

# ANTARCTIC

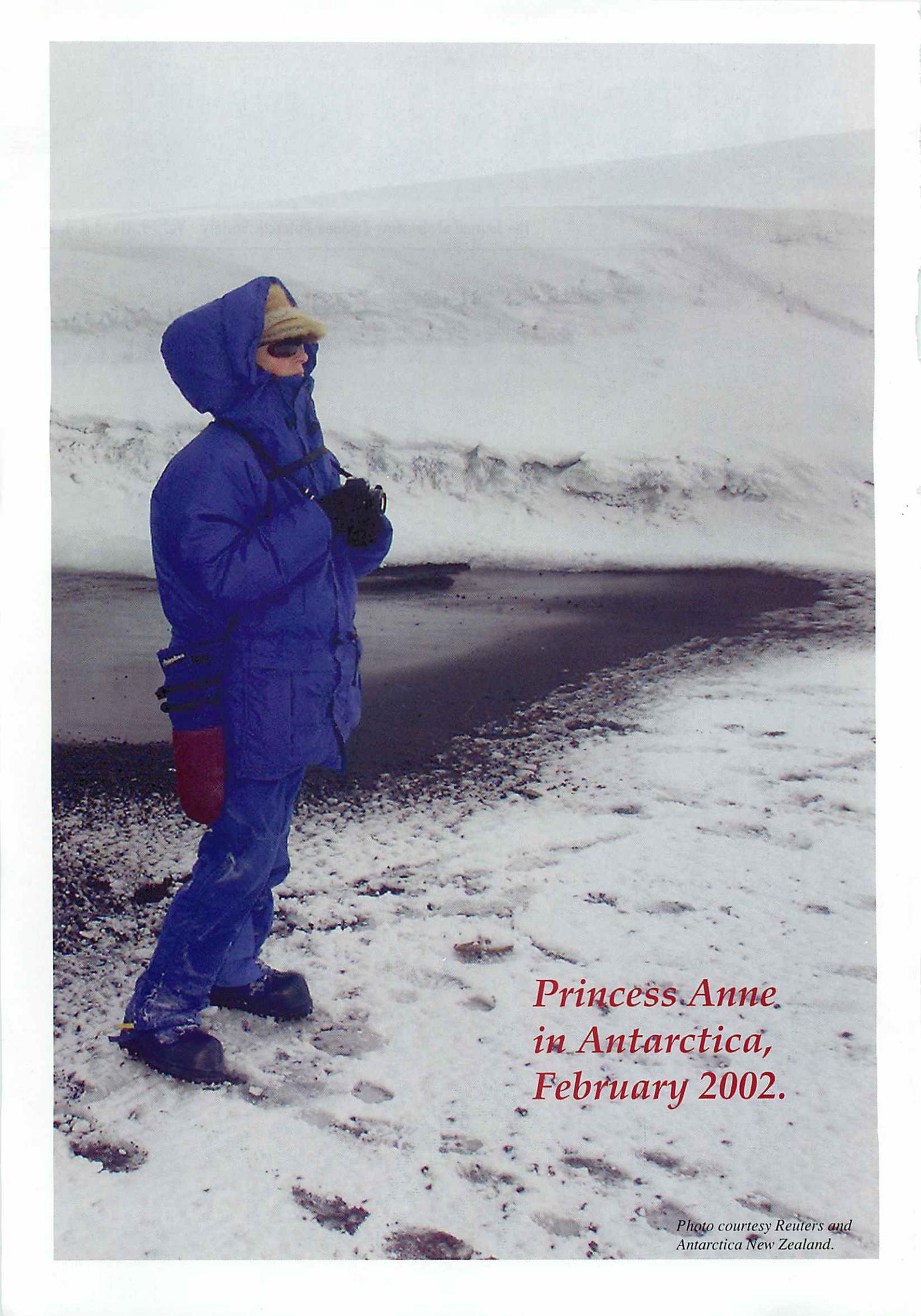


The Journal of the New Zealand Antarctic Society Vol 19, No. 3 & 4, 2002

## Princess Anne on the Ice



Special Double  
Issue

A person wearing a blue winter suit, hood, and sunglasses stands in a snowy, desolate landscape. They are holding a camera. In the background, a dark, circular pool of water is visible, surrounded by snow. The overall scene is a high-altitude, cold environment.

*Princess Anne  
in Antarctica,  
February 2002.*

*Photo courtesy Reuters and  
Antarctica New Zealand.*

## COVER PICTURE



Princess Anne during her visit to Antarctica in early 2002. Photograph courtesy *Antartica New Zealand* and *Reuters*.

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## Call for articles

We invite readers to submit articles for *Over My Shoulder*, a series relating to past experiences in Antarctica. The aim is to re-remember memories in print so that they are not lost to the future. Contributions from any country will be accepted.

Topical discussions on Antarctic themes are also welcome.

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# “Right Royal” Welcome to Ice

Princess Anne's early 2002 private visit to Scott Base, Antarctica, to inspect the historic huts of Ross Island as one of the events marking the centenary of Captain Robert Scott's first expedition south in 1901-1904 highlighted in its own way the isolation of the ice continent.

The Princess was a guest of the New Zealand Antarctic Heritage Trust, which is recognised as a world leader in polar conservation practice, and is responsible under the Antarctic Treaty for maintaining historic hut sites in the Ross Sea area. Princess Anne is Patron of the parallel organisation, the UK Antarctic Heritage Trust.

After her visit to Antarctica, Princess Anne launched an international appeal at Canterbury Museum for £10 million in funding to restore and protect four historic huts of international significance, Shackleton's Hut at Cape Royds; Scott's Hut at Cape Evans; Scott's Hut at Hut point and Borchgrevink's Hut at Cape Adare. The Trust has secured special protected area status for the four hut sites, all located in the Ross Sea region.

The international heritage conservation project developed by the Trust is managed by Christchurch project consultancy firm Arrow International.

In launching the global appeal Princess Anne presented to the Trust a donation of stg70,000 from the British Antarctic Territory, an independent agency based in London.

The Princess's visit also marked the centenary of Captain Scott's Discovery expedition. Scott arrived at Winter Quarter's Bay aboard the *Discovery* on 8 February 1902 and built the oldest of the Ross Island historic huts, the Discovery hut, on Hut Point. A lot of important scientific trips were undertaken by Scott's party, including a horrendous winter trip to Cape Crozier, as well as his attempt to reach the South Geographic pole in company with Edward Wilson and Ernest Shackleton.

In December 2001 New Zealand's High Commissioner in London Paul East hosted a reception for the NZ Antarctic Heritage Trust at New Zealand House in the Haymarket, at which guests included Princess Anne. On that occasion the chairman of the Trust Rob Fenwick and executive director Nigel Watson made a presentation on the poor state of the Ross Sea huts and the urgency of the restoration project. Within two months the princess was herself on a journey of discovery.

*All Photos courtesy Antarctica New Zealand and Reuters.*



Antarctica proved as elusive as ever for the official party. On 7 February 2002, at 9.30 a.m., the centenary party including Princess Anne left Christchurch, New Zealand, for Ross Island aboard a Royal New Zealand Air Force Hercules, but an hour and a half away from landing the aircraft was forced to turn around and return to New Zealand because of bad weather on the Ice. It was not the first time during the 2002 season that a distinguished visitor had been thwarted from reaching Antarctica by bad weather. In January the New Zealand Governor-General, Dame Sylvia Cartwright, and New Zealand's Deputy Prime Minister Mr Jim Anderson, waited days for the Scott Base weather to clear, and in the end their visit had to be abandoned.

On a subsequent attempt, Princess Anne's group duly arrived to spend four days in Antarctica, guided by Antarctica New Zealand chief executive Gillian Wratt and by trustees and staff of the New Zealand Antarctic Heritage Trust, including Chairman Rob Fenwick, Executive Director Nigel Watson, Arrow International co-founder Ron Anderson and Saatchi & Saatchi's New York-based global head Kevin Roberts.

Princess Anne experienced the true taste of Antarctica when, whilst visiting Scott's Cape Evans hut built for Scott's second expedition of 1910-13, she became stranded for an hour by a blizzard. The excursion had already been affected by bad weather when her two helicopters were forced to turn back to McMurdo. When her party of 15 were eventually able to travel the 25 kilometres from Scott



Base, like all who visit the huts, she was impressed by their atmosphere and by ninety-year old artefacts.

"It's like they have just left the hut" she is reported to have said, "... left it all behind as they rushed to go somewhere. There's a great feeling of people's individual histories here". She was able to spend two hours in the hut and its surrounds, delighting people with her knowledge and interest.

But when it was time to go, 40 knot winds and blowing snow grounded the party, who had to wait almost an hour sitting in the helicopters. A scheduled visit to Shackleton's hut at Cape Royds had to be abandoned.

The Princess also visited the Italian Research Base at Terra Nova Bay, travelling by Twin Otter and staying for dinner before returning to Scott Base.

She unveiled a memorial plaque for Scott and his team at the Discovery Hut, and then attended a church service at the Chapel of the Snows, McMurdo, led by New Zealander Father John Collins. She was guest of honour at a formal dinner at Scott Base before returning to Christchurch.

Overshadowing her visit was the death of her Grandmother, Queen Elizabeth the Queen Mother.

In Christchurch she laid a wreath at Scott's statue before attending the special launch at Canterbury Museum of the appeal by the New Zealand Antarctic Heritage Trust to save the historic huts of the Ross sea region. New Zealand's Associate Minister for Culture and Heritage, the British Ambassador, Christchurch Mayor Garry Moore, City councillors and leading businessmen were invited to the event.

Mr Fenwick said that the battle to save the historic huts was being lost and it was the opinion of experts that a major conservation project was needed "or we will lose this heritage."

He said the huts were in a state of reversal, rapidly deteriorating under the ravages of weather and high humidity. "Years of visitation have also taken their toll. The harshness of the climate means that the conservation will be one of the more challenging ever undertaken."

Princess Anne stressed that the appeal was an international fundraiser that needed a network of supporters. "The experiences of the Antarctic explorers are examples of human courage, commitment, endurance and co-operation in the most extreme conditions" she said. "These huts are the legacy of their extraordinary stories of triumph and tragedy and must be preserved for future generations".

The Princess presented a £70,000 (NZ\$237,000) donation from the British Antarctic Territory to the appeal. The fundraising appeal is for £10 million to be raised over 8 years. The New Zealand Antarctic Heritage Trust estimates that NZ\$34 million is needed to stabilise the huts for the future.

Mayor Garry Moore said "the experience of going to Antarctica changes you for ever." Visitors found a special place. "There is a feeling that Scott is still there."

The Princess said Christchurch has been the 'gateway' to Antarctica since the very earliest times of Antarctic exploration and is regarded as "a haven to all coming and going."

"People do respond very personally to Antarctica. It is a very profound place and the last frontier on Earth. (As I



found out) it is comparatively easy to reach by air but (even that) is not guaranteed. Captain Scott and the crew of *Discovery* had no knowledge of what they were facing, no knowledge of what was down there. They went in search of knowledge and (ultimately) sacrificed their lives.

"We shall not forget them. They made some of man's first footprints in Antarctic."

She added that the huts help to remind people of what early Antarctic explorers and scientists had gone through. "The legacy of the men who sailed from Christchurch and what they took on will be preserved for all peoples, and future generations will seek to understand what they represent. We must not waste their efforts. We will not forget them for what they achieved."

*Continued on next page.*

## Hillary Urges Support

**Despite the ravages of the world's harshest environment, the first wooden dwellings built by humans on the Antarctic continent remain intact as the legacy of a great age of exploration and discovery.**

**The remaining vestiges of this era – the huts, with many of the provisions of the original inhabitants still intact – represent a unique window into this remarkable age. But the buildings are seriously deteriorating from the impact of the elements and increased human traffic.**

**The patron of the Antarctic Heritage Trust, Sir Edmund Hillary, is calling on the international community to play a role in the preservation of these historic sites.**

**"I'm proud to be able to play a part in the conservation of these extraordinary sites," he said. "These huts, the last remnants of the 'heroic age' are an example of the best of the human spirit and endeavour."**

**"We must not fail in our responsibility to the past and to the generations of the future. But, like the men of these expeditions, we won't succeed alone and I urge interested governments, organisations and individuals from the international community to support us in this cause."**

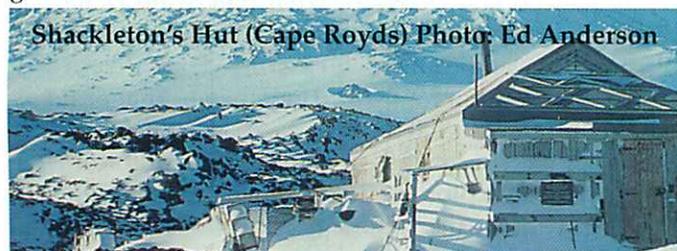
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Conservation plans prepared to international standards with detailed cost analysis and work programmes will be developed and implemented for the four-hut heritage programme.

A project strategy has been developed by the New Zealand Antarctica Heritage Trust project team with advice from various governmental Antarctica agencies.

Anticipating the development of the conservation plans, the Trust's project team had a busy 2001-02 season on the Ice. The team of seven included executive director Nigel Watson, professional conservators Australian Andy Viduka and German Heike Winklebauer, conservation architect Adam Wild, engineer/project manager Alan McKinnon, historian David Harrowfield and field leader Lawrence Smith.

The project strategy has been developed into programmes for each of the four huts:



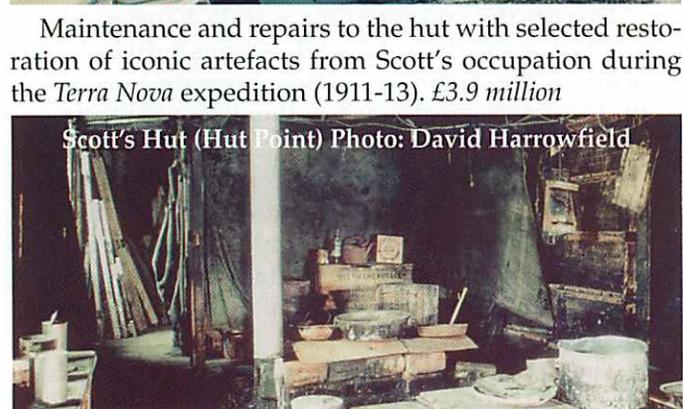
Shackleton's Hut (Cape Royds) Photo: Ed Anderson

Restoration of the hut and artefact collection to its 'former glory' at the height of occupation by Shackleton's *Nimrod* expedition (1907-09). £2.6 million.



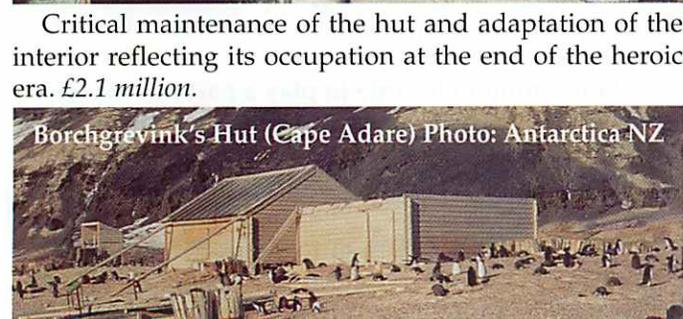
Scott's Hut (Cape Evans) Photo: Ed Anderson

Maintenance and repairs to the hut with selected restoration of iconic artefacts from Scott's occupation during the *Terra Nova* expedition (1911-13). £3.9 million



Scott's Hut (Hut Point) Photo: David Harrowfield

Critical maintenance of the hut and adaptation of the interior reflecting its occupation at the end of the heroic era. £2.1 million.



Borchgrevink's Hut (Cape Adare) Photo: Antarctica NZ

Stabilisation and preservation of the structure and contents of the continent's first wooden buildings. £1.4 million

## Mt Markham Climb to Commemorate Southern Journey

The year 2002 marks the anniversary of Scott's Southern Journey during his *Discovery* Expedition of 1901-1904. Sir Clements Markham, then President of the Royal Geographical Society, was the prime mover of this Britain expedition to explore Antarctica, being both instigator and organiser. When Scott, Wilson and Shackleton, manhauling across the Ross Ice Shelf late that year, reached their furthest point south at 82 degrees, they saw in the distance a high and magnificent mountain, which they named Mt Markham after Sir Clements.

This year the British three-man Mt Markham Discovery Expedition will attempt to reach the top of Mt Markham to commemorate Scott's Southern Journey 100 years ago. The group will include Freddy Markham, the grandson of a close relative of Sir Clements, and Roger Mear, who was part of the "Footsteps of Scott" Expedition in 1985. The name of the third person is not yet known. The Expedition's Patron is historian and author David Yelverton, who recently wrote a detailed account of Scott's first expedition in his book *Antarctica Unveiled*.

