.

Although we would have preferred to use sleeping bags filled with an artificial fibre because of their good insulation properties when wet, high quality light down bags were selected as less bulky and lighter. Lightweight 'Fiberfill 2' duvets were warm and wind-proof, and

would have been especially useful had our bags been soaked.

Both sealed-cell camp mats and airbeds provided adequate insulation. Pile-lined clothing, warm, durable, and easily washed, was excellent to wear on land. This was supplemented by 'thermawear' and good woollen pullovers. For wind/rain protection we used a light polyurethane-proofed nylon suit. These were very efficient, packed up very small, and served their purpose well.

Land footwear varied, and included sailing boots, kletterschue, and neoprene boots. For wetter conditions the boots would have been most suitable, with those designed for sailing kinder to the feet and easily bent around spaces in the boat.

The diagram below gives the lay-out of equipment packed into one kayak. In this case Frank's. My own packing arrangement is given here also and shows that there is no single answer to packing a canoe. While it is true to say that we kept the idea of 'Last in, first out' in mind, our main concern was to use every available space. Thus, we filled up with odd tins of food worked down between waterproof bags. This made packing and unpacking more tedious, but ensured we carried the maximum load possible.

Loading Plan: My Kayak.

Foredeck: Chart, compass, cag, buoyancy aid.

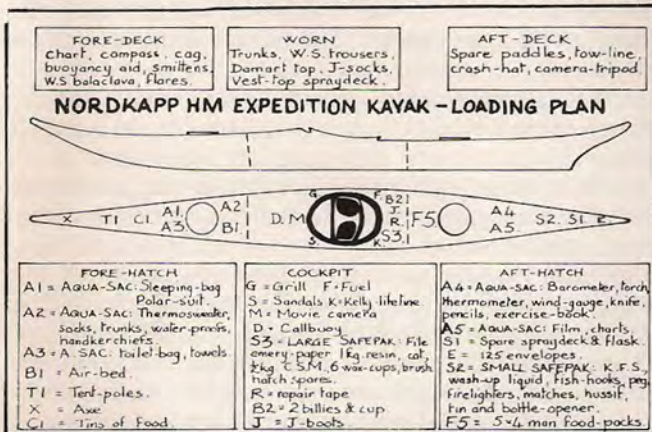
Aft Deck: Spare paddles, toe-line, crash-hat, Call-buoy radio.

Fore-hatch: Waterproof bags containing: 125 envelopes, Spare tent equipment, diary, 1 litre paraffin, collapsable water bottle, film, duvet, socks, polar-suit, 2 pullovers, thermo-sweater, waterproofs, wash-kit, 2 foodpacks.

Cockpit: Tent pegs, camp-mat, pullover, tent poles, gloves, flask.

Aft-hatch: Sleeping bag, 1/2 pint paraffin stove, 2 litres petrol, sailing boots, cooking pans, torch, spare batteries, spare cine film, 5 foodpacks.

Waist-bag: Lunch food, flares, hat and sowester, film, dark glasses, face cream, knife.



Those people who generously supported us are receiving individual reports on the testing of their equipment.

## PHOTOGRAPHIC REPORT *Nigel Matthews*

The financial return or otherwise of any expedition lies usually in the hands of the photographer. Pictures can be sold to magazines and newspapers and, more important, they are needed for the inevitable lecture tour. A choice has to be made: is there only one photographer or does everyone take pictures? We reached a compromise. We had a photographer but everyone had a camera.

It was clear that the best selling pictures would be those showing the most dramatic action but, in canoeing, the photographer is usually too busy paddling to press the shutter, let alone focus, when conditions become hairy. We hoped we would be lucky.

There are numerous books and publications offering advice on the many aspects of photography. Unfortunately the only people with experience of our particular aspect was ourselves. Without doubt an independent film crew could produce pictures that would portray all the aspects of the journey, but this was not possible even if we had been in favour of it.

Unwisely, misguided by offers of sales to television companies, movie film was taken in addition to the normal stills. A trial run with Super-8, filming the attempt on Cape Wrath, gave us several hundred feet of how not to do it. Undaunted we decided to try again.

Through the offices of "Monitor", J.J. Silber's advertising agency, we were loaned Canon equipment. For various reasons we didn't receive the equipment which we would have liked. Instead we had:-

- 2 Canon AE1 bodies
- 2 Canon 50mm f1.8 lens
- 1 Canon 28mm f2.8 wide angle lens
- 1 Canon 80-200mm f5.6 zoom lens
- 1 Canon 814 Super 8 movie camera
- 1 Canon G111 pocket automatic 35mm camera
- 1 Canon Datematic pocket automatic 35mm camera

In addition to this equipment loaned by Canon we also had a Canon 814 movie camera belonging to Frank Goodman and a Nikonos 111 35mm underwater camera the property of Nigel Matthews.

For each lens we had skylight filters to protect them as much as anything, together with rubber lens hoods. The filter collection was completed by a variety of 1-2-3 diptre close up lens, yellow, green, orange, red and polaroid filters.

K.E.M. Electronics of Hendon supplied us with Aqua-Marine waterproof housings for all the land cameras, together with a folding, rifle type, shoulder support.

There were a variety of blower brushes, cleaning tissues, batteries of all types, optical tools, changing bag, sticky tape, lens hoods etc., etc.

Film was almost entirely Kodak:-

- 60 rolls Kodachrome 64 Super 8
- 8 rolls Kodachrome 25 35mm
- 60 rolls Kodachrome 64 35mm
- 60 rolls Ektachrome ED 200 35mm
- 2 rolls Anscochrome 500 35mm
- 20 rolls Kodak Tri-X b & w 35mm
- 5 rolls Kodak Pan X b & w 35mm
- 10 rolls Ilford HP5 b & w

The film was shot almost entirely by one member

of the team, Frank Goodman. He had many problems to contend with. The foremost one was that of keeping the camera dry. The waterproof housing restricted the use of some of the controls and was abandoned. As the camera was carried in a waterproof bag in the cockpit, getting it out took so much time that he was likely to be left behind and "stars" were reluctant when required to come back for a second shooting. Except in the calmest conditions he needed support by rafting when he was filming.

All sixty rolls were soon shot and rationing had to be introduced. All film was shot at 24fps to allow easy sound synchronisation. With the obvious exception of those special effect shots to be projected in slow motion.