In late November the British group will be airlifted to the head of the Beardmore Glacier by Adventure Network International (ANI). Their tentative route appears to be down the Beardmore Glacier and north along the Shackleton Coast towards the mouth of the Nimrod Glacier. Before reaching the latter, they will ascend the Robb Glacier to its confluence with the Lowery Glacier, which they will cross to reach the Kent Glacier, and then on to the slopes of Mt Markham. After the climb they will follow Scott's Southern Journey route back to McMurdo, where they will be picked up by the *Klebnikov*. The original plan had been to recreate the Southern Journey entirely, but they were unable to secure a flight from New Zealand through the New Zealand Antarctic programme.

There has been only one previous visit to the summit of Mt Markham. In 1985 three American geologists were heli-coptered to the top to complete their geological studies. The mountain has never been climbed from sea level before. In late April the party left to make a preparatory manhauling trip across Greenland. They will also try out the parasails that they plan to use on the journey to McMurdo.



Right: Bust of Sir Clements Markham. Photo: David Yelverton.

## FOR SALE: THE SIR HUBERT WILKINS



The Australian Adventure-tourism Company Ocean Frontiers is offering its 36 metre ice-strengthened ship the *Sir Hubert Wilkins* for sale. The ship has made three Antarctic voyages over the past 14 months, carrying 60 paying passengers, and although considered not viable in commercial

terms, in many other ways it has been a great success. According to Ocean Frontiers Director Don McIntyre, "it was never intended to make a profit from the project. .... We have supported private adventurers, research and government departments and inspired many people".

*Below Left: Sir Hubert Wilkins at Cape Royds. Photo: John Parsloe*

When the ship was purchased, the plan was to conduct commercial operations in Australasian and Antarctic waters in support of "educational programs, scientific research, film expeditions, environmental monitoring and private ventures". The idea was to sail to Antarctica each summer, then make trips to tropical areas in the south-west Pacific during the winter. While high latitude operations were the prime focus of the company's plans, the commercial success of the off-season trips was important to the overall viability of the operation. As it turned out, the winter voyages attracted little custom and had to be cancelled.

Don McIntyre has been visiting Antarctica for over a decade and in 1995 wintered on the continent with his wife Margie. Ocean Frontiers also owns the yacht *Arctos* that is currently circumnavigating Antarctica, but this boat will also be sold later this year.

## Not a Good Year for Penguins

The Adelie penguin breeding colony at Cape Crozier on Ross Island has been decimated due to the presence of two giant icebergs (B15A and C16) lying close offshore. In March 2000 two long sections broke off the Ross Ice Shelf and drifted slowly westwards towards McMurdo Sound. This season the icebergs became grounded near the mouth of McMurdo Sound, forming a barrier against wind and currents, and effectively preventing the normal break-out of winter sea ice from the sound. Only a narrow opening remained across McMurdo Sound between the Drygalski Ice Tongue, Franklin Island and B15A. Early season sea ice, normally 24 to 32 km wide at this time, increased this year to 128 km. One of the icebergs (C16) became joined to Ross Island by frozen sea ice after one end became trapped in Lewis Bay. About the same time one end of B15A grounded near Cape Crozier and rotated so that the other end projected obliquely into Ross sea. This meant that a lot of McMurdo sea ice never broke out at all during the summer



and is now "two year ice". Small tour ships without ice breaking capabilities like the *Shokalskiy*, managed to creep between B15A and its smaller satellite icebergs and Franklin Island, and the US programme was concerned enough to send down two icebreakers this season instead of the normal one to make sure that the supply ship reached McMurdo in the late summer.

*C16 and B15A icebergs aground near Ross Island December 2001. C16 is completely surrounded by sea ice which extends as far as Beaufort Island. A narrow corridor of open sea lies east of Franklin Island. Image by NASA.*

But with both icebergs close to shore near Cape Crozier and sea ice between them has meant that Adelie penguins have had a hard time getting anywhere close to their normal nesting site at Crozier across the ice packed around the bergs. The birds, which can travel so easily in water, are slow movers on land and there is a limit to the distance that they can travel without food. Thousands have been unable to cross the increased distance without falling by the wayside. Normally the Cape Crozier Adelie colony has 250,000 birds, but few reached the site this summer for breeding.

The long term effects will be considerable. Adelie penguins can only breed on land, using pebbles as their

*Continued on Page 149*

# Two Medivacs from Peninsula Tour Ship

Two seriously ill passengers were evacuated by air from tour ships in the Antarctic Peninsula region in two separate incidents during three weeks in January-February. By coincidence, both medivacs, involved passengers from the German Hapag-Lloyd's ship *Hanseatic*.

The *Hanseatic* was at Brown Bluff near the north-eastern tip of the Peninsula on 22 January, when one of its passengers, believed to have had a history of brain tumours, was diagnosed with 'cranial oedema' or brain swelling.

Because his condition was rapidly deteriorating, the International Association of Antarctica Tour Operators' medical evacuation plan for the Peninsula region was initiated. The ship headed for King George Island 150 km to the north, where Adventure Network International (ANI) had arranged for a plane from Punta Arenas

to land at Chile's Teniente Marsh airfield. However, poor weather forced a change of plans. After the patient and his wife were transferred to Hapag-Lloyd's other tour ship, the *Bremen*, off Deception Island on 24 January, improved weather by the time it arrived at King George Island allowed the take off of a Chilean Air Force Hercules, and the patient was flown to Punta Arenas. Here the passenger received immediate medical attention and was then flown to the United States for further treatment. An "aggressive brain" tumour was removed in Miami.

The second emergency occurred on 14 February when the *Hanseatic* was travelling from Port Lockroy to Neko Harbour. A passenger was diagnosed as having a detached retina, and as the condition was worsening, arrangements were again made for another medivac from King George

Island. The ship arrived off the island early the following afternoon and the passenger was quickly transferred to a waiting plane that left for Punta Arenas a few minutes later. After arriving in Punta Arenas, the injured tourist was flown to Buenos Aires, where he underwent an operation, flying home to Hawaii just a few days later.

Christine Lampe, Expedition Leader on the *Hanseatic*, is reported to have said that the success of the medivacs was due to the "terrific co-operation and expertise" of ANI, personnel of the Chilean national programme, and the Captains of the *Bremen* and *Hanseatic*. Costs were offset by insurance.

The *Hanseatic* can take up to 180 passengers, and over its six voyages this season, has carried almost 1000 passengers to the Antarctic Peninsula. Before its medivac emergencies, crew from the *Hanseatic* had generously repaired a small landing wharf at the Argentinean Almirante Brown station in Paradise Bay, thought to have been damaged by sea ice last year. The Argentinean base was unmanned this season.

## Antarctic Visit by Two Superliners Next Season

The two giant tour liners *Amsterdam* and *Ryndam* are scheduled to visit the Antarctic Peninsula over a six day period next season. The two liners, each owned by the US Holland America Lines, are close to 250 m in length and fall into Category 3 of the International Association of Antarctic Operators (IAATO)'s listing, and as such, are prevented from landing in the Antarctic.

The two year old *Amsterdam* is reputed to be the largest and most spacious tour ship in the world, carrying up to 1300 passengers and over 600 crew. The smaller *Ryndam*, which made two visits to the peninsula last season, has berths for 1266 passengers.

The *Amsterdam's* visit will be part of a 38 port, four-month, round the world voyage starting from Fort Lauderdale in USA early January 2003. The *Ryndam* will visit the Pen-

insula as an extension of one of its "around southern South America" voyages.

The *Marco Polo*, which is operated by Orient Lines (US), will also be operating in the Peninsula area next season, but only has the capacity for 550 passengers. Because Orient Lines is not a member of IAATO, it does not have to conform to the association's by-law that prohibits landing if passenger numbers exceed 500.

On two separate occasions during the 2001-2002 season, the *Ryndam* travelled south from the Falkland Islands, passing down the west side of the Peninsula and through the Neumeyer and Lemaire Channels without incident. Arriving off the US Palmer station on Anvers Island, the ship was visited by five base staff that provided each trip with formal presentations. The staff did the same when the *Marco Polo* also visited.

## Polar Traverses

2001-02 has been the quietest summer for long-distance traverses to the Pole since 1993-94. Last season, 23 people took part in six long-distance traverses to the Pole from coastal areas, while eight people took part in a 'Last Degree' trip, and two treks failed to reach the Pole as planned. This year only 12 walkers reached the South Pole.

A commercial three-member 'Ski South Pole' group run by Adventure Network International (ANI) arrived at the South Pole on 27 January after a 58-day trek from Hercules Inlet. The party included guide Paul Landry from Canada and clients Timo Polari from Finland and Chris Weyers of Australia. In late December seven people took part in ANI's 111km, nine day 'Last Degree' traverse to the Pole from latitude 89°S.

Thomas and Tina Sjorgen, who formed the "Poles Wearables" team, successfully completed their second attempt at a traverse to the Pole from Hercules Inlet at the end of January. Last year's attempt was thwarted by an injury that slowed their progress. The pair is reported to have now begun an attempt on the North Pole.

# Strong Malaysian Party Visits Peninsula

The Malaysian Prime Minister, Dr Mahathir Mohamad, was at the head of a 67 strong group of Malaysians, who travelled to the Antarctic Peninsula aboard the *Kapitan Dranitsyn* in early February. Not only was Dr Mahathir one of the few heads of Government to have visited the continent, he was also the first high-ranking official to have utilised a private tour company to make the visit possible. The Prime Minister was accompanied by his Ministers for Foreign Affairs, Defence, Finance, and the Environment.

Half of the Malaysian group consisted of government officials and their staff, but the remainder included influential Malaysians and diplomats as well as a number of sci-

entists. The scientists included three people who had worked in Antarctica with Australian, New Zealand, and British national programmes. They were able to brief the Prime Minister on their first hand experiences. Also in the party was Azahar Mansor, who sailed solo around the world in 1999-2000 and was dismasted some 1,000 km from Cape Horn.

Dr Mahathir has for many years argued for the management of the Antarctic region to come under the auspices of the United Nations. He was a vocal critic of what he perceived was the "exclusive nature" of the Antarctic Treaty System.

The *Kapitan Dranitsyn* was chartered by the Malaysians from Quark Expeditions.

## TOO CLOSE FOR COMFORT – Tour ship nudges iceberg

Passengers on the tour ship *Professor Molchanov* had an unexpectedly close encounter with a 25-km long iceberg on 18 January in the southwest Scotia Sea. The large iceberg was sighted while the ship was travelling from South Georgia to the Antarctic Peninsula on the fourth of its nine 2001-02 voyages. As weather conditions on deck at that time were less than ideal, passengers were encouraged to go to the bridge to take photographs of the berg. In attempt to make it easier for the passengers to get some good shots, the ship manoeuvred close to the iceberg at relatively low speed but struck a face of the berg with her bow. Reports indicate that the vessel backed away quickly, and that it was never in any danger. Damage was limited to the bow bulwark. Crew members quickly made temporary repairs and when the ship returned to Ushuaia, Argentina, a week later, the work was checked by marine surveyors and the

vessel was able to proceed as scheduled.

The Russian owned *Professor Molchanov* had been chartered for the season by the Dutch Oceanwide Expeditions, but at the time of the incident was under sub-charter to US Quark Expeditions.

*The Professor Molchanov with her sister ship Professor Khromov.*



# Rubbish Update

The British environmental group *Mission Antarctica* succeeded in removing 1,000 tonnes of scrap metal, oil and other rubbish from Russia's Bellingshausen station on King George Island (See *Antarctic* Vol 19 no. 2, p. 135). The effort marks several years of preparing material for shipping, such as cutting large metal items into manageable sizes and transferring waste oil from rusting barrels into plastic containers.

The rubbish was loaded onto the Danish registered ship *Anne Boyle* over a period of four weeks, helped by members of the Russian programme. The *Anne Boyle* left the island on 9 January, taking with it several extra tonnes of rubbish from the Chilean and Uruguayan bases at their request. On board the ship was cleanup leader Gerry Brennan, while the remaining five team members left the island on a Chilean Hercules. The visit of the *Anne Boyle* was not without incident. Strong winds hindered ship-shore operations and the ship ran aground at one point. It was refloated within 24 hours by the Argentinian tug *Castillo* and suffered only minor dents to its hull.

The rubbish was unloaded at Montevideo, Uruguay. The *Anne Boyle* had to wait at anchor for nine days before obtaining customs clearance to land its cargo. Strong winds delayed them from entering harbour a further day, and the rubbish began to be unloaded on 1 February. Destination? A nearby recycling plant.

# New CEO for Antarctica NZ

Antarctica New Zealand has appointed Mr Lou Sanson to the position of Chief Executive succeeding Gillian Wratt from 1 August 2002.

Mr Sanson is Conservator for Southland Conservancy, Department of Conservation, with responsibility for Fiordland, Rakiura National Parks and New Zealand's subantarctic island nature reserves.

He was responsible for the establishment of the new Rakiura National Park and the New Zealand Subantarctic Islands World Heritage Area.

"He has extensive experience in operations and logistical planning in remote field locations and has considerable conservation and research management experience", says Antarctica NZ Chairman Mr Chris Mace. This experience includes the development of conservation partnerships and community arts and education programmes based on the natural

environment.

Lou Sanson worked as a field assistant for the New Zealand and United States Antarctic Research Programmes back in 1982/1983 and has continued a close association with Antarctica and the Southern Ocean as a regular visitor to the Ross Sea and Antarctic Peninsula. He has been active in working on seabird conservation in the Southern Ocean, management of natural eco-systems and protected species such as Kakapo and Takahe.

Mr Mace said "Gillian Wratt has made a truly outstanding contribution to both New Zealand's Antarctic Programme and the wider international Antarctic community, completing four years as president of the Council of Managers of National Antarctic Programmes (COMNAP) and three years as vice-chair of the Antarctic Treaty Committee for Environmental Protection (CEP)".

## Burnt Lab to be Rebuilt

The British Antarctic Survey (BAS) is to build a new £3 million laboratory at its Rothera Base after the Bonner Laboratory, its main research facility, was destroyed by a fire in September (*Antarctic* Vol. 19 no. 2, p. 117)

Independent investigators say the blaze was caused by an electrical fault in the roof of the laboratory. All that remains is a pile of twisted metal buried in snow. Before the fire it housed an aquarium, a diving facility and space for up to 25 scientists to study the environment and the biology of Antarctica.

No one was hurt in the fire, but attempts to fight it with a snow-blowing machine failed. Scientists had to watch from a distance as their work and personal belongings in the one-storey building went up in flames, fanned by winds of up to 100 km per

hour. The temperatures inside reached over 850 degrees and melted laboratory equipment.

Brian Newham, the base commander at Rothera, said it was a consolation to know that the fire systems at the base did work. Alarms went off before the fire took hold and the fire breaks between different sections of the laboratory delayed its spread.

The UK Government has agreed to provide more than £2 million towards rebuilding the laboratory and this will get underway next season. The site will be cleaned up and repairs made to the foundations. A temporary diving facility will be installed so that marine research can begin to get underway again and the new laboratory should be completed by November 2003.



## British Army Adventure Group Completes Programme

The British Army Antarctic Expedition (*Antarctic* Vol 19 no 2, p. 123) successfully completed its two month programme in the Antarctic Peninsula, ending at Elephant Island.

In December nine expeditioners made the long climb up onto the Forbidden Plateau (Antarctic Peninsula) and trekked south-west to climb Mt Johnston (2139). Plans to continue on to Paradise Bay were thwarted by bad weather, and the party descended the way it had come, making good time on skis once below cloud level. Re-joining the ketch *John Laing*, the group visited Brabant Island, then Wienke Island where the party split into two groups, one to climb Jabet Peak (545 m) and the other to climb Mt Luigi (2600m).

After an unsuccessful attempt to cross the Lemaire Channel, the *John Laing* sailed to Paradise Bay where an attempt was made on Mt Hoegh by six of the party. Bad weather prevented the first attempt, but a second attempt, with three people from the *Gambo*, was successful. The expedition then moved on to Elephant Island. A four-person party climbed Mt Pendragon on 31 January, while a second, similar size party made a 15 km traverse of the island from Hut Bluff to Stinker Point. The *John Laing* meanwhile circumnavigated the island and collected geological samples for a British University. The party later travelled to the Falkland Islands.

# Air Force Solves Slushy Runway Problem

Engineers from Tyndall Air Force Base, Florida, have found a solution for slushy conditions on Antarctic ice runways that always prevented large jet transports from making summer landings. "Although it's still well-below freezing", said James L Greene, a pavement programme manager with the Air Force Civil Engineering Support Agency at Tyndall, "the surface of the ice melts from the constant solar radiation." This means that when the Pegasus Airfield turns into slush during the summer, only ski-equipped C-130s or Hercules could be used.

To overcome the problem, engineers experimented in Antarctica. They covered the ice with 15cm of hard-packed snow so that heavier, faster planes, which cannot be equipped with skis, could land on their wheels at McMurdo's Pegasus Airfield. Afterwards, crews of an Air Force C-141 Starlifter and the even larger C-17 Globemaster II, broke out champagne to celebrate their first landings on the "snow pavement". The pilots had initially been worried that their planes might slide, or that the tyres would dig ruts in the snow and get stuck, but the surface held together due to the contractors spending several weeks tamping it down with heavy rollers.

Because the turboprop C-130 Hercules is slower and smaller than the jet-powered C-141 and C-17, and fitting a C-130 with heavy skis reduces the amount of cargo it can carry, the snow pavement is an important break-through. "Now the Air Mobility Command has an option on what it can use," said Randall Brown,

another Tyndall engineer. "The National Science Foundation can say - we need this much cargo to supply the bases - and the Air Mobility Command can select the aircraft." The population of McMurdo, the logistic hub for other research bases, fluctuates from a couple of hundred in winter to 2000 in the summer.

Brown, Greene, Brian Cotter and Captain Anthony Davit went to McMurdo in teams of two for two weeks each between December and mid-February to evaluate the new pavement design. They found the snow-packed runway stays frozen because it is white and reflects most of the sun's heat. The ice surface had melted because it had become almost black from impurities, thus absorbing solar heat. The new design was an idea borrowed from Army Corps of Engineers' Cold Region Research and Engineering Laboratory in Hanover, New Hampshire.

The snow pavement means that it will take fewer flights from Christchurch, New Zealand, to supply McMurdo and other US stations in Antarctica. As a result, it will free up ski-equipped planes to focus on other missions within Antarctica, in particular the rebuilding of South Pole Station.

*A wheeled RNZAF C-130 Hercules. Photo: RNZAF*

## Two Journalists to Visit Antarctica Next Season

Mark Dwyer, a photographer from the Daily News in New Plymouth and Dean Williams, a Radio NZ journalist have been selected to visit Antarctica next season as part of Antarctica New Zealand's media incentives programme.

Communications and Marketing Manager Vivienne Allan said the programme was always attractive to New Zealand journalists as it gave them an opportunity to visit Antarctica and record their experiences.

"We always try and take two New Zealand journalists with us every season, and in addition there are usually documentary and film makers with international interests who are part of our programme."

This year Mark Dwyer will make a photographic record of his journey to Antarctica and Dean Williams - Radio NZ's environmental reporter - will develop a series of interviews on specific topics of interest.

*Source: Antarctica New Zealand.*

# FIRST TOURIST VISIT TO Leningradskaya

Ninety-four people from the tourist ice-breaker, *Kapitan Khlebnikov*, visited the disused Russian Leningradskaya station in Oates Land on 3 February, the first such landing ever made by a non-government group anywhere along that remote ice-bound coast.

The Leningradskaya visit was added to *Khlebnikov's* itinerary in late January after satellite and other data suggested that ice conditions north of the station might allow the ship to get within helicopter range. Time was available, as well a direct lead north from Cape Adare, and a diversion was made in the planned leg to Macquarie Island.

Leningradskaya consists of some half-a-dozen buildings located on top of a coastal nunatak, with a 220m cliff dropping vertically to the sea just a short distance north of the buildings. Its high position gave visitors spectacular views of the surrounding icescape.

The *Khlebnikov* took 14 hours to approach the station through large floes of broken, multi-year fast ice, using its helicopter to reconnoitre a route. The ship was eventually able to get within 20 km of the station, and with good weather on the day, the unscheduled visit proceeded.

During a seven-hour operation, 94 individuals (passengers and staff) were flown to Leningradskaya. The living quarters and mess areas were visited, and the expedition reports that "no items found were handled or removed and all doors were securely locked prior to departure". As the *Khlebnikov* may have been the first visit by anyone to the deserted station since it was closed ten years ago, a detailed report on the condition of buildings has been prepared for the Russian national programme.

Leningradskaya was one of eight year-round stations operated on the continent by the former Soviet Union during the 1980s. The establishment

and running of both Leningradskaya and the Russkaya station on the coast of Marie Byrd Land (also closed) had proved very difficult due to heavy sea-ice off-shore. Ships were required to penetrate a heavy zone of pack ice, after which supplies had to be flown a considerable distance to shore by helicopter, an operation that often became delayed for days, sometimes weeks, by bad weather.

On several occasions in the 1980s, despite the fact that resupply activities were scheduled for the March-April period when pack ice should have been at its minimum, even icebreaking vessels became beset for months at a time north of both stations, causing major disruptions to expedition operations. These problems, together with the funding shortfalls that followed the collapse of the Soviet Union, led to the two stations eventually being closed early in 1993.

Three years ago the *Khlebnikov* landed tourists at Russkaya during a 'semi-circumnavigation' voyage from Lyttelton, New Zealand, to Ushuaia, Argentina, via both the Ross and Amundsen Seas.

## LIKE A FISH OUT OF WATER – Norwegian penguins

Scientists are baffled as to why Antarctic penguins, which inhabit the world's most hostile environment, do not adapt well to kinder climes. No zoo has attempted to replicate the freezing conditions that Emperor penguins need, and they are kept in captivity at only a handful of aquarium-like locations. King penguins, which are prolific breeders in the Subantarctic Islands, such as Macquarie Island, are probably easier to relocate. Kelly Tarlton's Aquarium in Auckland, New Zealand, has very successfully kept a small colony for years, and visitors can see the birds both standing on ice and swimming underwater.

In 1936 Norway's National Federation for the Protection of Nature introduced nine King penguins to the wilds of northern Norway, an

area considered to be an ideal habitat for the birds. Two years later a few Macaroni and Magellanic penguins were also released.

The results were not good. One moulting King was put down by a woman who thought it was ill, while another bird was mistaken for a troll and was also killed. A fisherman dragged up a third on his fishing hooks.

Human and other predators continued to take their toll, and the last Norwegian penguin died in 1954. Antarctica is certainly a much safer place for the birds, and "environmentally incorrect" occurrences like this one would fortunately be no longer be possible in today's world.

(Modified from an article by Colin Haskin in *The Globe & Mail*, 2000)

## Fuel Limits Flights

The cancellation of one of two intercontinental flights to Dronning Maud Land (DML) from Cape Town planned for late January has meant that tourists could not fly to that region this season.

The flights were to provide a quick intercontinental air link for national programs that operate in Dronning Maud Land and places had been allowed for up to 40 tourists. The tourists were offered the chance to fly south for only \$US2,500 and to test out field camps that would be used for a larger tourist operation in 2002-03.

The flights are operated by Antarctic Logistics Centre International (ALCI) who said that the decision to cancel one of the late January flights had been made because of heavier than expected fuel usage earlier in the season.

According to ACLI, 40 drums more

*Continued on Page 153*

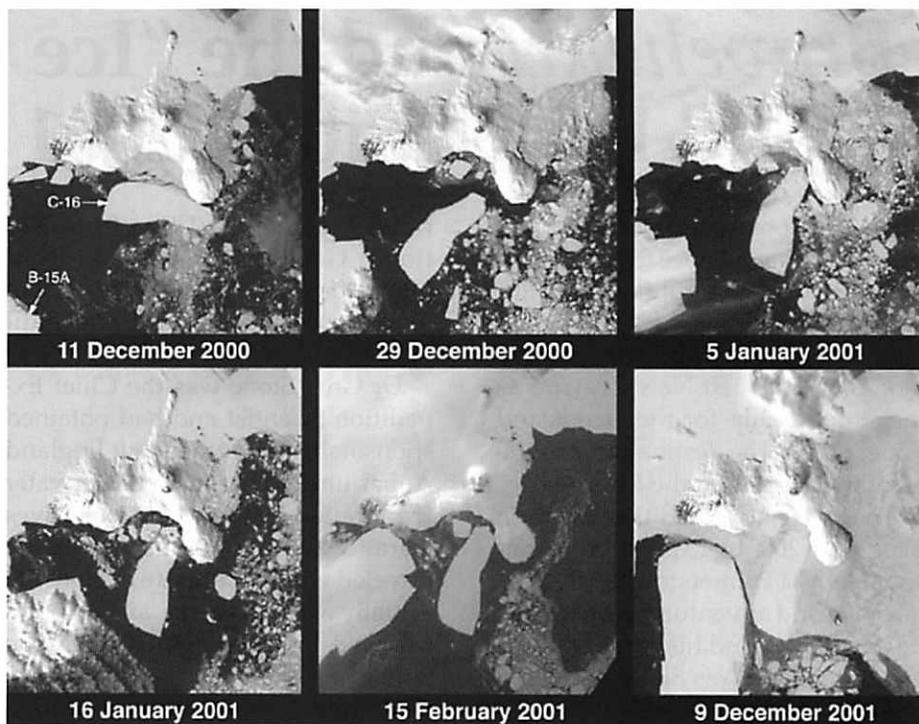
*Not a Good Year for Penguins*  
Continued from Page 143

nesting material. After separate winter lives at sea, birds meet their mate of last year at the nest site to begin the cycle of life again; but not so this year.

At Cape Bird, near the northwest tip of Ross Island, the much smaller Adelie colony there experienced some viciously stormy weather this season. Strong winds caused eggs to be blown away during egg transfer between parents, and when the remaining eggs did manage to hatch, many chicks became drowned in the flood waters during thaws after heavy snow falls. Chick survival has been only a fraction of the normal rate for the colony.

Despite the devastation amongst the Ross Island colonies, Adelie rookeries on Franklin Island and at Cape Hallett were thriving this season, with many healthy young chicks in the nurseries.

Problems have also occurred amongst the Adelie penguin colonies near Mawson Base where about 15,000 birds are breeding each year. Australian scientists found over 100 dead penguins near the base and fear that an unknown disease may be responsible. Human access to the colonies has been restricted to prevent the spread of the infection. Boots and clothing were disinfected after leaving the area to prevent transfer to other parts of Antarctica.



*Satellite Image showing the rapid movement of the C16 and B15A icebergs between December 2000 and December 2001. The images were provided by the Multi-angle Imaging spectroRadiometer aboard the Terra satellite, launched in December 1999. Image by NASA.*

Keith Reid, a penguin expert at the British Antarctic Survey, said "The Australians are very concerned about the potential for humans introducing disease into penguin colonies. But if this was an externally introduced disease, it would go through a colony extremely rapidly." He said one possibility was that skuas, which travel large distances while scavenging

around the oceans, could easily introduce disease into a penguin colony.

It has also been a bad year for thousands of Emperor penguins living near the British Halley Base. The ice broke up early this year before the chicks were old enough to fend for themselves. Most of them are believed to have drowned or died of hypothermia.

## Antarctic Art Fellows Named

Dunedin fabric and fashion designer Fieke Neuman and Auckland intermedia sound artist Phil Dadson have been selected as this year's Antarctic Arts Fellows.

Fieke Neuman is well known in the New Zealand fashion and design scene and has enjoyed considerable success in major fashion competitions including the New Zealand Wearable Art awards. She holds a degree in science and a diploma in fashion and design, and worked for eight years as curator and technical manager for the Anatomy Museum at the University of Otago. Part of her research in Antarctica will include working with Dr Miles Lamare from Otago University exploring the symmetry of designs in sea urchins and starfish.

Phil Dadson is a fulltime artist with a background in sculpture and the time-based arts. While in Antarctica he will explore its unique acoustic environments and hopes to work with stones to make experimental music. A strong background in music and fine arts, Phil Dadson completed a fine arts diploma with honours from Elam and founded the New Zealand Scratch orchestra. He has won many awards both in New Zealand and overseas for his music and has contributed to sight and sound installations.

Last season's Antarctic Art Fellows were Denise Copland (print artist) Anne Noble (photographer) and Richard Thompson (painter).

Source: *Antarctica New Zealand.*



*Fashion designer Fieke Neuman will study in the Antarctic this summer. Photo Copyright Otago Daily Times.*

# *Braveheart* and the "Ice Island Expedition" 2001

The effect of giant icebergs on the local environment once they break off the Ross Ice Shelf stimulated a ship-based adventure to study them at first hand. In January 2001, the 36 metre long *Braveheart* left New Zealand as the support ship for the "Ice Island Expedition". The destination was the giant B15 iceberg in the Ross Sea.

The Ice Island Expedition had been planned in 2000 by Expedition Leader Nigel Jolly, a Palmerston North businessman and adventurer who owned the *Braveheart*, and his Deputy Leaders, Americans Wes Skiles and Greg Stone.

Wes Skiles brought with him sponsorship from the National Geographic Society having featured regularly in publications as diver and filmmaker. His main objective was to land and film on the massive ice island, B15 iceberg, and to dive and film its underwater caves. Bob Clark (USA) assisted with filming, with Don Anderson (NZ) as soundman.

Keith Moorehead (USA) from National Geographic acted as ROV pilot. The other divers were "Canadians from Florida" Jill and Paul Heinerth.

Dr Greg Stone was the Chief Expedition Scientist and had obtained sponsorship from the New England Aquarium and Bermuda Underwater Exploration Institute. His objectives were to study how ice shelf sea life traveled with icebergs, to explore life actually within icebergs, and to monitor bird and mammal life in the Southern Ocean. His assistants were Dr Porter Turnbull from Hawaii, a scientist as well as the ship's medical doctor, and PhD student Carlos Olavarria from Chile, whose job was to get DNA samples of whale blubber.

*Braveheart* started life as the Japanese fisheries patrol vessel *Gen Kai*. The vessel is 36 metres long with an 882 kW Niigata engine and variable pitch propeller. She had 1980's

state-of-the-art navigational and communications equipment, to which had been added the latest radios, radar, echo sounder, GPS, and electronic charts. She is not registered as ice-strengthened but almost certainly would have been for her tasks in Japan's wintry seas. Her Master, Iain Kerr, said she proved a strong and manoeuvrable little ship in the Ross Sea ice.

The crew of *Braveheart* were nearly all from New Zealand. Her Master, Iain Kerr, was on leave from the Maritime Safety Authority, while the Mate, Robert Williamson, the regular master of *Braveheart*, was on leave from Victoria University. The Second Mate was Matthew Jolly. Chief Engineer Tony Campbell was from the Bluff fishing fleet; John Spruit, Second Engineer, was the regular engineer of *Braveheart*; Laurie Prouting, helicopter pilot, was taking time off from his Mesopotamia Station farm. American Mike Gerzevitz helped as seaman, while Carol Anne Chowning, also from the US, had the hardest job of all as ship's cook.

*Thanks to Iain Kerr for supplying the above information.*

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## The Voyage of the *Braveheart* 2001

*By Iain Kerr*

Explaining what people's jobs are can be a little misleading, for in Antarctica everyone has several skills and does whatever is necessary. The *Braveheart* was no exception. All the seamen were engineers, and all the engineers were seamen. Helicopter pilot Laurie could steer the ship, Dr Porter could drive boats, and Chef Carol was as likely to be up the mast on lookout.

*Braveheart* sailed from her homeport of Tauranga to Lyttelton (via Wellington), where final crew, stores, and fuel were taken on board. With a dismantled helicopter lashed on deck and some 20 drums of Avgas secured, the ship was very definitely a "no smoking" zone. The main en-

gine diesel fuel had also been lightened for use in colder waters.

We sailed from Lyttelton on 17 January, with supporters running down the quay alongside us. In reality we sailed a couple of times backwards and forwards, becoming initiated into the film-world of multiple shots and some imaginative use of times and places. We shot some 350 hours of film, very soon learning to ignore the cameras and microphones in our faces, and built up material for an IMAX film, and several documentaries.

The Southern Ocean was as rough as expected. The Roaring Forties and Furious Fifties lived up to their names. We found that 35-degree rolls were the norm, with the occasional

bad one pushing our recorder up against its stops at 50 degrees. The waves were big, and green seas would sweep the ship. Our afterdeck, and the second toilet and shower, were out of bounds.

Apart from a short respite from seas, if not from winds, at Campbell Island where we offloaded some long range fuel tanks (green plastic 1000 litre septic tanks), the weather was bad until we got into the Sixties. We raised our first iceberg at 64.5° South, and circled it at a mile's distance, filming. Next day we crossed the Antarctic Circle in perfect weather.

We now headed south east for a couple of days to try and enter the pack at 178° East. On the way we found what looked a small, friendly,

interesting iceberg and we lay alongside it for a couple more days diving, plankton sampling, and filming.

Encountering the pack, but lacking the experience we later gained, we soon turned back. Continuing east we crossed the dateline and tried again. Once more we were forced to turn back. Our third attempt was at 175° West where we penetrated to about 72.5° South before again having to stop. But if Mohammed wouldn't come to the mountain, satellite information via a fishing boat told us that a massive part of the ice island, called B17 B, had drifted through the pack towards us.

The weather was perfect, and the helicopter, loaded to its maximum, took off in what can only be described as a daring operation, with Laurie, Wes, extra fuel, and survival equipment on board. When it comes out the film will tell its own story, but Laurie found the ice island and landed, Wes filmed the awesome scene, and Laurie found his way back to the *Braveheart* again.