At this point it is still impossible to comment on either the success or otherwise of the movie film as it has not been projected. To have any hope of selling the film it has not to be projected for fear of scratching it. To have a duplicate made at current prices is a major financial undertaking at this stage. For T.V. purposes the film would have to be copied via a video process to 16mm.

The problems of shooting movie film from small moving boats are numerous if the results are to be of a commercial quality. The obvious solution would be to film either from a large boat or a helicopter. Neither of these possibilities was acceptable to the team as having a safety boat a telephoto's length away would defeat much of the point of the expedition. Now that the achievement has been made perhaps a second rounding should be undertaken for filming purposes.

Still photographs were taken almost entirely by two members, Nigel Matthews and Barry Smith. The former shooting colour reversal and black and white, the latter colour reversal. Both used AE1's in Aqua-marine housings while Nigel also had a Nikonos. The Canons were used either with standard 50mm lens or 28mm while on the water. The Nikon was always used with its standard 35mm lens.

The housings proved to be very successful so long as they were kept absolutely dry internally. In normal use they were completely water-tight though problems arose while changing film on the water. Initially the housings were a bit cumbersome but after a few days use became second nature. The housing consists of a very heavy duty but pliable plastic bag, with a glove in its side and an optical glass window in front and rear. The camera inserted viewfinder and lens are aligned with the window. The seal is made with a very simple but effective pressure clip tightened with knurled nuts. All controls are easily operated.

In the canoes both of us designed retaining straps to hold the cameras against our bodies when not in use. These were merely elastic straps passed around the body in addition to the normal neck straps. The camera could be lifted to the eye but did not swing about when left. They would also help prevent loss should either of us capsize. The body straps proved to be so successful that for energetic land shots mine has stayed on the camera ever since.

Wherever possible colour shots needed to be duplicated with a black and white shot, a chore at the time but well worth the effort. Colour and monochrome necessitated two cameras around the neck or tucked under elastic straps on the deck of the boat. Round the neck they presented quite an encumbrance.

While being somewhat easier than the shooting of movie, getting action pictures in what was pictorially the most spectacular situations was very frustrating. Being

thrown around, trying hard to stay upright, hold a paddle in one hand and then focus and shoot with the other is quite a feat. The results are too often disappointing. The shot perched on top of a 20ft. wave looks as if it was shot off Skegness on a calm day. The majority of the "rough sea" shots were taken from dry land. Waterspots were a constant problem. No sooner was the lense cleared than another wave soaked it.

As with any form of photography it is essential to get thoroughly familiar with the equipment before you have to use it in earnest. In our special case we needed to be able to take shots one handed and very quickly, a feat made easier by automatic cameras. Although manual, the Nikonos was set and usually left to wait for any dramatic change in exposure. Unfortunately its mechanics did not prove to be reliable. It did delay its failure until the Horn was rounded, however.

Having completed the expedition the photographic aspects continue at a hectic pace. Depending on the attainment of the expedition pictures can be highly sought after. Many empty promises are made. One local paper offered to take all our b/w process it, print the shots they wanted and talk about the price afterwards!!!!

The easy solution seems to be to use an agent who deals with ALL the pictures, avoiding situations where pictures are obtained free of charge from one source and at the going rate from another. Where possible the arrangements to sell pictures should be set up before departure and ideally film sent back while the expedition is in progress. (This will maintain interest back home, reveal the problems with shooting before it is too late and give prospective buyers a tempting preview of what they are going to get. Even though film is dealt with through one agency some form of insurance or liability needs to be taken out, a factor learnt at bitter cost by the "mis-laying" of the choice four dozen pictures of our trip. If an agent is engaged he needs to be given complete control of sales if any profit at all is to be made. Special arrangements can be made for supplying pictures to sponsors etc. beforehand.

Every team members wants copies of the pictures for lecture purposes. Quality duplicates are expensive. Often, the local chemist rattles off copies with the familiar blue - green cast. The extra expense is worth it in the end. Get some samples first!

On the whole, our equipment was good. A longer, faster zoom would have been useful as would a macro lens.

With these additions to the gear I'd do it almost the same way again but resolve to stand in the cold and wet more, to be first up and last to bed, to be at the front, the back, the size and on the bank, to capsize in the roughest water for the dramatic shot, always have film in the camera, always be wound on and never up. Always bracket exposures and get the one from the other angle, clean the gear morning and night, never lose my temper and swear when the shutter sticks and the rewind dies. I would catalogue all the pictures when we got back, make perfect prints from the right negatives the day before I'm asked for them, get them delivered before they're ordered and never ever wonder whether it was worth it when the picture of Cape Horn complete with thirty foot breaking wave taken over the front of my kayak is captioned in a leading canoeing magazine, "A view from a canoe".



## MEDICAL SUPPLIES REPORT

*Jim Hargreaves*

It is very easy when making a list of essential medical supplies for an expedition to err on the side of opulence rather than necessity, particularly when space is not a governing factor. In the case of our expedition the amount of space available was very much an overriding factor which influenced the types and quantities of the medical supplies which we carried. As soon as you start leaving things out in favour of what you consider to be more vital items, the thought immediately crosses your mind that because you've left it out someone will surely need it. The fact that all treatment would be administered by enthusiastic amateurs with no formal training (we had no doctor) meant that complex medical equipment and dangerous drugs were precluded from our list. This meant we had to try and cater for every imaginable common ailment or injury with very basic medical application. One other factor which influenced the choice of supplies was the remoteness of our expedition from skilled medical help of any kind. This obviously meant that someone suffering from serious injury or illness could have been marooned without trained medical help for many days.

All the medical supplies listed below were double packed in polythene, and then divided into large and small BDH containers, and then split amongst the group. In addition to the comprehensive kits we carried every-day packs, which contained basic supplies to deal with day to day conditions such as headaches, blisters, sores etc. These were also double packed and then put into a BDH container, but were stored so they were readily accessible at all times without the necessity of landing.

In the event the only medicament which was applied in real earnest was Lomotil with Neomycin. This was used to ease a very acute attack of stomach sickness and diarrhoea. It proved to be an admirable cure, and can be thoroughly recommended for this, the most common of expedition ailments.

Our very special thanks must go to Dr. Mike Jeffries and his assistant, Mrs. Valerie Symons, who both contributed an enormous amount towards this aspect of the expedition's equipment. Mike Jeffries advised me on various up to date drugs and medicines suitable for a variety of conditions and eventually, from the list of requirements presented to him, produced a supply which could cope with most of the more likely maladies. He was unsparing in his donations of time and advice to our venture, and without his valuable contribution, the task of preparing the first aid packs would have been an enormous headache!