One primary objective achieved, we now headed west through a variety of floating ice, with the Admiralty Mountains appearing in the distance. Reaching the Possession Islands, we had to work our way south to Cape Hallett under demanding conditions. Although Cape Hallett had been frozen in a couple of days earlier and a cruise ship was forced to pass it by, Hallett was now open to us and we anchored off the old NZ/USA Hallett Station. The domed survival hut would be as familiar as ever to old Hallett hands.

What was unexpected were the people there. Five members of a multinational team who were evaluating a clean-up programme under Emma Waterhouse of Antarctica NZ, were waiting for us on the beach. They were overdue for a pick up - so joined us aboard *Braveheart* for one of the best dinners I can remember.

Next day the US Coast Guard icebreaker picked the team up, and when the NIWA vessel *Tangaroa* arrived at Hallett, the short window of ice-free water at Hallett became quite a busy time for the old station. We had a full week at Hallett ourselves, sampling, diving, and filming. We were mostly anchored close off from the



*The Braveheart at Cape Hallett, 16 February 2001. Photo: John Mitchell.*

old station, but we also had a couple of days alongside the fast ice on the north side of Edisto Inlet.

It was here in Edisto Inlet that we had a sobering demonstration of the power of ice. We were working alongside a fair sized tabular berg, which was still very blocky and looking as if it was only months into several years of life in the Southern Ocean. Our divers found an underwater cave and followed it right through to the other side of the berg. No doubt the film shots will become classics and the diving exploits a legend. However, that evening as we lay off the berg enjoying a tranquil Antarctic evening, the berg started splitting, upending, and disintegrating into nothing bigger than growlers in an orgy of self destruction. Unfortunately our filmmakers were below decks and it was not a scene we could repeat. I believe *Tangaroa*, on the other side of the berg, did get some good video.

It was now mid-February and time to start heading north again, past the Possession Islands and Cape Adare for another week operating in the pack and amongst the bergs - the biggest of which, our B17B, was now starting to block off the exit from the Ross Sea.

The return passage across the Southern Ocean did not seem as bad as before. It probably was, but we were more used to it by now and we were heading home, via Campbell Island to pick up our empty tanks, and head next past the Auckland Islands.

We had seen lots of life during the voyage, Adele Penguins, Emperors,

horrible Skuas, and myriad albatrosses, mollyhawks, and petrels; Crabeater, Ross, and Leopard seals; Orca and Minke whales. But it was round the Sub-Antarctic Islands that we saw the really big whales, the Sperm and the Humpback. We had all the excitement of looking for them - "donde estan las putas ballenas?" as we would say in our second language on board, "putas" being the Spanish expletive. But when we found them we took only tiny DNA samples and lots of photos.

By now, the southern outcrops of New Zealand felt as if we were almost home, and landfall was made in Akaroa. By a series of coincidences, the medieval sword adorning *Braveheart's* saloon is an old French officer's sword that had been found on the Akaroa seabed. It would have come from the fleet of Dumont d'Urville, whose claim to fame, apart from buying a broken statue of Venus from the Island of Milos for France, was in exploring and claiming a large part of Antarctica, also for France.

*Braveheart* returned to Tauranga via Kaikoura and Wellington, ready for a refit. She had lost paint, and needed repainting. But as our own divers had continually reported, there was not a mark on her.

At the time that this article was written in December 2001, *Braveheart* had just sailed from Wellington for South America, the Falklands, South Georgia, and South Shetlands, with Robert as master, and Matthew and John in the crew. I was due to join the Sir Hubert Wilkins as master for a shorter trip to Commonwealth Bay.

# In Touch with the World

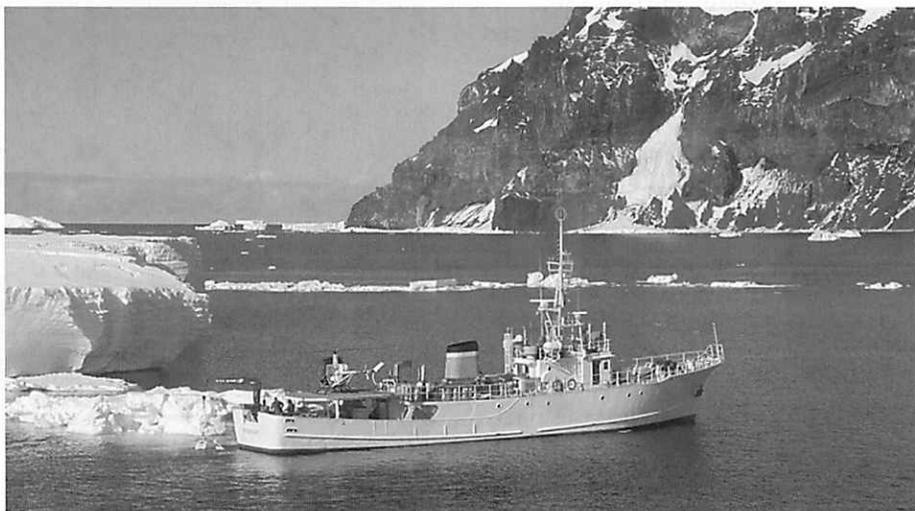
Earlier this year, the New Zealand registered vessel *Braveheart* (35 metres) returned to Antarctic waters carrying a group of ham radio operators. The expedition left Stanley in the Falkland Islands on 12 January with 12 radio hams from Canada, Ireland, the Netherlands, Switzerland and the United States, and a crew of five. The vessel headed directly for the island of Southern Thule in the South Sandwich Islands, completing the 1,820-km journey in five days in moderate seas.

During their month-long voyage, the twelve operators made 70,428 contacts or QSOs, from both the South Shetlands and South Georgia with 'hams' from all around the world through voice, morse code and teletype transmission links.

Declan Craig, one of the three organisers said that the expedition was "an experiment in the use of low-powered, 'microlight' [radio equipment] from a tough location". The expedition was forced to limit the amount and range of equipment that it used on both islands because of environmental requirements for South Georgia and the South Sandwich Islands, and by the logistics involved in putting personnel and equipment on shore from *Braveheart*.

Operations were conducted on Southern Thule between 18-22 January and the hams worked from a tent field-camp on Hewison Peninsula, the island's south-eastern point. Access to the Peninsula from the sea was difficult, and participants had to negotiate a steep, "dangerous" 13m climb directly after leaving the inflatable rubber boats that had ferried them to shore.

A 'human chain' transferred all equipment up the cliff-face to the camp site. A reverse operation was necessary when they left, but this time in 55-knot winds and a 3 metre swell. Over 26,000 contacts were made during 80 hours of operation on the island, despite frequent periods of high wind, rain and snow. As well as the weather, camping conditions were "very uncomfortable" because both the tents and much of the equipment quickly became covered in penguin guano.



Another view of the *Braveheart* at Cape Hallett, 16 February 2001.  
Photo: John Mitchell.

The group visited South Georgia between 25 January and 4 February, where radio operation took place in the Manager's House at the old whaling station at Husvik. Close to 43,000 contacts were made during a seven-and-a-half day period. Team members slept on *Braveheart* when not working, or napped on shore for short periods.

While in Stromness Bay, *Braveheart's* skipper Robert Williamson, and owner Nigel Jolly, helped the crew of the Russian scientific vessel *Atlantida* free its anchor after it had become fouled on old mooring gear on the floor of the Bay. Captain Williamson, a professional deep-sea diver, descended to 42m depth to successfully free the anchor. The five day voyage back from South Georgia to the Falkland Islands was "rough and unpleasant" with eight metre swells as the vessel headed west into the prevailing winds.

Declan Craig said that his group had shown that such expeditions could achieve "excellent results" without "large amounts of high-powered equipment" as used by similar ventures in the past. Ham operators were challenged in their attempts to tune into what was, as a result, a relatively "weak-signal operation", and Declan said that the high number of contacts recorded around the world was a credit to the "skills and persistence" of those who made contact.

Due to the difficulties involved in the landing at Southern Thule, a

smaller range of equipment was sent ashore there than at South Georgia. At both locations electricity to power the radios and provide heat for the operators was generated using four small one-kilowatt generators. Four small radio units were used for transmissions from Southern Thule and six on South Georgia; relatively simple antennas being erected on both islands. Transmissions from Husvik were possible over a greater range of frequencies due to the additional range of equipment taken ashore there.

Earlier ham operations have taken place on Peter, Heard and Campbell Islands, where 60,000, 81,000 and 96,000 contacts had been made in February 1994, January 1997 and January 1999 respectively. It took over two days to set up the radio equipment used on both the Heard and Campbell Island operations, whereas the *Braveheart*-supported operation were under way in just five to six hours. Consequently, this year's 70,000 contacts made over an operational period of just under 11 days, makes a better contacts-per-day ratio than for the Heard and Campbell Islands expeditions, the greater number of contacts at those locations taking 20 and 24 days to achieve respectively.

'QSL' or 'contact made' cards from the islands, highly prized by hams, are currently being distributed to those who successfully made contact with the expedition.

# Aircraft Problem Strands Group at Pole

A group of 14 people, who included Dr Artur Chilingarov, Deputy Chair of the Russian Parliament, Russian government officials and tourists, became stranded at the South Geographic Pole for two days in early January after their aircraft had broken down. The party had to be flown out on US and private aircraft.

The visit to the Pole had been organised by the French company Polar Circle Expeditions (CERPOLEX) and seven of the party were tourists from France, Sweden, Switzerland, the Ukraine and the United States. The remaining people were acting as consultants. CERPOLEX has been conducting commercial tourist operations in the high Arctic for the past decade, including to the North Geographic Pole, using Russian aircraft and Russian polar expertise. This season was the company's first Antarctic venture. An

Ilyushin-76 (IL-76) long-range aircraft was used between Punta Arenas, Chile, and the Patriot Hills blue-ice runway, with a smaller single-engine Antonov-3 (AN-3) aircraft used for the journey to the Pole and back. The AN-3, however, did not have the range to fly to and from the Pole without refuelling and both Chile and the United States were approached for assistance. Chile subsequently agreed to provide support at its Patriot Hills summer field camp, and the US to provide fuel for the AN-3 at Amundsen-Scott station at the Pole.

The Antonov-3 aircraft is an upgraded version of the long-proven Soviet-era AN-2 bi-plane, and was recommended for the 2,200-km round-trip flight to the Pole from the Patriot Hills. The AN-3 consists of a standard AN-2 airframe fitted with a modern turboprop engine and all-new avionics. Personnel

from the AN-3's 'Paliot' design office and factory in Omsk subsequently became involved in the project and one of the aims of the venture was "to demonstrate that the AN-3 can be useful for scientific polar expeditions".

After the party landed at the South Pole, the AN-3's engine became difficult to restart. Once it did, there was a strong vibration that caused the two pilots to quickly shut it down. There is speculation that either the problem was caused by the aircraft standing for four hours in temperatures between  $-25^{\circ}$  and  $-28^{\circ}\text{C}$ , or that the thin atmosphere at the Pole, with oxygen levels equivalent to 5000 m above the sea level, seriously affected the engine systems.

At the Pole the stranded party was housed and fed, most sleeping on the floor of the station gymnasium. Dr Chilingarov and his government colleagues travelled to McMurdo station and on to New Zealand on a US Antarctic program aircraft. The fare-paying tourists flew back to the Patriot Hills on Adventure Network International's (ANI) chartered 'Basler 67' aircraft which happened to be visiting the Pole.

Nicholas Mingasson of CERPOLEX said that the aircraft's "black box" is currently at the Russian Department of Civil Aviation, and that discussions are underway with the Russian Government about ways in which the aircraft could be returned from the Pole next season.

*The stranded Antonov 3 aircraft and the Russian party. Photo: Scott F. Smith.*



## *Fuel Limits Flights Continued from Page 148*

fuel than had been allowed for had been used for a flight within Antarctica that transferred Russian national programme personnel from Novolazerevskysya Station to field stations located in Dronning Maud Land. The planned destination of the

intercontinental flight was the blue ice runway to the south of Novolazerevskysya Station.

John Sparks of the South African company Transworld Travel, who are ALCI's agents for the tourist part of the Dronning Maud Land flight operation, expressed disappointment for both his company and ALCI, al-

though he said that the tourist activity had always been "second priority, and that "safety must always come first". He stressed, however, that both companies were "very excited and confident" about the tourist operation in 2002-03 and that all requirements for that season would be shipped down to Antarctica this April.

# Polar Plateau Marathon – The Ultimate Challenge

Three runners completed Adventure Network International's (ANI) Plateau Marathon on 22 January and two others ran a half-marathon. Both marathons took place two weeks later than planned because of bad weather. They were so successful that a similar event is planned for next season.

After a 10-day delay at the Patriot Hills due to the bad weather the five runners were flown to the South Pole on ANI's 'Basler 67' aircraft. Originally there had been six runners booked for the marathon, but one had to withdraw due to work commitments. After a brief visit to Amundsen-Scott Station the five runners were flown to a starting point 42 km to the north, where a small tent-based field camp was established. The participants spent three days acclimatising to the 3,000-m altitude, and during that time two of the runners decided not to attempt the full marathon.

The three full marathon runners were Richard Donovan from Ireland,

and Dean Karnazes and Brent Weigner from the US. The runners started at 0900 hours South Pole time on 22 January and stopped every hour for an "energy boost" that consisted of soup, a water energy-gel, chocolate bars and nuts.

Donovan was first over the line after 8 hours 52 minutes, followed by Karnazes about 27 minutes later, with Weigner a mere 70 seconds behind him. Donovan and Weigner wore "snow shoes" for the run, while Karnazes elected to use "standard running shoes", a decision that made running particularly difficult in the soft snow. Standard marathons run at sea-level in 'friendlier' climates are normally won in just over 2 hours.

But for Donovan and Weigner completing the marathon was not enough, and they went on to complete what ANI says was an ultramarathon, running an additional 15-16 km from the Pole out to the South Pole Remote Seismic Observatory to the "east" of the station and back. A

'road' consisting of hard-packed snow had been maintained between Pole station and the Observatory over the previous few months and this made running the extra distance considerably easier.

The half marathon was run from the South Geographic Pole marker "west" for just over 10 km before returning to finish at the Pole. The two half-marathoners were flown from the advance camp to the Pole in the Basler, their race starting soon after Donovan, Karnazes and Weigner had begun their own run. Ute Grüner from Germany won the half marathon in 5 hours 49 minutes, just over four minutes ahead of Don Kern from the US.

ANI said that the race had been "an historic event" for the company, and that all the runners agreed "that the course was extraordinary challenging". Karnazes was quoted as saying that "this was unequivocally the toughest marathon on earth".

The second high plateau marathon is scheduled for 4 January 2003. The price of participation is the same as this year, \$US25,000 ex Punta Arenas. According to ANI, they have the logistic capacity to take up to seventy-five people for the race.

## Polar Marathon Marred by Personalities and Friction

The preceding article is the official version of the Polar Marathon. What actually happened is not so sweet. Beneath the surface the event was marred by bitter arguments after the finishing line. The problem lay in the personalities. Of the half marathoners, Ute Grüner was a 56 year old German grandmother who had skied across Greenland. Don Kern was a 45 year old American computer consultant who had run 67 marathons. The half marathon was run with no problems. Of the ultramarathoners, Brent Weigner was a 52 year old American teacher who was also a seasoned marathon runner. Richard Donovan was a 36 year old Irish economist who had decided to spend 2002 running seven

ultramarathons in seven continents to raise money for two charities. Dean Karnazes, 38, was an American endurance athlete, business man and sports model.

The problem began before the start of the race. According to Karnazes, the full marathoners agreed to run together and not to compete against each other. Weigner and Donovan say this was not so; they had agreed to run together for most of the course but would race the last couple of miles. Despite what Karnazes said had been agreed, he set off before the others because he had been "freezing" while the others strapped on their snow shoes. Karnazes was not using snow shoes. The issue was complicated by the fact that the snow

shoes Donovan was using belonged to Karnazes and had been given to him because of an injured knee. Karnazes maintains that he wouldn't have lent them if he had known that it was a race. Donovan finished 27 minutes before the other two, but was suffering from mild snow blindness, hypothermia and frostbite in his toes. After the race he required 3-4 litres of IV fluid. Harsh words were later exchanged, compounded by Karnazes later expressing his opinion on a website.

The initial ANI press release declared Richard Donovan the winner, but an official decision was later made to create a runner's division and a snowshoe division. Some competitors believed they were racing for a US\$25,000 first-place prize, which happened to be the entry fee for the race. In the end ANI declared all five runners winners and awarded them each US\$3,000.

*Continued on Page 165*

# Changes in South Georgia since Shackleton's Day

by Colin Monteath

South Georgia is the most beautiful island in the polar world; a frigid mountainous paradise with glaciers flowing into the sea and where quixotic wildlife no longer fears the wrath of humans. Fur seals, hunted to the brink of extinction in the early 1800s, are back in great numbers; their inquisitive pups unable to resist snuffling and snorting in your face as you sit quietly on a beach. It is also a great privilege to have thousands of gleaming king penguins waddle past, some stopping to chat or to peck snowy boots.