Mike Jeffries' assistant Valerie Symons also gave unsparingly of her time. Each prescription was packed, bottled and labelled with the following details:-

- a. NAME
- b. USE
- c. DOSAGE
- d. INCOMPATIBILITIES (WITH OTHER DRUGS)
- e. POSSIBLE SIDE EFFECTS

This must have taken many long hours of painstaking work, and we are all very grateful to Valerie

for her kind efforts.

The following is a list of the medical supplies as carried on our expedition with the ailments/injuries they were designed to treat:

ITEM	CONDITION
1 x 100g Boric Lint	Dressings etc.
2 x 100g Cotton Wool	Dressings etc.
2 x 3" Bandages	Dressings etc.
4 x 2" Bandages	Dressings etc.
4 x 1" Bandages	Dressings etc.
2 x 2" Crepe Bandages	Dressings etc.
2 Triangular Bandages	Dressings etc.
1 Netelast Dressing Size E	Dressings etc.
2 x 1" Zinc Oxide Plaster	Dressings etc.
1 x 1" Micropore	Dressings etc.
20 x 2mls Hypodermic Syringes	Analgesics/Local anaesthetic
20 x 21g Hypodermic Needles	Analgesics/Local anaesthetic
20 x 2mls Fortral amps.	Analgesic
36 Tabs Fortral 25mg	Analgesic
200 Solprin	Mild Analgesic (Soluble)
200 Paracetamol	Mild Analgesic (Soluble)
1 x 25gms M.S.Paste	Abscesses
60 tabs Talpen 250mgs	Antibiotic
40 tabs Septrin Dispersable	Antibiotic
10gms Bongela	Mouth Sores
2 x 50gms Ceteflex Cream	Antiseptic
2 x 25gms Brulidine	Burns and Scalds
3 Samaritan Cream	Antimidge
10gms Fucidin	Anti-Bacteria
40 tabs Altacite	Indigestion
12 Anusol	Suppositories
100 Lomotil with Neomycin	Diarrhoea
100 Piriton	Hayfever and Itching
30 Avomine	Travel Sickness
10gms Brolene	Eye Ointment
10ml Brolene	Eye Drops
30gms Mycil	Skin Infection
30 caps Dexadrine 15mg	Stimulant
50 Electrosol	Salt Tablets
30gm Dermonistat	Fungal Skin etc.
20 Infection swabs	
2 x 100gms Uvistat	Sun screen
Hibitane	Mouth infections
50 Stemetil Tablets 5mg	Stomach Upsets
500 Multivite Tabs	Vitamins
6 Tubes Lipsyl	Chapped lips
30 Puritabs	Water Sterilisation
200ml T&R Embrocation	Sprains, Strains, Stiffness
250 Tabs Ascorbic Acid 50mg.	Vit. C

Finally, our thanks must also go to Joe Tasker of Magic Mountain for giving us the list of supplies he took on the Changabang West Wall Expedition, it was this list which provided me with a foundation upon which to judge our own needs and supplies.

## FOOD REPORT

*Jim Hargreaves*

Quite how I ended up organising the food for our trip I shall never know, except that the other three members were quicker off the mark in avoiding it than I was, which only left one alternative! The planning, preparation and packing of the food for any expedition is, traditionally, an unenviable task, and yet singly it is probably one of the most influential factors affecting the overall success of any venture. Nothing is guaranteed to under-mine health, strength and morale more than a monotonous diet, or one that fails to take into account the physical outlay necessary to complete the objective. Traditional style mountaineering expeditions of the past, with their vast armies of porters were faced with enormous self inflicted logistical problems; how to transport the food necessary to feed the people carrying the food! Enormous food dumps resulted. None of this helps a canoeing expedition. The over-riding factors influencing the quantity and quality of food taken on self contained canoe journeys are space versus weight. In our case we knew that the area we were going to was one which was notorious for bad weather, an area where long periods of unpredictable squalls could easily render the group tent-bound for many days. To give ourselves a fair chance of success we had to carry as much as possible to allow for days lost due to bad weather, however we were obviously going to be limited by the capacity of our kayaks. We decided that about a month's food was therefore a fair compromise considering our proposed total travelling distance of 235 miles. We knew that we would be able to eke out the rations if necessary, and so plans were made to pack food for four men for twenty eight days.

The next problem, after you've decided how long you're going to need food for is formulating a series of menus. Most people will probably imagine that this is the stage when expert dieticians are consulted, the calorific return of various foods adjudged and each member consulted as to his idiosyncratic likes and dislikes. I suppose this is the stage when these things ought to happen but didn't in our case! The food we took was simple, wholesome and nourishing, this is borne out by the fact that it took very little time to prepare, tasted good and we all arrived back feeling healthy.

The first thing to be considered was variety in the food packs. This is essential, to a degree, but can become over complicated if you allow your gastronomical imagination too much licence. The aim is a satisfactory food pack, not a Fortnum and Mason hamper! Having exchanged correspondence with Bill Tilman, who reputedly planned his expeditions on the back of a post card, I was left with the opinion that simplicity was the answer. The result was four basic food packs, A, B, C and D. Each of these packs contained a different menu revolving around the normal basic daily meals.

The menus were made up as follows:

### **MENU A BREAKFAST**

Alpen  
Sausages and beans 4oz tin  
Healthy Life biscuits  
Marmalade

### **MENU B BREAKFAST**

Weetabix  
Kippers  
Ryvita  
Jam

Tea/coffee

### **LUNCH**

Dried mixed fruit  
Old Jamaica chocolate  
Sardines  
Assorted biscuits  
Sweets  
Tea/coffee  
**EVENING MEAL**  
Beef and tomato soup  
Chicken Supreme  
Smash  
Dehydrated peas  
Tea/coffee

### **MENU C**

#### **BREAKFAST**

Healthy Life biscuits  
Bacon grill  
Alpen  
Marmalade  
Tea/coffee

#### **LUNCH**

Dried mixed fruit  
Plain chocolate  
Tuna fish  
Assorted biscuits  
Sweets  
Tea/coffee