However, an eerie pall of death still hangs over the island. Although whales are increasing again on the Antarctic Peninsula, it is seldom that a cetacean larger than an orca is seen close to South Georgia. From 1904 to 1965 (when the shore stations closed), 41,515 blue and 133,735 other species of whales were processed in South Georgia's six shore-based whaling stations. From 1925, whaling gradually became entirely pelagic (sea-borne), with the massive factory ships and fast killer boats replacing the need for shore-based installations.

Today, instead of whales, bigger, more deadly leviathans, in the form of British nuclear powered submarines (a Soviet submarine visited in 1966), occasionally enter these waters to test their capabilities in the depths of the Weddell Sea. On the island Shackleton called *The gateway to Antarctica*, much has changed since the wooden-hulled *Endurance* tacked into Grytviken.

Across the bay from where we stood around Shackleton's grave, lights from the whaler's museum peeped into an inky gloom. Museum caretakers Tim and Pauline Carr, living a solitary life at Grytviken these past six winters aboard the yacht *Curler*, welcomed us for a drink. The clank of machinery echoed overhead among the crags as construction continued on a modern British Antarctic

Survey (BAS) base at King Edward Point.

In 1982, science was completely disrupted when Argentine troops captured Grytviken. The resultant British-Argentine conflict that erupted in the South Atlantic Ocean, principally around the Falkland Islands, had a major impact on South Georgia and nearby South Sandwich Islands. Every summer since 1983 I have visited South Georgia as a guide so was used to being confronted by heavily armed British Gurkhas who beamed when greeted in their native Nepali. Two decades on, with the fisheries research complex due to be occupied by BAS next summer, the military has finally gone. (Lying within the Antarctic Convergence Zone, South Georgia is biologically part of Antarctica, though north of 60°S, the island is outside the political boundary of the Antarctic Treaty where weapons must be declared.)

Commencing in 1999, an American Museum of Natural History exhibition on Shackleton toured the United States, sparking phenomenal sales of Caroline Alexander's book *The Endurance*. A similar display in England was oriented around the original *James Caird*. Classic accounts of the 1914-17 Imperial Trans-Antarctic Expedition, such as Shackleton's *South* (ghost written by Edward Saunders, the same New Zealand journalist who helped write Shackleton's *The Heart of the Antarctic*) and Frank Worsley's *Endurance* are all back in print alongside a host of new titles, most illustrated with Frank Hurley's time-honoured images.

Since 1993, when a resurgence of interest in Shackleton's journeys gained momentum, there have been three attempts with replica craft to recreate the voyage of *James Caird* - two of them reaching South Georgia safely - Trevor Potts (UK) and Arved Fuchs (Germany) - while a third, sailed by an Irish team, (Shackleton was born in Ireland in 1874) was scuttled half way, the crew bailing out in

dangerous conditions onto the support yacht *Pelagic*. In 2000, Arved Fuchs, who had previously skied to the North and South Geographic Poles within a 12 month period (1989), has led the only team thus far to have completed the boat voyage followed by a crossing of the island.

A new television documentary on Shackleton was filmed in 2000. On location near Elephant Island the film team lost all three of its replica craft while under tow in big seas. In March 2000, an IMAX film version of the Shackleton story was also completed, featuring Reinhold Messner (Italy), Stephen Venables (UK) and Conrad Anker (USA), three professional mountaineers. Almost with impunity, the trio crossed South Georgia wearing sophisticated protective clothing and using ultra-light mountaineering gear, luxuries beyond the imagination of Shackleton's party who staggered across to Stromness with scant equipment and dressed in ragged blubber-soaked woollens. Screws from *James Caird* had been driven into their boot soles so they could grip the ice. In contrast, Messner broke a foot jumping a crevasse while wearing crampons on the Crean Glacier. (In 1989/90 Messner and Arved Fuchs skied 2800 km across Antarctica.) In November 2000, a 17-member Geographic Expeditions team from USA skied over the route, the first commercial group to do so. There have been approximately 16 crossings to date, many of them completed by the British military and British Antarctic Survey teams.

*Shackleton mania* has now reached new extremes with Dr Robert Ballard, discoverer of Titanic in 1985, planning a dive to 3400 m in the freezing Weddell Sea in an attempt to locate *Endurance* (see *Antarctic Vol 19, No 2, P 118*). Even Shackleton's *management style* (on an expedition Shackleton considered a failure) is now being looked to by business leaders as a model for success.

# NO TURNING BACK

Part II of Colin Monteath's article retracing Sir Ernest Shackleton's 1916 route across South Georgia.

On 10 March 2001, *Molchanov* pounded northward towards South Georgia from the Antarctic Peninsula on the final leg of a three week voyage. As we neared the island, briefing sessions were held, stoves tested and crevasse rescue gear stowed in packs. Conscious of the audacity of guiding clients on such an extreme journey, Greg Mortimer had turned down applicants with insufficient experience, finally selecting six for the crossing – four Australians, Chris and Michelle Ward, Martin Dumaresq and Peter Marsh, an American, Tom Powell, and a hard-bitten 61 year old Scot, Roger Booth. During a shake-down climb earlier in the voyage, I had observed the team's strengths and weaknesses. Given anything but desperate conditions I considered we might just squeak through.

Nervous anticipation of what lay ahead spread through the crossing party as *Molchanov* nudged closer to King Haakon Bay. Excited chatter from the other passengers was infectious, their enthusiasm an important ingredient in the success of our venture. Flurries of snow pranced around the stern, then cavorted and scurried across the crests of inky-black waves. Glowering peaks snarled at us from under a band of bruised cloud. Glinting in a feeble patch of sun, sealskin-grey glaciers folded like crumpled cardboard and flowed into the sea; the jagged lips of crevasses blew skeins of powder snow skyward. In perfect unison, a pair of sleek sooty albatrosses wheeled overhead, their forlorn *peee-aaah* a most haunting cry, never forgotten by those who venture to these latitudes.

Conditions were favourable for *Molchanov's* Zodiacs to land at Cave Cove. Our party, fresh-faced and fueled by a cooked breakfast, assembled in front of the overhanging rock where Shackleton's men had collapsed and huddled together for warmth, their bellies digesting freshly-strangled albatross chicks. Balanced on slippery rocks, we read

*A strong wind with blowing snow made the crossing of Trident Ridge and the descent to the Crean Glacier very difficult. Photo: Colin Monteath.*

aloud from a dog-eared copy of Worsley's *Endurance*; his description of reaching South Georgia sounding all the more poignant as freezing surf hissed and sucked at our boots.

After sailing up the fjord, Shackleton decided to land at a bleak beach that they named Peggoty Camp (from a Dickens' novel). Washed ashore on the rocks they found flotsam from wrecked ships swept before the westerly gales all the way from Cape Horn. In Worsley's colourful words "...a sad tale of wasted human endeavour, of gallant seamen beaten by the remorseless sea. Piled in utter confusion lay beautifully carved figureheads, well-turned teak stanchions with brass caps, handrails clothed in canvas 'coach-whipping' finished off with 'Turks' heads' – the proud work of some natty, clever AB; cabin doors, broken skylights, teak scuttles, binnacle stands... There the mighty roaring Southern Ocean, tiring of its sport, had cast them up contemptuously to rot, in grievous memory of the proud, tall ships with lofty spars, of swift clippers, barques, barquentines, possibly even an old East Indiaman. Wreckage from schooners, sealers, whalers, poachers, pirates, and maybe even bits of a man-o'-war, lay around, for some of it may even have drifted there when Drake first battled round the Horn."

As we landed at Peggoty, I spotted a bleached tree trunk lying on the sand. (South Georgia is treeless.)



Having waited for a full moon to light their way, Shackleton finally set off across the island with his fellow Irishman Tom Crean and the Kiwi Worsley, leaving the three weakest companions, Harry McNish, John Vincent and Tim McCarthy, sheltered under *James Caird*. Following their original route, 87 years later, our party of eight shouldered hefty packs and struck out on a steady climb on bare ice for a low point on the horizon, now named Shackleton Gap. Judging by Shackleton's description, it was evident how much glacial recession had occurred in the intervening years.

From the Gap, Shackleton thought he could see a lake, realising later that it must be Possession Bay glowing in the moonlight. With a raw wind on the rise and snowflakes flickering in our faces, we too gained a brief glimpse of Possession Bay below us

on the north coast. (Possession Bay was charted by Captain Cook in *Resolution* when he laid claim to South Georgia for Britain in 1775, the first national claim to Antarctic territory.) Reorienting himself toward the whaling stations in Stromness Bay, Shackleton turned inland to tackle the first major obstacle, Trident ridge. Despite weak leg muscles, wasted by inactivity on the boat journey, the trio pushed on. With no tent and clad in worn out clothing, Shackleton could not afford the luxury of sleep. Feeling far from heroic, we chose to camp. In fading light and harried by a nagging wind, we dug our tents in under Trident's evil-looking rock walls. A full-blown blizzard toyed with us all night.

By morning visibility was near zero. Tossed like rag dolls by powerful wind gusts, we fought hard to cross Trident Col, gaining a brief respite on the far side from the shrieking blasts of snow that plastered our clothing. Communication was all but impossible. It was here that Shackleton's party had launched itself down a steep snowslope in the dark, sliding out of control on their backsides – a desperate, do-or-die move contemplated only by those who know no other way but *forward*.

Shackleton wrote in *South* "I turned to the anxious faces of the two men behind me and said, 'Come on boys.' Within a minute they stood beside me on the ice ridge. The surface fell away at a sharp incline in front of us... We could not see the bottom clearly owing to mist and bad light, and the possibility of the slope ending in a sheer fall occurred to us; but the fog that was creeping up behind allowed no time for hesitation.... There could be no turning back now, so we unroped and slid in the fashion of youthful days... descending at least 900 feet in two or three minutes... But we had escaped."

With daylight to help us, Greg and I threaded a route through a jumble of crevasses, leading our party down to the relative flatness of the Crean Glacier. For the rest of the day we trudged across the wind-scoured Crean in two teams of four, a tight rope between each member. Out of radio contact with the ship and with a jigsaw puzzle of half-hidden crevasses to negotiate, this certainly was no place for a mistake, nor to linger. With hindsight, the comparison



*Crossing the last pass before the descent to Stromness. Photo: Colin Monteath.*

seems feeble however. Like Shackleton, we felt committed – there was no turning back. And then, the wind turned really nasty.

When sudden gusts hit we could do little but crouch, protect our faces and drive in the curved picks of our axes to stop us being somersaulted across the ice. Then, without warning, another squall hit with the lightest member of our team, Michelle, taking off like a wayward kite on the end of a string. At times, it seemed as if Michelle's husband Chris was literally pulling her back down to the glacier. Then Chris would stagger forward and lurch up to his waist in a hole and Michelle would have to help dig him out. Worn down by the unseen danger of crevasses lurking below and an invisible enemy above relentlessly pounding our windproofs, this Keystone Cops' progress seems comical now in front of a warm fire. But, at the time, with dusk all but on us and wet clothing starting to freeze, we were far from laughing. We had to find shelter. (Later, during a lull, we passed what first appeared as a rock on the glacier. It turned out to be the fuselage of a crashed helicopter, dumped heavily on the ice by a downdraft when British marines were retaking Grytviken during the 1982 British-Argentine war.)

Shackleton drove Worsley and Crean to the limit, knowing that if they fell asleep they would die, as in all probability would the others on Elephant Island. At one point, after

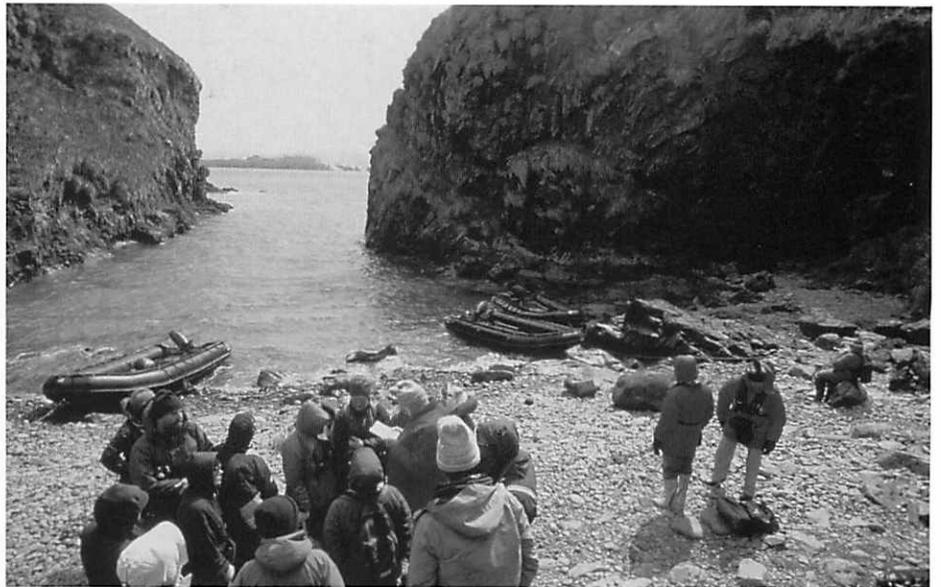
the briefest of naps, Shackleton roused his mates, telling them they had slept for half an hour. They stumbled on in deep snow trying to locate the Fortuna Glacier, the crucial exit from the mountains. We decided the Fortuna could wait until morning and turned to face another numbing hour doing battle with unruly tents. There seemed a chance to avoid the worst of the wind by pitching our camp close to a peak Worsley labelled the Great Nunatak on the copy of his sketch map of the route tucked in my parka pocket. (I also had Duncan Carse's 1958 contour map. Worsley did have a rudimentary map of the South Georgia coastline with him though, of course, the interior of the island was blank.) As I struggled into the cramped tent beside Greg and Martin, I could sense it was going to be a night to remember. Wedged together like wallowing seals, I held on to vibrating tent poles then occasionally yelled outside to the others to ensure they were secure. Each of us wrapped chilled fingers around steaming soup mugs until finally, curled foetus-like in damp bags, we drifted into a fug of fitful sleep.

Our third day dawned clear and so cold that it took ages to stuff frozen tent nylon into packs and warm our stiff bodies with awkward movements. For a brief spell before the mist rose to meet us again, a wan sun lit unsullied peaks around us, tingeing their flanks in hues of delicate pastels. Thankfully, probing our way down the Fortuna Glacier proved

straightforward, enabling us to reach the coast in five hours. (Shackleton's crossing took a total of 36 hours in a single push during the wintery month of May – ours, 24 hours actual walking time, spread over three short autumn days). With the mountains, and thankfully, the crevasses, behind us now nothing could seriously delay us – though a steady drizzle dampened our enthusiasm for fording an icy torrent cascading from the glacier snout. Startled king penguins looked on, corkscrewing their necks sideways to stare in disbelief as we gingerly picked our way into the surging water in our underpants. Roger failed to link arms with teammates for support and fell in. Wringing out his clothing, he was heard muttering "Another bloody day in the Highlands!" Climbing stiff-legged, it took us the final haul over steep rocky ground to warm up again. All the way from a sealer's cave at Fortuna Bay excitement grew at the thought of eventually seeing Stromness.

As Shackleton's party had been descending to Fortuna Bay, they heard a shrill whistle, the first long dreamed-of indication that salvation was at hand. Worsley remembered "Seven o'clock came, and we listened intently. Then, clear across the mountains, in the still morning air, from eight miles away came the sound of the steam whistles of the whaling factories bidding the men turn-to. It was the first signal of civilisation that we had heard for nearly two years. For the second time on that march we shook hands; for each of us recognised that this was an occasion on which words were inadequate." After the climb above Fortuna, on the wind-raked pass overlooking Stromness, Shackleton's men had a scary time lowering each other down a frozen waterfall in the dark. But by then, nothing could stop the desperate trio from reaching safety.

As we crossed Fortuna Saddle in a vicious wind, it was a relief to hide behind boulders and peer down on Stromness Bay in the rain-sodden glimmer of dusk. After a descent of easy snow slopes, I waded through bogs toward a now silent whaling station with its forlorn graves. As I approached the manager's house, I tried to grasp something of what Shackleton must have felt as he real-



The party reading Worsley's book on the beach of Cave Cove, the point where the James Caird landed from Elephant Island in 1916. Photo: Colin Monteath

ised that by his own survival he had just been granted a slim chance, but a chance nonetheless, of rescuing the men still clinging to life on that far-flung rock. For Shackleton "We had reached the naked soul of man" and for Worsley, reflecting on their salvation, "I learnt afterwards that we had crossed the island during the only interval of fine weather that occurred that winter. There was no doubt that Providence had been with us. There was indeed one curious thing about our crossing of South Georgia, a thing that has given me much food for thought, and which I have never been able to explain. Whenever I reviewed the incidents of the march I had the sub-conscious feeling that there were four of us, instead of three. Moreover, this impression was shared by both Shackleton and Crean."