#### **EVENING MEAL**

Chicken soup  
Beef curry  
Minute rice  
Dehydrated vegetables  
Tea/coffee

Tea/coffee

### **LUNCH**

Dried mixed fruit  
Fruit and nut chocolate  
Pilchards  
Assorted biscuits  
Sweets  
Tea/coffee  
**EVENING MEAL**  
Oxtail soup  
Farmhouse Stew  
Smash  
Dehydrated mixed vegetables  
Tea/coffee

### **MENU D**

#### **BREAKFAST**

Weetabix  
Powdered egg  
Ryvita  
Jam  
Tea/coffee

#### **LUNCH**

Dried apricots  
Meat spreads  
Assorted biscuits  
Sweets  
Mars bar  
Tea/coffee

#### **EVENING MEAL**

Mushroom soup  
Brown stew  
Smash  
Dehydrated vegetables  
Tea/coffee

Each of these food packs were prepared as one man packs and then packed in twos, every item contained in the packs was sealed in individual polythene bags. To begin with the bags were heat sealed, and although this gave a very neat end result it proved to be much quicker in the long run to tie knots in the bags. In addition to all the food items mentioned on the menu list each food pack carried the following standard items:

Milk  
Sugar  
Salt  
Matches  
Toilet paper

The lunch time spreads and fish portions were carried separately, stuffed into odd spaces in the boats. One advantage was discovered here in having a translucent deck pigment, you could see where things were in your hatches, this was very useful when searching for goodies buried in the bowels of your kayak.

Each food pack was double packed in heat sealed 500 gauge polythene tubing. Finally each of the packs was labelled A, B, C or D and each kayak loaded with seven packs of each (These were four man day packs) this meant only one person had to unpack food daily.

Cooking was done as one group in good weather, mostly over open fires, the evergreen beech provided abundant firewood. During bad weather we cooked in our tent pairs.

Generally speaking the planning of the food was not particularly difficult, although the packing of the food was a bit of an epic which was performed in one night. All the food was laid out in piles all over my

house, and people were made responsible for fitting different foods into portion packs. This worked very well, notwithstanding the vast quantities of mashed potato powder all over the bedroom walls, and the scientific experiments conducted in the toilet as to exactly how many sheets of paper were required by one person for one visit!!

To conclude, very many thanks to the many people who helped us with this aspect especially Nigel, Anne Jan, Rhi, Malcolm and Rosie.

Finally I would particularly like to thank Mars and the North of Scotland Milk Marketing Board for their generous donations to our expedition.

## NAVIGATION

*Barry Smith*

Admiralty Chart number 1373 covers the area of our journey. This is at a scale of 1:550,000. We were lucky enough to be able to borrow an Argentinian chart which was slightly bigger giving a scale of approximately 5 miles to the inch.

In addition there are more detailed extracts for some of the more important bays.

We each had a 'Sestrel' compass mounted on the front deck, and carried a 'Silva' type compass to help lay off courses. We did not feel the need for parallel rules, but a pair of dividers was useful for making a quick time and distance estimate.

Unfortunately there are no larger scale maps available and the chart, although accurate in outline, provided little detail on inland topography, the nature of the coastline, the position of smaller streams, etc.

Although canoeing borrows certain techniques from the world of coastal sailing, and this is especially true for open crossings and during poor visibility, the skills employed with map and compass are basic. There is no mystic involved in navigating a kayak; likewise there is no substitute for experience.

We were never out of sight of land. As such the compass was useful for verifying the position of features and to check our observations and drift. Thereafter we navigated mainly by chart reading, diligently keeping in touch with the chart as any plotted feature came into view. In this way the ever rapid changes in the weather would not leave us short of a contingency plan.

Tide tables were only available until December 31st, and from December 11th the maximum range for Puerto Williams was 2.19 metres and usually considerably less. The Admiralty Pilot South America Volume 2) was singularly lacking in information for us. Most of the sheltered bays were obvious from the chart, and only in three instances does it mention tidal streams. These gave little concern to the Chilean Navy, and information from local fishermen was contradictory to our own opinions in some instances. From this it emerged that the maximum spring rate in constricted areas and off salient points would be two to three knots. Off Cape Horn there is a permanent one knot drift to the east. Consequently tidal considerations played a minor part in our planning, and we concentrated in keeping one step ahead of the weather changes.

## EXTERNAL RESCUE

*Barry Smith*

The Chilean Navy's desire for us to have an escort boat was finally overcome. We agreed that it was in the best interests to set up a series of radio links whereby we could obtain weather information, give our position and make an emergency call if necessary.

We each carried a 'Callbuoy' radio strapped to the back deck.

There are radio stations on Navarino Island, by the Murray Channel, on Burnt Island, and the islands of Wollaston, Herschel, and Deceit leading down to Cape Horn. These incredibly isolated huts are usually manned by between two and four radio operators, and serve the dual purpose of monitoring ship movements and relaying weather information of their own and from the station on Diego Ramirez Islands, fifty miles south-west of Cape Horn. Language problems necessitated the use of the phonetic alphabet and code. In an attempt to overcome potential transmission difficulties the stations would be listening at set times, thus allowing three transmissions each day. More details would be relevant had the system worked! In spite of the painstaking work of the Chilean Navy, the limited range of our sets, and the mountainous nature of the terrain combined against us. We actually heard Puerto Williams on two celebrated occasions but no meaningful contact was made. We were left to sort out our own problems, and this is what we had expected.

## PERSONAL REFLECTIONS

*Barry Smith*

Dutchman Willem Schouten from the village of Hoorn is credited with having discovered the mis-named cape in 1616. Since then there has emerged an enormous quantity of literature comprising epic tales of personal heroism and tragedy set in the area south of the Straits of Magellan. Of the land hereabouts the South American Pilot considers it '... as about as inhospitable land as is to be found in the globe'. If we failed in our objective then we had bitten off more than we could chew. Success, then it must have been easy, you must have been lucky.

Fortunately, even with the benefit of hindsight, neither is true. The concept that this intricate group of islands linking Tierra del Fuego with Cape Horn Island was accessible by, and indeed most easily expored by, kayak has been vindicated. During the period 11th - 28th December the Chilean Navy at Puerto Williams recorded average wind and sea conditions for the area, with the worst day they have ever seen in the Beagle Channel on Christmas Day.

Personal reflections need tempering by the fact that Cape Horn is 7,500 miles away, a long and expensive flight with the kayaks sent in advance. To leave the shelter of technical detail and simply explain why it was so worthwhile is surprisingly difficult. The single aim, a simple lifestyle, and the satisfaction of being self-sufficient carrying one's home complete in the kayak, these are a few of the more easily definable rewards.

The area embraces a multitude of landscapes — mature forest and alpine peaks on Navarino Island,

hanging glaciers on the north shore of the Beagle Channel, barren moorland on Herschel Island, and the horned peaks of the Wollaston Group like Tolkein's Mountains of Shadow, foreboding yet alluring as virgins to the romantic heart. Every camp site holds its own attractions and, especially if poorly sheltered, its misgivings; and there is always a new world to explore. Digging in midden heaps for Indian remains, photographing the local fauna and flora, beachcombing, looking for shellfish and fungi to supplement our food packs, keeping the fire going and trying to think up new recipe variations for our daily diet. And always an eye on the weather, the sea and the barometer to make maximum use of any reasonable conditions. These are some of the simple pleasures which occupied us when we were not paddling.

Undoubtedly rounding the Horn and the day spent on the island were the high points. But there are innumerable coves, stretches of untrodden coastline and periods of paddling when body and soul achieved a degree of unity, which have left a permanent impression on my mind. There was always the hospitality of the people of Chile who, although doubtful of our sanity and fearful for our safety, gave us every possible assistance.

## PERSONAL REFLECTIONS

*Jim Hargreaves*

It would be impossible to summarise in a tome, let alone a brief precis, the memories, sentiments and reflections of a journey such as ours. From the outset I viewed the expedition objective as being perfectly feasible and rational, had there been any doubt in my mind I would never have become involved in the first place.

The single outstanding factor in my mind remains not what we actually achieved, but what we were prepared to do to achieve it. Our expedition was extremely fortuitous inasmuch that the group's compatibility, our canoeing skill and judgement and the prevailing weather conditions all coincided at the right time. Had this not been the case the outcome would almost certainly have been different.

The planning and preparation for the expedition took, from the very start to the very end, almost two years. This seems to be an unjustifiably long time for eighteen days of canoeing, however all of us agree that it was well worth it, although at times I personally found the degree of commitment required and the intrusion of expedition affairs into my home life somewhat harrowing. I would certainly think twice, however, before undertaking this degree of involvement again. The reason why our plans were so complex and lengthy to formulate was mainly due to the logistic side of things. Cape Horn is a difficult place to get to, and this fact alone, without the encumbrances of South American bureaucracy, made the planning side of the venture much more difficult. There were many times during this period of preparation when the words 'Cape Horn', instead of being synonymous with fear and adventure, stimulated only boredom and frustration. Organising, carrying out and winding up an expedition is damned hard work!

When I reflect on the actual journey from Puerto Williams to Cape Horn and back, it is hard to suppress an intense feeling of satisfaction and pride, but when I

look back on the organisational side of it I am left quite cold. When I was still looking forward to the journey I was numbed by the enormity of the task that lay ahead, when I now look back I realise I had still underestimated the amount of work involved!

It was a kayak journey which will always stand out in my mind as being full of excitement and reward. The excitement came, not from the technical difficulty, but from the uncertainty of the outcome of the undertaking.

Technically the canoeing was easy, although physically strenuous. Psychologically it was probably my most taxing canoeing experience ever.

By far the most satisfying and fulfilling aspect of the expedition I found, was the team work involved, the unified determination it produced and the friendship which has sprung from this. So many expeditions have suffered from incompatibility, the instant death blow to morale, and success becomes, subsequently, more and more difficult to achieve as relationships deteriorate. Although we had the odd disagreement, invariably over some petty matter which ultimately, didn't affect the aim of the expedition, generally relationships were very good, and I, at least, feel that the seeds of a life long friendship were sown and cultivated during our journey. To conclude this aspect perhaps I may quote that outstanding explorer and adventurer, Eric Shipton, from his book, 'Upon That Mountain' .... "One of the most acute problems of expedition life is the difficulty of preserving harmony among members of a party. All manner of things, great and small, are liable to promote discord. Garrulity is notoriously hard to bear; silence can be no less trying. Even an unconscious display of virtue can be as intolerable as any vice, gentlemanly pose as hasty temper, efficiency as clumsiness, knowledge as ignorance, energy as sloth. In conditions of strain or boredom one is quick to resent the way a man drinks his soup or wears his hat, or the silly manner in which his beard has grown, or a thousand other trifles that in normal circumstances would pass unnoticed. When one is short on rations it generally seems that one's companions have secured a larger portion of the meal; and they invariably occupy more than their share of the tent. Disagreement about the route is common cause of open hostility. On occasions when this has occurred, and we have each gone our own way, I have found myself hoping that my opponent will fall down a crevasse rather than that he should get there first. I remember once that someone became very angry when I playfully threw an egg at his face, it's not that at the time there was any scarcity of eggs, nor was the egg particularly bad. There is no limit to peoples' unreasonableness!" We, at least, were able to avoid some of these problems.

I have always been one for activities which provide instant thrills, as opposed to more protracted forms of adventure. For me the immediate thrill of running a giant rapid has always had more attraction than, say, a committing solo sea crossing. Each is equally exciting in its own way, and comparably dangerous, but in different ways. Perhaps this stems from a desire to be very frightened, but only for a brief period, as opposed to the prolonged mental concern that might accompany the sea crossing. It was this aspect which I found alien during our expedition. It is important to the serious sea canoeist to shut out from his mind the potential of a situation, and concentrate on what is actually necessary to keep moving. I found that I was lacking in this

facility to start with, but with application soon felt at home, however, the five hours spent passing down the west coast of Cape Horn produced a confluence of emotions ranging from a great sense of well being to a very deep fear.

Just before we departed for South America I re-read the Cape Horn pilot for the thousandth time, "... as about as inhospitable a land as is found in the globe. The land is mountainous, presenting an alternation of matted forest, bare rock and deep bogs, and is intersected by many deep channels into peninsulas and islands. The scenery is magnificently stern; cloud and mist usually screen the higher peaks and snowfields". I imagined that for the next two months I was going to be fighting for existence, sitting in a little tent perched perilously on a storm lashed ledge or battling against gigantic seas. I tried to imagine rounding the Horn, and could only conjure up pictures of grey skies, wind whipped seas and terrifying cliffs rising from the maelstrom. And yet, I still said goodbye to my wife and two beautiful daughters, turned my back on my family and friends, and set off selfishly on this venture.

Don't ask me why, but I enjoyed every minute of it.