At daybreak, with the last of our food simmering on the stove and snug in the knowledge that *Molchanov* would soon pick us up, we climbed the rickety staircase in Captain Sorlle's villa to find the old bath. The likelihood of crashing through rotten floorboards in the bathroom was probably as great as falling into one of countless crevasses on the glaciers. And hunkered together in wind-lashed tents seemed somewhat akin to now cramming all of us into the wobbly bath – the same tub that Shackleton, Worsley and Crean left a black ring in when they scrubbed off layers of grease and grime. "Fortunately there were no ladies, still, we were a terrible-looking trio of scarecrows, but we had got so used to ourselves that

*we did not mind. Ragged, filthy and evil-smelling; hair and beards long and matted with soot and blubber... Fortunately we had no vermin."* Buzzing with excitement at our own small achievement, we felt our ritual in the bath was an odd but somehow apt way to honour Shackleton and the most extraordinary escape story of all time.

On board *Molchanov* again, I dumped my pack and stepped into a hot shower. For me the trip was almost over; but for Shackleton, leaving Stromness, destined for four protracted attempts before recovering the marooned men from Elephant Island, another four months of worry lay ahead. *Molchanov* moved further along the coast to Grytviken so our crossing party could pay its respects to Shackleton at his resting place in the whaler's cemetery. (At Grytviken in 1922, the 47 year old explorer died of a heart attack on board his new expedition vessel *Quest*.) In darkness we gathered around the headstone and I shone my headlamp on the back of the granite block to light up the quote from Robert Browning, *I hold that a man should strive to the uttermost for his life's set prize*. Turning home, I remembered Apsley Cherry-Garrard, author of *The Worst Journey in the World*, who wrote, *'For a joint scientific and geographical piece of organisation, give me Scott; for a Winter Journey, Wilson; for a dash to the Pole and nothing else, Amundsen: and if I am in a devil of a hole and want to get out of it, give me Shackleton every time.'*

# A Ship Called "Huey"

By Dominic Hughes

Not many people get the chance to travel to Antarctica, one of the most remote and hostile environments on earth. So when the opportunity cropped up for me to cover the first crossing of the continent by two women explorers, I jumped at the chance. But as his report shows, when I left my home in Sydney, Australia bound for the polar ice, I really had no idea what he was letting himself in for.

Covering a news story is one thing - spending around 10 days on a 37 metre ship pitching its way south through some of the roughest seas in the world is another altogether. This was not part of the scenario I had imagined when I was asked if I'd like to go to Antarctica - beautiful icebergs, killer whales, penguins and seals, yes. Leaning over a toilet, soon to become reacquainted with my breakfast - definitely no. As I had wandered around Sydney on a sweltering summer's afternoon, feeling slightly absurd buying long johns, gloves and thermal underwear, in my mind I was already in the ice. I had totally forgotten the two thousand or so nautical miles you had to cross before you got there.

I just hadn't appreciated the kind of distances involved until we were midway through the journey. A large map stretching from Tasmania to the Antarctic adorned the wall of our saloon room at the front of the ice ship, *Sir Hubert Wilkins*. After three days we had progressed about an eighth of the way down the map. We seemed to travelling incredibly slowly, possibly because the ship seemed to be moving up and down and side to side instead of forwards. Sometimes it would move up and down and side to side all at the same time. I know that sounds impossible, but when you appear to be standing upright while actually lying flat in your bunk anything becomes logical. One night my cabin mate's face actually made contact with the roof while he was lying on the top bunk. And this was through what the crew assured us were reasonably calm waters. The owner's warning that the ship rolled "just a bit" was something of an understatement.

*Dominic Hughes (left) with polar traversers Ann Bancroft and Liv Arneson at Cape Evans in 2001. Bancroft and Arneson returned to civilisation after their traverse aboard the Sir Hubert Wilkins. Photo: John Parsloe.*

Apparently the ship's movement is due to its design. To stop it getting caught in the ice, it has a rounded hull. This knowledge was little help in combating seasickness - and in fact I felt a little queasy just thinking of that rounded hull. The *Sir Hubert Wilkins* is not nicknamed "Huey" for nothing.

After a few days of intense rolling and bucking, all the passengers and most of the crew were exhausted just by the sheer effort of sitting upright, let alone standing. For the first two days I felt incredibly smug. While most people stayed prone in their cabins, I was manfully fighting off all thoughts of seasickness. It was not to last. I think my mistake was spending too long bending over to put on my socks. Suffice to say, by the end of the day I was on a diet of dry crackers and water.

The "Huey" itself is a relatively small ship for Antarctic waters, but the cabins are comfortable, the food and crew both excellent. Originally built as a small cruiser for the President of Finland, the "Huey" played a small part in the history of the Cold War, hosting meetings between the Americans and the Russians. But cruising around Finland's lakes and fjords is very different to crossing the Southern Ocean.

Eventually we reached the ice. What a relief - the water became incredibly smooth as new ice formed among the floes. People stopped feeling too ill to socialise, and as they emerged from their cabins we got to know each other better. The crew were a fascinating mixture. The first mate was an incredibly upper class Englishman who first went to sea when he was 16 and never looked back. He had a knack for brilliant opening lines in conversations, delivered completely deadpan, like



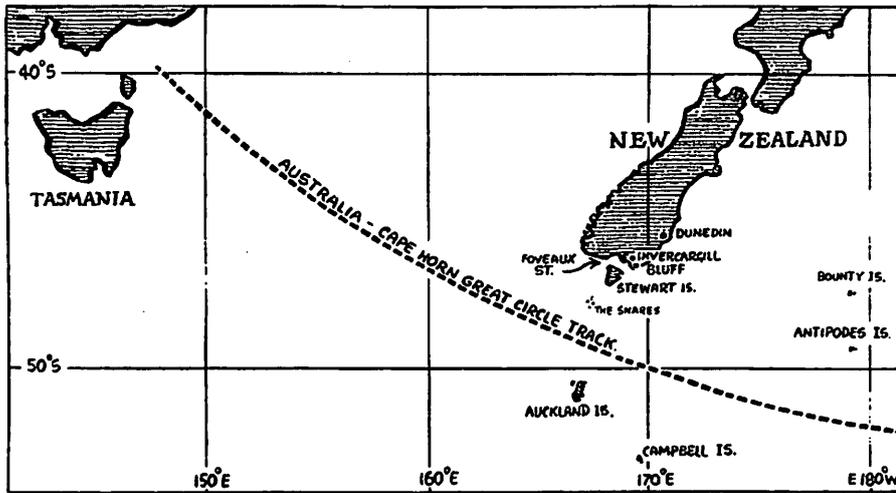
"When I met Deng Xia Ping...." or "While driving a bus to Kathmandu..." or "I had a gun held to my head once during the cultural revolution....". Our Antarctic expert was a New Zealander with a wealth of knowledge about the history and surprisingly intricate politics of the Antarctic region. In younger days he'd driven motorcycles across the ice pack and sampled 80 year old cocoa from the stores left in the hut of the doomed Scott expedition in 1912. Ian the engineer most closely resembled the archetype of the seadog, with a fantastically bushy beard and eyes lined from squinting at the sun. He told us that he got rid of his stomach cancer by telling it to go away, only in language you'd expect from a sailor, and it hasn't bothered him since.

Two unusual things happened on the trip. First I became a film star. I made my celluloid debut in what the director assured me was the very first Antarctic drama to be shot on location. It was a demanding role which involved sitting in the middle of a vast expanse of snow and ice, and then running backwards at speed and falling over. New Zealand film-maker Jonathan Brough's script is about the speeding up of time, but I'm afraid I didn't fully understand it. In fact the landscape was the real star, and I was just an extra, but I'm looking for a

*Continued on Page 171*

NEW SERIES: THE BACKGROUND TO ANTARCTIC STAMPS

# The 1915 General Grant Expedition



The proposed route of the General Grant.

By Paul Whales

## Introduction

The *General Grant* was a 180 foot long, 1,000 ton, three-masted sailing ship that left Melbourne on the 4<sup>th</sup> May 1866 bound for London. Her route was to be the so called "Great-Circle Track" which involved heading South-East and sailing between The Snares and the Auckland Islands (104km and 320km south of Stewart Island respectively) and on around Cape Horn to England.

On board were 25 crew, 58 passengers (many being miners from the Ballarat and Bendigo goldfields), miscellaneous items of cargo plus, according to the ship's manifest, 2,576 ounces of gold worth (at the time) 10,000 sterling. The true amount of gold carried is unknown as many believe that most of the nine tons of spelter as listed in the manifest was in fact gold also. It is also thought that many of the returning miners on board were carrying the rewards of their hard work with them. One story published in New Zealand papers in 1961 claimed that three male passengers had in their steerage accommodation up to thirty-one bars of gold, each weighing 100lbs.

## The Wreck of the *General Grant*

On 13<sup>th</sup> of May land was sighted and that night, after the wind had dropped, the ship was driven onto the rocks by the prevailing sea. According to survivors the vessel had become wedged in a large cavern at the base of high cliffs. As the ship

started to break up many passengers and crew took to the boats while others swam away from the wreck. Fourteen men and one woman managed to escape in boats and they headed for Disappointment Island, some 10 miles away. Eighteen months later on the 21<sup>st</sup> November

1867, the remaining ten survivors were rescued by the *Amherst* and their story told to the world. Almost immediately, private speculators were making plans to retrieve the gold.

## Attempts to Recover the Gold

The first attempt at recovering the gold was made in 1869 by one of the survivors, James Teer, using the paddle tug *Southland*. Bad weather caused the abandonment of the expedition. Although there are various theories as to the actual location of the *General Grant* and there have been several attempts to retrieve the gold, none can claim success. The best known of these expeditions was organised by Captain Catling.

## The Catling Expedition

Percy Vincent Catling was a Londoner living in Sydney, Australia, whose attempt at retrieving the gold was not organised with a lot of publicity as were the previous attempts. He first travelled to Dunedin (New



Sheet of 2d value with selvedge removed.



Sheet of 1d value with selvedge removed.

## STAMPING GROUND



Shows misplacement of impression.

Zealand) and formed the "Catling Fishing and Prospecting Company". He then purchased the 24 ton Stewart Island fishing cutter *Enterprise*. On the 8<sup>th</sup> June 1915 the expedition sailed from Bluff to the Islands in order to find the likely site of the *General Grant* and prepare for an attempt at recovering the gold the following year. *Enterprise* returned to Dunedin later that year for re-caulking.

Catling was near ready to sail south again in early 1916 when the authorities told him he was required to have on board a certified master. He argued the case but when he could see he wasn't getting anywhere he left early without any warning.

Back at the Islands Catling struck bad weather making the search very difficult. Following an extensive search of the western coastline Catling was sure he had found the location of the cavern although no sign of the remains of the *General Grant* was seen. The only indication of any wreck was two pieces of timber jammed under some rocks inside the cavern. It appeared that the constant heavy seas had dispersed any remains during the previous fifty years. Catling examined the floor of the cavern but found no gold. Possibly it had already been recovered he thought.

With no money left he abandoned the project and returned to Dunedin. Except for some half hearted attempts, this was the last serious search carried out for sixty years. In 1976 Commander John Grattan and his team of divers mounted an expedition. To this day the whereabouts of the gold remains a mystery despite more attempts over the last twenty years.

#### The Catling Cinderella stamps

Captain Catling had two locals (2d green and 1d lake) printed by his friend, J. Bannerman, proprietor of

the "Bluff Press", a newspaper office in Bluff. These were to be used on all expedition mail from the Auckland Islands back to New Zealand. Catling had established, without official authority from the New Zealand Post Office, a "post office" at his base at Port Ross on the Islands. Any covers posted at this "post office" were permitted to be put into the New Zealand Post Office mail system for posting onward from Bluff on the condition that the correct rate New Zealand stamps had been affixed alongside the Auckland Island locals.

The two locals were designed by Mr Bannerman and printed on thick wove unwatermarked paper. The sheets of paper were first perforated using a line machine of gauge 112. The distance between lines of perforations varied resulting in finished stamps of different sizes. Each impression was then applied individually in two rows of six. This necessitated the sheet being passed through the printing process twelve times. Care had to be taken to ensure the images lined up but, as can be seen with the 2d pair illustrated at left,

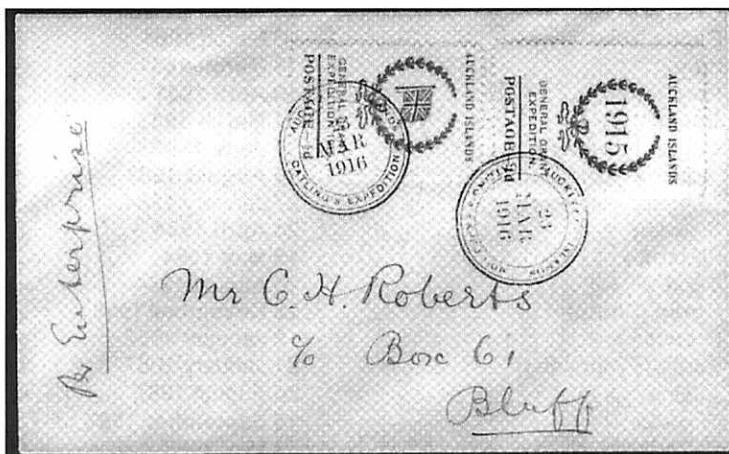
misalignments did occur. Volume V of "The Postage Stamps of New Zealand" reports *It is believed that not more than fifty sheets of each value were printed.*

Surviving covers are very rare and all carry the same date (23 MAR 1916) handstamp. This cover from the Paul Wales collection, is back-stamped at Bluff on July 7, 1916 (the date the *Enterprise* returned).

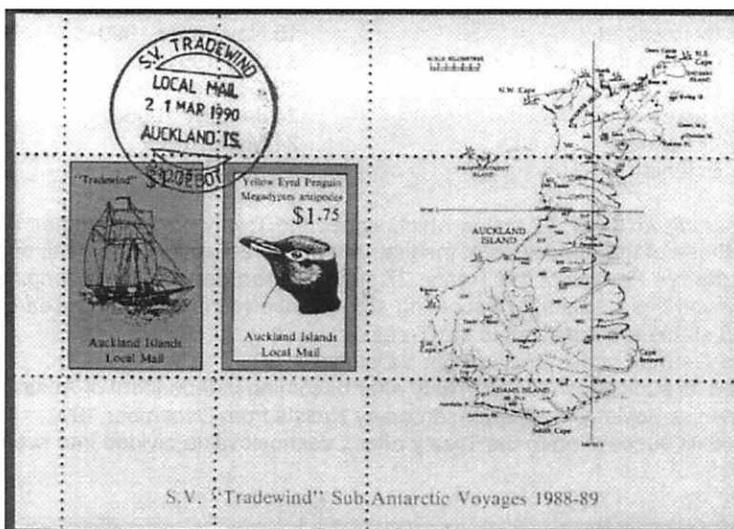
#### References:

Royal Philatelic Society of New Zealand: The Postage Stamps of New Zealand, Volume V.  
Keith Eunson: The Wreck of the General Grant.

*Paul Wales is a stamp dealer in Christchurch, New Zealand. His company, Classic Stamps Ltd, hold regular sales of Antarctic philatelic material dating from the late 19<sup>th</sup> Century to the present day. Paul has formed and exhibits award winning collections on Scott's 1901-04 Expedition and the Campbell Islands.*



Cover posted on Auckland Islands and returned to New Zealand "Per Enterprise". Cancelled "Auckland Islands, Catling's Expedition, 23 MAR 1916."



Recent Auckland Island local posted on the Islands (21<sup>st</sup> March 1990) and carried by S.V Tradewind back to New Zealand.

# ANTARCTIC TREATY 2001

Supplied by Bob Headland, Scott Polar Research Institute

The Treaty was made on 1 December 1959 and came into force on 23 June 1961. The Treaty has no limit on its duration. It may be reviewed, at the request of a Consultative Party.

Contracting Parties; in chronological order.

<i>Britain</i>	<b>31 May 1960</b>	
<i>South Africa</i>	<b>21 June 1960</b>	
<i>Belgium</i>	<b>26 July 1960</b>	
<i>Japan</i>	<b>4 August 1960</b>	
<i>United States of America</i>	<b>18 August 1960</b>	
<i>Norway</i>	<b>24 August 1960</b>	
<i>France</i>	<b>16 September 1960</b>	
<i>New Zealand</i>	<b>1 November 1960</b>	
<i>Russia</i> <sup>3</sup>	<b>2 November 1960</b>	
<b>Poland</b>	<b>8 June 1961</b>	(29 July 1977)
<b>Argentina</b>	<b>23 June 1961</b>	
<b>Australia</b>	<b>23 June 1961</b>	
<b>Chile</b>	<b>23 June 1961</b>	
<b>Czech Republic</b> <sup>4</sup>	<b>14 June 1962</b>	
<b>Slovakia</b> <sup>4</sup>		
<b>Denmark</b>	<b>20 May 1965</b>	
<b>Netherlands</b>	<b>30 March 1967</b>	(19 November 1990)
<b>Romania</b>	<b>15 September 1971</b>	
<b>Germany, DDR</b> <sup>1</sup>	<b>19 November 1974</b>	(5 October 1987)
<b>Brasil</b>	<b>16 May 1975</b>	(12 September 1983)
<b>Bulgaria</b>	<b>11 September 1978</b>	(25 May 1998)
<b>Germany, BRD</b> <sup>1</sup>	<b>5 February 1979</b>	(3 March 1981)
<b>Uruguay</b>	<b>11 January 1980</b>	(7 October 1985)
<b>Papua New Guinea</b> <sup>2</sup>	<b>16 March 1981</b>	
<b>Italy</b>	<b>18 March 1981</b>	(5 October 1987)
<b>Peru</b>	<b>10 April 1981</b>	(9 October 1989)
<b>Spain</b>	<b>31 March 1982</b>	(21 September 1988)
<b>China, Peoples' Republic</b>	<b>8 June 1983</b>	(7 October 1985)
<b>India</b>	<b>19 August 1983</b>	(12 September 1983)
<b>Hungary</b>	<b>27 January 1984</b>	
<b>Sweden</b>	<b>24 April 1984</b>	(21 September 1988)
<b>Finland</b>	<b>15 May 1984</b>	(9 October 1989)
<b>Cuba</b>	<b>16 August 1984</b>	
<b>Korea (Seoul)</b>	<b>28 November 1986</b>	(9 October 1989)
<b>Greece</b>	<b>8 January 1987</b>	
<b>Korea (Pyongyang)</b>	<b>21 January 1987</b>	
<b>Austria</b>	<b>25 August 1987</b>	
<b>Ecuador</b>	<b>15 September 1987</b>	(19 November 1990)
<b>Canada</b>	<b>4 May 1988</b>	
<b>Colombia</b>	<b>31 January 1989</b>	
<b>Switzerland</b>	<b>15 November 1990</b>	
<b>Guatemala</b>	<b>31 July 1991</b>	
<b>Ukraine</b>	<b>28 October 1992</b>	
<b>Turkey</b>	<b>24 January 1996</b>	
<b>Venezuela</b>	<b>24 March 1999</b>	
<b>Estonia</b>	<b>17 May 2001</b>	

**Original signatories**; 12 states which signed the Treaty on 1 December 1959, are *italicised*; the dates given are those of the deposition of the instruments of ratification, approval, or acceptance of the Treaty.

**Consultative Parties** of the Treaty; 27 states (**emboldened**), the 12 original signatories and 15 others which achieved this status after becoming actively involved in Antarctic research (with dates in brackets). A total of 45 states are adherent to the Treaty.

<sup>1</sup> The two German states unified from 3 October 1990.

<sup>2</sup> Declared its succession to the Treaty after becoming independent of Australia.

<sup>3</sup> Formerly the Soviet Union, represented by Russia from December 1991.

<sup>4</sup> Declared its succession to the Treaty after Czechoslovakia divided into two republics on 1 January 1993.

# Antarctic Ice – Tool for Studying Climate History

Since the industrial era began in the early 1800s the world's atmosphere has changed. There is great concern today over the increase of greenhouse gases in our atmosphere and their long term effect on the world's climate.

Greenhouse gases are mainly carbon dioxide, methane and nitrous oxide, and these make up a relatively small proportion of the earth's atmosphere. But because they absorb strongly in the infrared part of the sun's spectrum and retain heat, they play a significant role in the radiation balance of the earth, and consequently on its climate. Increase in their concentration is viewed with concern, and international activity is focused on predicting the consequences of changing atmospheric composition and its impact on climate. Many of these studies use global climate models to predict, for example, the effects of doubling atmospheric carbon dioxide. But data is insufficient because records need to cover long periods of time for gases such as carbon dioxide.

New Zealand's National Institute for Water and Atmosphere (NIWA) has the longest continuous record of atmospheric carbon dioxide in the Southern Hemisphere, measured at a site near Wellington. In the 30 years since measurements began there, atmosphere carbon dioxide has increased by about 15%.

But even the longest dataset for atmospheric carbon dioxide goes back less than 50 years. How can we tell what the levels of greenhouse gases were in the atmosphere before pollution from industry and agriculture started to change the air we breathe?

About 20 years ago an important discovery was made about the potential of ice sheets to store information about past atmosphere. Near the surface of ice masses, such as the Antarctic polar ice cap, snowfall over time turns into ice that contains air trapped in tiny bubbles. In this way ice preserves a record of past atmospheres and their chemistry. Because

the ice is both impermeable and inert, it is an extremely good storage container for many of the important gases in air.

By drilling into the ice cap and taking cores, which have to be kept frozen, the chemistry of the trapped air can be analysed. Australian researchers have been particularly successful with cores extracted from Law dome, an ice cap 200 km across and up to 1200 m thick near the coastline of Wilkes Land. The site is ideal because of rapid ice formation and temperatures that average -20°C. Rapid ice formation traps air bubbles over short time spans, and changes over periods as little as 10 years can be detected. The ice cores at Law Dome extend down to bedrock, and at this depth the air is over 1000 years old.

Analysis of the methane content of the trapped air shows only small variations in atmospheric methane since 1000AD, but from 1800 to the present atmospheric methane has more than doubled. The dramatic rise is attributed to human activity.

Ice drilling (EPICA) is also being done at Dome C in Wilkes Land, and at Vostok, a Russian station in the remote centre of Antarctica. At Vostok French, Russian and American scientists have worked together to produce a climatic history from the cores spanning over 400,000 years, covering four complete glacial and interglacial pe-

riods (we currently live in a warm interglacial period). Atmospheric carbon dioxide and methane data can be clearly correlated with temperature changes throughout the cores. We know that climate changes were initially triggered by changes in the amount of solar radiation reaching the earth due to wobbles in its orbit. The response of the greenhouse gases was to feed back and amplify the temperature changes by a factor of about two. It is interesting to note that nowhere in the cores do the carbon dioxide or methane levels reach those of today.

A joint NIWA and CSIRO project is studying the source of methane from the firn layer of Antarctic snow. Using isotopic techniques, levels of the naturally occurring radioactive isotope Carbon 14 in methane can indicate whether it was derived from fossil fuels or from a natural source such as a swamp. The study has already shown that 60 years ago up to 15% of atmospheric methane was derived from fossil fuel sources.

The study of air bubbles trapped in Antarctic ice, in conjunction with modern greenhouse gas levels, is essential if we are to develop climate models that can predict the future behaviour of our atmosphere.

*Based on an article by David Lowe (NIWA) and David Etheridge (CSIRO).*

*Tabular icebergs calving from the side of the Mertz Glacier. Photo: Colin Monteath.*



# A Question of Deception

Deception Island, a popular tourist destination, is to have its own management plan. The Island derives its name from its shape and the deceptive nature of its concealed harbour. From the Sea, the island looks like unbroken land, but in reality it is a horseshoe-shaped volcanic caldera. There is a small breach in the caldera wall called Neptunes Bellows. As ships pass through the bellows, the caldera opens up into a fantastic natural harbour called Port Foster. The island was given its name by Nathaniel Palmer who visited the island in 1820.

Deception Island is an active volcano that last erupted in the 1960s, destroying a British Antarctic Survey base on the island. This eruption was quite small and Port Foster is a much older feature, the result of the collapse on the centre of the volcano after a major eruption. The collapse and the breaching of the lowest part of the rim created a harbour that is safe in all seas. The ruins of a Norwegian whaling station are a reminder that the island was once a centre for the whaling industry.

The island is of great biological significance. Geothermal warm ground supports one of Antarctica's most diverse floras and the island is also home to very large penguin colonies. The main visitors are now tourists who come to view the whaling station, watch the penguins and bathe in the thermal waters. Spain and Argentina have bases on the island.

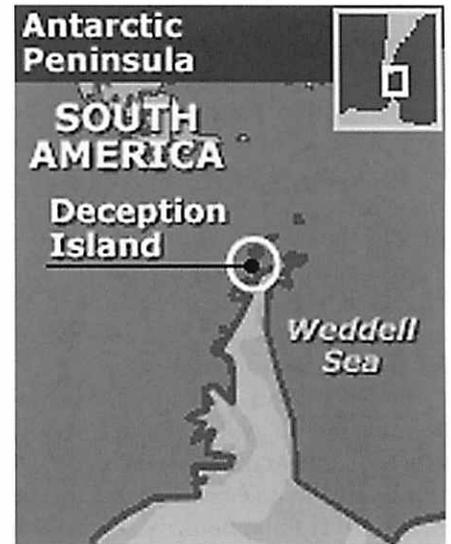
British Antarctic Survey is leading a project to manage all activities on Deception Island. "What we are trying to do is to use the Antarctic Protected Area System to create a sort of matrix of zones – zones set aside for science, for tourism and historical zones" said Rod Downie, Environmental Manager for British Antarctic Survey (BAS). "We need to find a way to make sure tourists don't damage the area, but equally we don't want tourists to stop visiting the island because it is a remarkable place. Actually going into the centre of this drowned volcano surrounded by these walls covered in snow and ice is a magnificent experience", said BAS biologist Dr David Walton.



*Deception Island; a safe haven. Photo: British Antarctic Survey*

A group of international experts visited the island last summer to discuss the new management plan. For Britain it is part of a four million pound, five-year programme to clean up its abandoned Antarctic bases. The plan is to remove all disused buildings that have not been designated a Historic Site and Monument under the Antarctic Treaty. This classification has been given to the old whaling station at Whalers Bay. It was in these buildings that the British base was established in 1944. The huts will therefore escape demolition.

*Location of Deception Island, Antarctic Peninsula. Map: British Antarctic Survey*



## Satellite Reveals Antarctic Ice Dynamics

The Canadian Centre for Remote Sensing (CCRS) has derived exciting new information on Antarctic ice movement by analysing data from the Canadian satellite RADARSAT. Conventional interferometric and new radar speckle analyses have been used to give a broader picture of ice movement rates and directions.

One area of study has been the Filchner Ice Shelf that borders the eastern Weddell Sea to the east of Berkner Island. Over 80% of the ice

in the Filchner Ice Shelf comes from two glaciers, the Recovery Glacier and the Slessor Glacier, both draining the East Antarctic Ice Cap.

The Recovery Glacier and its recently identified tributary, the Blackwall Ice Stream, are particularly interesting. Near the coast the flow is constricted and passes over a steep drop to reach a speed of 1000 metres per annum (m/a) before joining the ice shelf. Once it reaches the floating part

*Continued on Page 166*

# NZ Antarctic Heritage Trust Develop Plans to Save Historic Huts of the Ross Sea

Since its establishment in 1987, the New Zealand Antarctic Heritage Trust has struggled hard to prevent the deterioration of the historic huts of the Ross Sea region. But in the last few years it has had to accept that it was very slowly losing the battle.

As soon as the Ross Island huts were abandoned by the early explorers (the last leaving in 1918) they became filled by snow, because fine snow has the power to find even the smallest hole or crack to blow through in a storm. In time the snow turned to ice, and the huts became "deep frozen". Work on digging out the huts began during the 1960s, and many fascinating artefacts were found. Although the huts were now "ice free", the rate of deterioration of artefacts within them increased, because they changed from "deep freeze" storage to normal "fridge" conditions. "The stuff is priceless" says the Trust's Executive Director, Nigel Watson, "but it is also decaying in this environment. The significance of the structures is their location.....the feel and the atmosphere."

Almost every year since its establishment the Trust has sent a small team down to the ice to maintain the three historic huts on Ross Island. Winter build-up of ice and snow is routinely removed and the huts have been weatherproofed, even to the extent of reroofing them. A computerised inventory has been made of all the artefacts in the hut and their state of preservation, and research has been done on the long term temperature and relative humidity ranges inside the huts. The majority of the Trust's funds came from tour ships that donate a set sum per passenger. After the establishment of the autonomous UK Antarctic Heritage Trust in Britain, it began to contribute regular amounts towards the upkeep and conservation of the British huts. But it too appreciated the deterioration that increased visitors to the huts can bring. John Heap, chairman of the UK Heritage Trust, says "Ice grains are wearing away the wood the huts are made of. The other problem



comes from large numbers of people walking through the huts, which brings its own wear and tear." Rob Fenwick, Chairman of the NZ Antarctic Heritage Trust, is well aware of the need to preserve the huts and of the difficulties and costs involved. "We need to preserve these huts for the inspiration of future generations," he said. "Where they are is the only place on Earth where humans' first dwellings still survive, and their preservation is of global importance".

The Trust realises that it has to change its focus and broaden its horizons if the huts are to be still there in a hundred years time, and to this end they have launched a fundraising plan that is aimed at the international community.

The vision of the Trust is "Inspiring the future by conserving the legacy of discovery, adventure and endurance", and its mission is "Conserving in perpetuity the human heritage in the Ross Sea region of Antarctica for the benefit of all by demonstrating leadership, innovation and professionalism."

A major conservation project has been developed with multi year staged work programmes on the four historic huts in the Ross Sea region. The plan was presented to the New Zealand Government who have made a funding commitment of NZ\$400,000 to assist the production of an overall strategy. Arrow International has been selected as Programme Manager. Trust Chairman Rob Fenwick and Executive Director

Nigel Watson travelled to the UK to launch the appeal in Britain. Princess Anne, Patron of the UK Trust and keenly interested in the British huts, travelled to Antarctica this past summer to see the huts for herself. On her return to Christchurch she helped launch the Trust's funding appeal in Christchurch to businessmen and benefactors.

Plans for each hut are different depending on their location and existing state. Shackleton's Cape Royds Hut will be restored to its former glory by complete reconstruction. Scott's Discovery hut at Hut Point will be restored to how it was left at the end of the Heroic Era, when it was used as an emergency shelter by other parties long after Scott had abandoned it. Maintenance, repair and selected restoration will occur at Scott's second hut at Cape Evans, while Borchgrevink's hut at Cape Adare will be stabilised and preserved with little reconstruction because of the site's difficult access.

The plan is an ambitious one and the Trust's International appeal is for 35 million New Zealand dollars over the next ten years.

*Editor's note: The New Zealand Antarctic Society supports the efforts of the Antarctic Heritage Trust and is directly involved through the presence of its President on the Trust Board. Members are encouraged to make personal donations to the Trust or to consider the Trust in their will.*

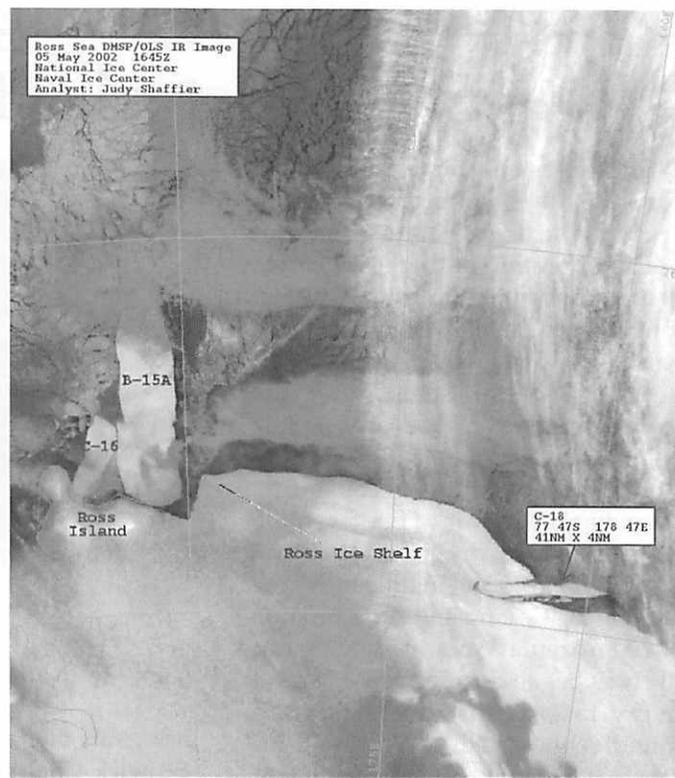
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*Polar Marathon Marred by Personalities and Friction  
Continued from Page 154*

One can't help but think that Antarctica is not a place for egotists. As a footnote, Donovan went on to run the world's first North Pole Marathon on 4 April 2002, battling 60 km winds and temperatures down to -60°C. His overall time was 3 hours 48 minutes. He became the first person to run marathons at both poles. His North Pole marathon was run in great secrecy to prevent the "prize" being stolen by another solo competitor.

# New Giant Iceberg Breaks off Ross Ice Shelf

In early May another giant iceberg broke away from the floating front of the Ross Ice Shelf. The iceberg was discovered during routine analysis of satellite images by the US National Ice Center, and was named "C18". Iceberg names are given according to the Antarctic quadrant in which they are first seen. The quadrants are divided counter-clockwise in the following way: A quadrant – 0-90°W (Weddell Sea to Bellingshausen); B quadrant – 90W to 180° (Amundsen to eastern Ross Sea); C quadrant – 180-90°E (western Ross Sea to Wilkes Land); D quadrant – 90°E-0 (Amery to eastern Weddell Sea). C18 is the eighteenth large iceberg to be tracked by satellite in the C quadrant. The iceberg is approximately 76 km by 8 km, somewhat of a baby compared to B15A (93 km x 37 km).