## PERSONAL REFLECTIONS

*Frank Goodman*

Cape Horn did not provide me with the biggest seas I have ever encountered, or the longest crossing I have tackled nor the most difficult tide-race I have faced, yet overall I can confidently say that it was the most impressive paddle of my life. The reason is that Cape Horn involved me in the most sustained commitment I have ever made when canoeing. Of course this is all in the mind, and although the bad blow at the end of day two and the tricky clapotis off the west coast of Isla Hornos were the only times when we could reasonably say we were under any sort of direct stress physically, there is no doubt that the complete isolation of our journey added another dimension.

It is the thoughts about what **might** happen in a given situation that provide adventure, plus the realization that one's own assessment of personal skills or dangers involved may be wrong! With sea-canoeing these thoughts are stretched out over many hours of tension when compared with the quick stabs of stress that may attack at the start of a committing rapid.

The most memorable events for me under these categories were:-

1. The sickening feeling when I first realized the extent of the damage to the kayaks in transit.
2. The worse feeling when it was realised that Nigel's kayak was hopelessly twisted. (At the end of the first day's paddle)
3. The even worse feeling the next morning when I realized that the other three had no idea of the enormity of the problem presented by the bent canoe, and also their touching faith that I could straighten it.
4. The good feeling when I did!
- 5, 6 & 7 The commitment I sensed when we tackled the three major obstacles of our journey: Paso Nassau, the Horn itself and Bahia Nassau.

I am always impressed when I find myself very close to primeval forces of any kind. I think the north west corner of Isla Hornos, with its huge stacks and arches, the swell booming off their bases and the spray

drifting slowly away was the most awe-inspiring sight of my life. No doubt it was partly so because it was viewed from a kayak that had a three hour journey to safety ahead of it.

The Horn itself was impressive, but I didn't feel any particular elation when we finally realized we had achieved our objective. The climb to the top of Cape Horn the following day left a lasting impression for two reasons: firstly because the terrain was such difficult going that I was completely shattered. Barry, who was a Himalayan mountaineer remarked during the climb that it was the hardest low-angle ascent he had ever done. This bit of information cheered me greatly, as I was so tired that I thought it was just that I wasn't up to it personally. Secondly, the top of the Horn revealed its secret of the corrie lake to us, and although it was not an original discovery, it was so unexpected, that in many ways it was the most satisfying discovery of the journey. Our reception when we returned to Puerto Williams was really touching, and another great memory was the evening we spent in the mess at the Pto Williams barracks when we were entertained informally by the Chilean officers singing folk songs for us.

Albatross, whales, penguins, condors, seals, the whole area ... fascinating! The most useless thing we took ... the expedition axe, that we never used. The most useful thing we took ... the small collapsible grill that I made for cooking on. I made this as an afterthought a couple of hours before we left, and it saved many a meal from being deposited into the fire.

Although I lost over 10 lbs. weight during the expedition, I found that I was in good condition throughout. Slight shoulder strain at the end of the third day disappeared during our rest day, and the fatigue of climbing Cape Horn itself evaporated after a cup of tea!

I was relieved to find that our careful decisions paid off, and we never got ourselves into a bad position, though we saw clearly enough that one mistake, either on the water or even in the siting of the tents could have spelt disaster. It was also clear that the time spent obtaining political permission to mount the expedition was essential, and had we not done so we would never have been allowed to move from Puerto Williams.

The expedition proved to me that it was perfectly possible to conduct an expedition without a leader, and that sensible discussion of each major problem was the best way to proceed. Of course this means that the individual members must all be on a par in terms of experience, and that they must be reasonably compatible in the first place. One of the joys of this expedition was that all four of us remained friends throughout and that our friendship was reinforced rather than torn apart, as so often happens.

One disappointment was that an expedition like ours, designed to survive, could not make a first-rate job of filming our progress. So many times we were in situations that were excellent visual material but we were unable to film or even take slides because of the difficult conditions. Now we have done the expedition, it would be nice to go back with a camera team and make a good film of this superb area.

I carried with me one extra responsibility during this expedition, and this was my concern for the kayaks. Not only was I responsible for any repairs needed en route, but as the designer of the kayaks I felt that any malfunction or weakness could be laid squarely at my door. Luckily, after the initial repairs, we had no more damage problems. At the end of the expedition I asked the other members of the team what they thought of the

kayaks, and what criticism could they make. They all replied that they hadn't noticed the boats at all. I must admit that I took this to be the highest praise.

## **AN ACCOUNT OF THE ROUNDING OF CAPE HORN**

*Barry Smith*

Cape Horn Island presented a dramatic and awe-inspiring spectacle from our stance on the cliffs of Herschel Island. Four miles of angry storm-tossed sea separated us from our goal — a goal which so far had cost nearly two years of hectic preparation, followed by a seven thousand five hundred mile jourey, and some difficult paddling from Puerto Williams, the most southerly permanent community of the world. To have come so far and found a flat barren wind swept isle would have ben an anticlimax; but the jagged pinnacles of rock leading up to the summit looked all too ominous.

We spent two days on exposed and desolate Herschel, gale force winds blowing incessantly and stirring up a sea which lived up to all our worst expectations. We were fortunate in having a shack to shelter in, but even this seemed insecure against the worst of the gusts. This was followed by signs of improving conditions from the west and, keen as ever to make use of any moderately good weather, we packed our kayaks ready for a dawn start on December the 22nd. I passed a restless night, fitful sleep being interrupted by dreams of enormous rogue waves breaking over our small craft.

At first light we reluctantly left our refuge. There was much blue sky and the wind had moderated considerably. High cirrus clouds, heralding the approach of yet another depression, were approaching from the west. Paddling across the sound we said little, each being locked in fantasies about what the next few hours could bring. We knew the moment of truth would be upon us when we rounded the north-west corner of the island and faced the Pacific swell, built up by two days of gales and unimpeded for thousands of miles. But for the moment we sheltered in the kelp, enormous tentacles stretching as far as a hundred metres and which has been the place of rest of many shipwrecked sailors unable to break the surface of the water through these embracing arms. We smoked a last cigarette and decided to reconsider the situation upon arrival at the north-west point.

Once there, events happened very quickly. Apart from the rapid moving high cloud the sky was clear with the wind blowing about force two. But the swell was enormous, and the rebound effect from the cliffs made for a turbulent sea which pitched our Nordkapp kayaks in all directions and called for very careful paddling. It soon became apparent that to retreat with the sea on our stern quarter would be very difficult and, by a process of non-verbal communication, we opted for the bold stroke and pushed along the six mile west coast of the Horn.

Stacks ran out into the sea like enormous fangs, foam-covered and unfriendly. Where the swell met the twelve-hundred foot cliff there was chaos and an eerie booming noise which kept us facing firmly out to sea. And all the time there was the realisation that, with cirrus cloud coming in, the weather could change swiftly and dramatically. We were in a dilemma, wanting to

savour that for which we had worked so hard and at the same time clear this terrible lee shore as quickly as possible. Psychologically we wanted to keep close in, but this meant sharing the most turbulent water. At one stage we sought the apparent shelter between a stack and the cliff and were tossed about like matchsticks. With the water temperature at eight degrees centigrade and the waves dumping on the shore in a very terminal manner we knew that a capsized would be very serious indeed. Never had I appreciated the true majesty of the ocean as on this day.

As we progressed towards the southern side so we gained a little shelter and some respite from the sea. We felt secure enough to take photographs, but even as we glimpsed the diminutive beacon which stands on the Horn itself, we knew there could be no relaxing of effort until our feet were back on terra firma. A sheltered cove on the eastern shore was selected as the landing place. We shook hands but said little. The fourteen miles of paddling on one of the most exposed shores in the world left us mentally exhausted, and it was only after about half an hour that we started to discuss our feelings of fear and elation. It was interesting to compare notes and appreciate how similar our lines of thought had been.

Within little over an hour of landing a full gale was blowing. A combination of experience, advice from the Chilean Navy and, as in all such ventures, luck had helped us round. We buttoned up our anoraks and set out to explore Cape Horn.

## **ACKNOWLEDGMENTS**

To get even a team of four canoeists to Cape Horn required a lot of help and a lot of money. Had we purchased everything at full retail price the expedition would have cost £10,000. In fact, owing to generous help from equipment manufacturers the final cost was £7,618.59. Of this sum, £2,100.50 was given as cash donations. This left the individual members £1,379.55 each, to find. The answer here was to open an expedition account and immediately overdraw! The co-operation of Barclays Banks was needed to give us this facility.

The cost shown here includes the cost of processing films and also all the duplicate slides needed for lectures etc., together with the costs of producing posters, brochures, T-shirts and stickers after the expedition. These last-named were an extra cost but should eventually help to defray there own and other expenses. Although members of the expedition are still giving lectures, and therefore the final balance sheet cannot be produced, it would seem that the final cost of the expedition to each member will be around £500.00. The consensus of opinion is that the cost was well worth it.

Below is a list of companies and persons who helped the expedition with monetary gifts, discounted goods, gifts of equipment, services, advice and not least, encouragement and goodwill. They are not in order of importance, and we would like to thank them all for their help, however big or small. No doubt we have left at least one name off this list .... but we have done our best to remember everyone.

In particular, we wish to thank our wives and families for their unflinching support.

Mars Ltd.,  
The Sports Council  
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Dr. M. Jeffries  
Mrs. Valerie Symons  
Springlow Sales Ltd  
Oregon Freeze Dry Foods Ltd.  
Ian  
Anne  
Rhiannon  
Nigel  
Rosie  
Lizo  
Malcolm  
Bob  
John  
Joe Tasker  
Dr. Launcelot Fleming  
J.J. Gilber  
Fox Talbot  
Wolsey  
K.E.M.  
Wendy Wright  
Peter O'Neil  
Roger Turner  
42nd Glenfield Scouts  
North of Scotland Milk Marketing Board  
Mr. Attenborough  
Burbage Jnr. School  
London Camera Exchange (Nottingham)  
Helly Hansen U.K.Ltd.  
V. and A. Newberry  
Rushcliffe Sec. School  
J.J. Silber  
Monitor Group  
Canon Cameras  
Valley Canoe Products Ltd.  
Dick Goodman  
Keith Cooper  
Robin Goodliffe  
Mr. Morell  
Dexion Ltd.  
K. Hofmann, Santiago.  
Denny Hofmann  
Hugh Deformes  
DeBeers  
Poole Wood Equip.  
Prof. Fentam  
Dr. P. Jones  
Pat MacClean  
Mark Gee Paddles  
Elm Engineering  
Pfizer  
Flaretex  
B and K Thomas (Nottm) Ltd.  
Javlin  
Leisures Services Dept., Nottingham  
Henry Brown  
Ron

Ron Templeton  
Lan Chile Airways  
B.D.H. Chemicals Ltd.  
Howarth Sport  
William Gardiner  
Pet Cheney C.C.P.R.  
Gordon Richards, B.C.U.  
Mr. Gambles and Mr. Dover (Radio Hams)  
The Antarctic Survey  
Hapag Lloyd (Shipping)  
Callbuoy Ltd.  
Eddie Banks  
Hugh O'Gorman  
A.C. Canoe Products (Chester) Ltd.  
Joseph Banks Ltd.  
The Wild Water Centre  
Ultimate Equipment Ltd.  
Karrimor International Ltd.  
G. and H. Products  
Graham Tiso  
Supreme Plastics Ltd.  
H. Pickles and Sons Ltd.  
Henry-Lloyd Ltd.  
Roger Egger and Co. Ltd.  
Scottish and Newcastle Breweries Ltd.  
Swiss Cutlery (London) Ltd.  
Peter Storm Waterproofs Ltd.  
Pringle of Scotland Ltd.  
Thermos Ltd.  
Star Sportswear Ltd.  
The Prestige Group Ltd.  
Laughton and Sons Ltd.  
Ronson Products Ltd.  
Morfed (South Wales) Ltd.  
The Ever Ready Company (Great Britain) Ltd.  
Polywarm Ltd  
Alexander Duckham and Co. Ltd.  
J. and P. Coats (U.K.) Ltd.  
Salter Industrial Measurements Ltd.  
Banton and Co. Ltd.  
Baume and Co. Ltd.  
Philips Electrical Ltd.  
Hitachi Sales (U.K.) Ltd.  
W.L. Gore and Associates (U.K.) Ltd.  
Timex Corporation  
Seiko Time U.K. Ltd.  
European Public Relations Ltd.  
Lothian Regional Council  
Recreation and Leisure Dept.  
World Expeditionary Association  
Mr. and Mrs. D. Roscoe  
Loughborough University  
Nottingham University Medical School  
Dunfermline College of Physical Education  
A.D. King  
A. Abbott  
Armada de Chile  
Consula do General de Chile

## THE EXPEDITION TEAM



### **BARRY J.N. SMITH**

Age 29, was born in London

#### **Education**

Newport Grammar School, Essex.

B.A. (Hon.) Geog. History. Cert Ed. in Education  
Geog & O.D.E.D.

#### **Profession**

1970 Instructor, Plas y Brenin, Nat. Mount. Centre

1971-5 Chief Instructor Clwyd O.D.P. Centre

Presently Lecturer in Outdoor Pursuits Dunfermline  
Coll. of Ed.

#### **Canoeing Experience**

10 years canoeing experience. Divisional slalomist.  
Extensive sea-canoeing through the British Isles.

1976 Circumnavigation of the Outer Hebrides (approx.  
450 miles)

#### **Expedition Experience**

1966 Member: British Schools Exploring Society Exp.  
Arctic Sweden.

1969 Leader: Southampton University Geog.  
Expedition Group, Grenadine Islands, West Indies  
R.G.S. appro.

1971 Member: British Central Hindu Kush Exp.  
(Afghanistan) (British Mountaineering Council App.)

1974 Member: British Nepalese Expedition (BMC App.)

#### **Qualifications**

B.C.U. Coach. Mountain Instructors Cert.

#### **Special Interests**

Human geography

Physiology



### **NIGEL MATTHEWS**

Age 33, was born in Bromsgrove, Worcestershire

#### **Education**

Halesowen Grammar School & St. Paul's Coll. of Ed.

DIP of Physical Education

#### **Profession**

1966-9 P.E. Master, Tividale School Warley & Sir  
Gilbert Cloughton Grammar School.

1969-71 Instructor, Mountaineering and Canoeing, Plas  
Gwynant Ad. Sch. N. Wales

1971-72 Instructor, Mountaineering Canoeing and  
Sailing Tower Wood O.P.C. Windermere, Cumbria.

1972-74 Chief Instructor, Mountaineering, Canoeing  
and Sailing, Marle Hall O.P.C. N. Wales.

Presently Senior Advisory Teacher of Outdoor  
Education Leicestershire Education Committee.

#### **Canoeing Experience**

Extensive white water and sea-canoeing experience  
around the British Isles, including two English Channel  
Crossings.

Division II slalomist

1974 First crossing of the Irish Sea by canoe from  
Wicklow to Aberdaron (approx. 60 miles)

#### **Expedition Experience**

1975 Member: British Kayak Expedition to the  
Nordkapp (approx. 500 miles)

#### **Qualifications**

B.C.U. Coach

#### **Special Interests**

Photography

Route Planning

Equipment





**FRANK R. GOODMAN**

Age 47, married, two daughters, was born in Hinckley, Leicestershire.

**Education**

Hinckley Grammar School  
Loughborough College D.L.C.

**Profession**

Craft Teacher in Schools, eight years experience.  
Senior Lecturer in Art, Clifton Coll. of Education, Nottingham, eleven years experience.  
1970 Set up partnership with brother to design and build canoes.

Presently Director, Valley Canoe Products Ltd.

**Canoeing experience**

Eleven years canoeing experience in and around Britain  
1970 1st Division slalomist  
1969-70 Lived in California, U.S.A., and paddled many of the Sierra Nevada rivers. Competed in the Arkansas International River Race, finished 12th.

1974 Crossed Irish Sea (Wicklow-Aberderon) with Nigel Matthews and also equalled the world surf distance record by surfing over four miles on the Severn Bore.

1967-76 Several original designs of canoes and equipment, including the Slip-on Skeg, Tie-Beam Fail Safe Footrest, Tailored Air-bag buoyancy, Chevron Buoyancy aid.

1975 Designed the expedition kayak used for the British Nordkapp Expedition.

**Expedition Experience**

1963 and 65 Member: Nottingham Geographic Exp. to Yugoslavia (Sponsored by the R.G.S.)

**Qualifications**

B.C.U. Senior Instructor

**Special interests**

Geomorphology, equipment design



**JIM HARGREAVES**

Age 32, married, two children, was born in London

**Education**

King Edward VI Grammar School, Totnes  
Newquay Grammar School, Newquay

**Profession**

1961-65 Merchant Navy

1965-76 Staff Sergeant Army Physical Training Corp.

Presently Head of Canoeing Dept. Plas y Brenin Nat. Mountaineering Centre also Local Coaching Organiser for North Wales and Anglesey.

**Canoeing experience**

Seven years canoeing experience.

Sea canoeing experience around Britain.

Extensive white water experience in Britain and the Canadian Rockies.

1st descent by Canadian canoe of Aberglaslyn Gorge, Wales.

1975 Descents of the Mistaya and Siffleur Canyons, Canada.

1970 Army Kayak and Canadian singles slalom champion. Also inter services Canadian singles champion.

**Expedition Experience**

1971 Member: First British Grand Canyon Exp. to the Colorado, U.S.A.

1972 Member: British Army Mount Kenya Expedition

**Qualifications**

B.C.U. Coach. Mountain Instructors Certificate

**Special Interests**

Equipment

Photography

Navigation

## USEFUL REFERENCES AND BOOKS WE FOUND HELPFUL AND INTERESTING

Hough, R. Islands Beyond Cape Horn. Geographical Magazine. June 1975, 561-566  
Hough R. The Blind Horn's Hate.  
Zydler T. Cape Horn Cruise. Yatching Monthly, May 1975 702-705  
Bridges E. Lucas The Uttermost Part of the Earth, Hodder and Stoughton 1948  
Darwin C. The Voyage of the Beagle

As I edited this report I noticed some small discrepancies in the various accounts. I have not tried to correct these, as no doubt my own memory and journal may be inaccurate. I have not contacted the others either, as I know from experience how long the democratic process takes, with these chaps, anyway!

If there are any points you would like to discuss, any points where further information would be useful, or you would like more copies of this report, contact any of the members of the team at the following addresses :

Barry J. N. Smith c/o Dunfermline College of P.E. (staff), Cramond Road North, Edinburgh.

Nigel Matthews c/o Leicester O.D.P. Centre, Loughborough Road, Leicester.

Frank R. Goodman c/o Valley Canoe Products Ltd., Private Road 4, Colwick, Nottingham.

James Hargreaves, c/o Plas y Brenin Mountain Centre, Capel Curig, North Wales

*Frank Goodman*