*Satellite Reveals Antarctic Ice Dynamics Continued from Page 164*

of the shelf, basal friction disappears and the ice accelerates to 1200 m/a. as it moves towards the ice front. The Blackwall Ice Stream is also moving quickly. The upper part is flowing at 100 m/a compared to 30 m/a for the surrounding ice, but as it approaches and finally joins the Recovery Glacier, it progressively accelerates to 200 m/a.

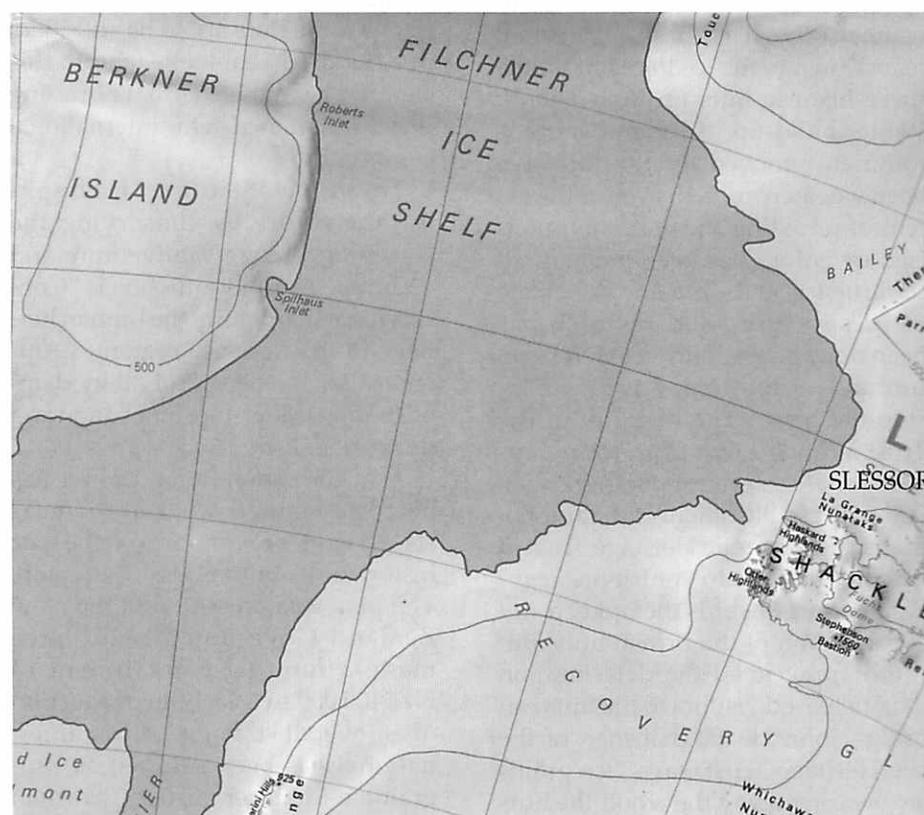
One of the advantages of conventional interferometric data is that it is possible to detect the bending of the ice during successive tidal cycles. This in turn fixes the 'grounding line', the line at which the shelf loses contact with the bottom. The position of the grounding line reflects a complex matrix of factors, but two important ones are variation in ice thickness and variation in sea level. Both relate to climate variation. For example, more precipitation leads to thickening of the source ice-cap which in turn leads to thickening and acceleration of the ice streams, and in due course, the thickening of the ice shelf and a seaward movement of the grounding line. If the increase in precipitation was purely local there would be no significant impact on sea level, and the shift in grounding line would re-

late directly to increased ice thickness. If, however, it was part of a global trend, then the movement of the grounding line would be much more rapid and greater than could be explained by ice thickness alone.

A frequently updated picture of ice thickness and ice velocities coupled

with data on sub-shelf bathymetry and grounding line position helps calibrate the rate and direction of climate change.

(Information derived from *Newsletter for Canadian Antarctic Research Network* and summarised by John Bradshaw)



# Antarctic Bases No. 2

## – Arctowski (Poland)

Poland acceded to the Antarctic Treaty on 8 June 1961 and became the first country to add its signature as a consultative party on 29 July 1977. Poland's initial Antarctic involvement was in 1958/59 when a small group of six scientists, led by Wojciech Krzeminski, stayed at "Oasis" station in the Bunger Hills. The station had been built and occupied by the Soviet Union for the International Geophysical Year (IGY) in 1957-58. Afterwards it was handed over to Poland, who renamed it "Dobrowski" after one of the Polish scientists on the *Belgica* Expedition of 1897-99. Seasonal studies continue there on geodynamics and environmental research.

In 1975/76, Poland sent a major marine expedition to Antarctica with the research vessel *Professor Siedlecki* and the trawler *Tarzar*. For several months the party studied krill and fish in Antarctic waters, taking home with them 100 tonnes of krill to assess the possibility of harvesting the krill.

The following year a second marine expedition, led by Dr Zbigniew Karnicki, travelled south in the *Professor Siedlecki* accompanied by the trawlers *Gemini*, *Yazar*, *Manta* and *Gryf*. Their scientific aim was to define the krill populations more precisely and to discover if they could be harvested on an industrial scale. The second aim of the expedition, headed by S. Rakusa-Suszczewski, was to build a permanent base at Admiralty Bay on King George Island. The Polish programme therefore comprised 400 men, cranes and bulldozers to erect the prefabricated base. The building started 1 February and finished 26 March. The geophysical observatory was built the following year. Before Arctowski was built there had been only two bases on King George Island; The Soviet Bellingshausen Station and Chile's Presidente Frei Station. Today there are eleven.



*Arctowski Station on King George Island in 1978, the year after its construction on the south side of Ezcurra Inlet in Admiralty Bay. Photo: Roger Waite.*

Poland named its station "Arctowski" after Professor Henryk Arctowski, the second Polish scientist with the *Belgica* Expedition. Nineteen men manned the station during its first winter. The station is medium in size, accommodating up to 20 people in the winter and 20 more during the summer. The base is run by the

Polish Academy of Sciences, and ecological studies in Admiralty Bay have been conducted without interruption for over 20 years in collaboration with Belgium, Brazil, the United Kingdom and USA.

*Continued on Page 168*

## Antarctic Bases No 2 – Arctowski (Poland)

*Continued from Previous Page*



*Arctowski Station after a snow fall. Photo: Aurora magazine.*



*The warmth of wood inside Arctowski Station. Photo: Aurora magazine.*

*Duznia, an open fishing boat used by Polish scientists to catch krill near the base in 1978/79. Photo: Roger Waite.*



# MAWSON'S HUTS

by ALASDAIR MCGREGOR Published by Hale and Iremonger  
(194 PP: A\$29.00) Reviewed by James Barker

This book by Alasdair McGregor is based on his daily journal of a month spent in December/January 1997-98 at Cape Denison in Commonwealth Bay on the Australian coast of Antarctica.

He took part as photographer and artist in a privately funded expedition mounted by the Australian Associated Press Mawson's Hut Foundation. This Foundation was inspired and encouraged by the work carried out by the New Zealand Antarctic Heritage Trust on the huts of Scott and Shackleton on Ross Island. Working often in atrocious and even dangerous conditions dominated by the notorious katabatic winds from the Antarctic plateau, the team not only worked on protection and restoration of the old buildings, but also established a set of secure living facilities for future restoration expeditions.

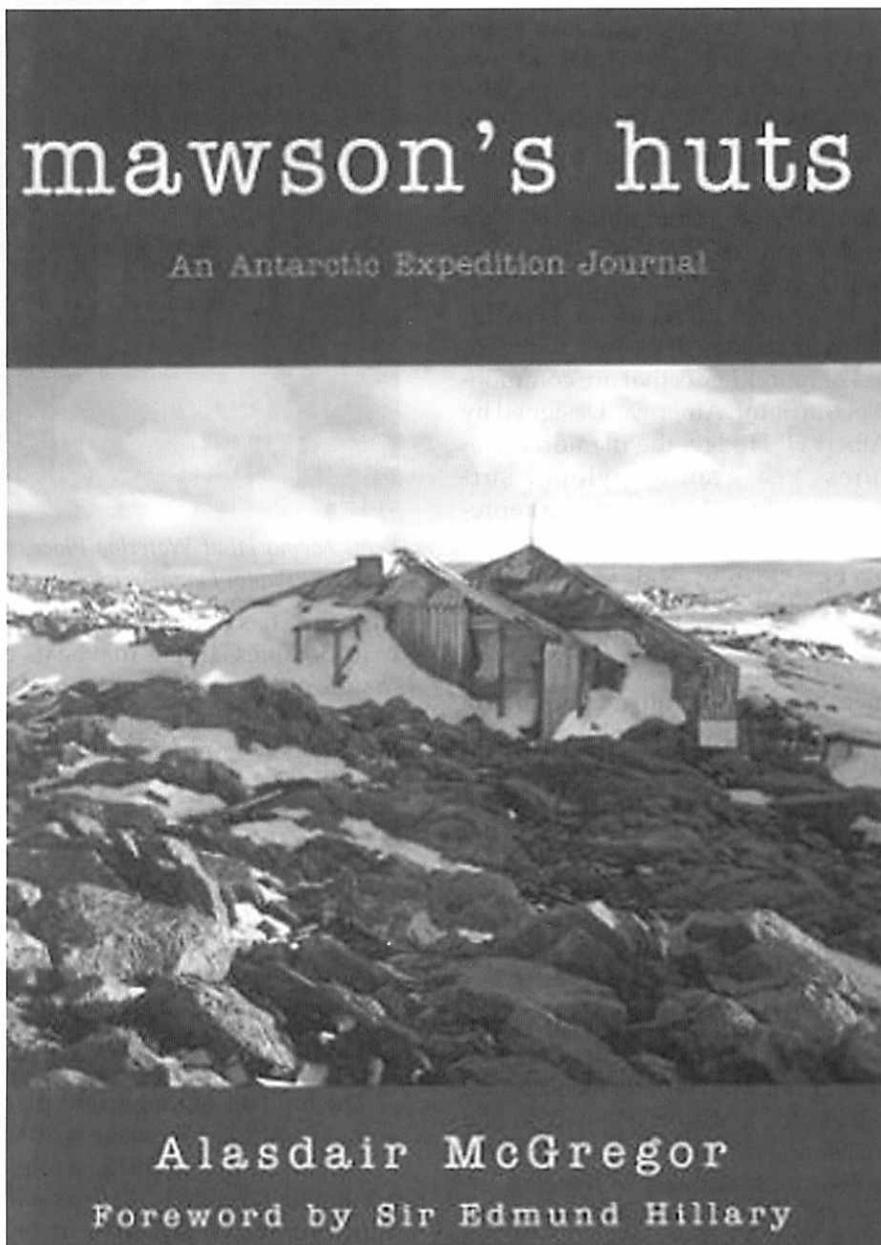
An excellent forward by Sir Edmund Hillary, in which he justifies the restoration of the historic bases of the early explorers, and an introduction giving a potted account of Douglas Mawson's Australian Antarctic Expedition (AAE) of 1912-13, sets the scene for the journal of the party's efforts.

The author, in an interesting manner, covers the day to day activities of not only himself, but also other members, in which the difficulties of working in winds of 40 knots and above, create windchill of frostbite proportions.

He makes frequent reference to the experiences of the AAE of 1912, remarking with reverence at their courage and endurance. He describes the incredible, harsh beauty of the landscape, and the personal sensations created, which will be readily recognised by those lucky enough to have had the experience.

As an artist, his descriptions of light and colour bring out the amazing contrasts and the effect they have on the beholder.

His description of the dynamics and personal relations of the team are



most interesting and bring out the urgency of the group to complete their work against the clock, in spite of the exhaustion created by the weather conditions.

The book is well written, with good illustrations. Unfortunately the map of the area and the only diagram of the main but interior are almost indecipherable, where good quality would have greatly enhanced the author's description of his movements about the area and work carried out in the hut.

This book will be appreciated by both Antarcticans and those who have an interest in isolated places and in preserving the historic bases of explorers who have gone before.

*James Barker served as a Major in the New Zealand Army. He was seconded as Deputy Leader of Scott Base in the summer of 1970-71, and Base Leader for the year in 1971-72. James became closely associated with the NZ Antarctic Heritage Trust soon after its establishment, acting as Administrator.*

# Monuments to Antarctic Heroes

Memorials to individuals who died while achieving great things enrich the lives of those who follow. Perhaps the largest and most magnificent Antarctic memorial ever built is the Scott memorial on Mount Wise in Plymouth, close to where Scott was born. The memorial was originally proposed as a national one to be mounted in London, but the design was rejected by the Lord Mayor's Memorial Fund Committee in favour of the one in Waterloo Place by Kathleen Scott.

The Plymouth memorial is by far the more striking of the two, with echoes of monuments that are commonplace in South America. Designed by Albert H. Hodge, the memorial features "...a granite pylon... surmounted by a bronze group representing Courage sustained by Patriotism, spurning Fear, Despair, and Death, the figure Courage being crowned by Immortality. The front of the pylon bears the name of the five men, whose portrait medallions in bronze, linked together by a band of laurel leaves, occupy prominent positions on the monument....." (Royal Geographic Society Journal Vol. 44 (2), Aug. 1914). In comparison the Waterloo Place Scott memorial is rather staid, although still commanding, as it focuses on a single figure.

One might be understandably curious as to how many memorials to Scott's tragic polar party exist around the world. Christchurch, which had a close association with both of Scott's expeditions, appears to have an exact replica of the London memorial, although it is carved in limestone and not cast in bronze. It too was carved by Scott's wife, Kathleen, and sits on a granite plinth. The back of Scott's left leg is unshaped raw marble, left there it is rumored, because there was some resentment concerning the slowness of payment by the City. The statue, now surrounded by iceberg roses, attracts a lot of tourists and was recently refurbished by Maxim Consulting Service Pty Ltd, Australia, with the help of David Harrowfield.

But memorials appear in the most unlikely places. Queenstown, a scenic and popular New Zealand tour-

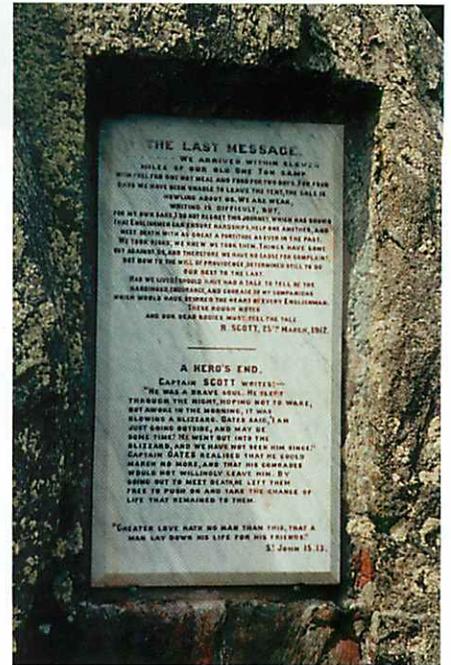


Scott Memorial at Waterloo Place, London. Photo: David Yelverton

ist resort, has a giant schist boulder in its Botanic Gardens that bears two marble panels erected with funds collected by the 42nd Company of Senior cadets to commemorate "the patient, stubborn, invincible courage, the loyal comradeship and brilliant achievement" of Scott's tragic Polar Party. After the names of the five men, is the inscription "They rest in the great white silence of Antarctica amid the scenes of their triumphs, wrapped in the winding sheets of the eternal snows. SUB UMBRA CRUCIS" (under the shadow of the cross).

The top half of the second plaque shows Scott's last message written in his diary 25 March 1912, while the bottom half, headed "A Hero's end" is Scott's tribute to Oates after he walked away from the tent to his death. "He was a brave soul. He slept through the night, hoping not to wake, but awoke in the morning. It was blowing a blizzard. Oates said 'I am just going outside, and may be some time'. He went out into the blizzard, and we have not seen him since".

The memorial is a striking tribute to five men, regardless of the controversy concerning the planning of the expedition. It makes that corner of the Botanic Garden very special, and a thoughtful setting for a more recent plaque to Queenstown's Andy Harris who had visited Antarctica three



Close up of one of the Queenstown memorial panels. Photo: Margaret Bradshaw.

times in the more recent past. His plaque reads "Andy Harris, Mountain Guide and Friend. Having ascended Mount Everest he was last seen returning upwards to assist others in a gathering storm. 29.9.1964 - 10.5.1996." This was the same storm in which Rob Hall, a member of the Society and frequent visitor to Antarctica also perished. With the centenary of many Antarctic expeditions, the great deeds of human beings from all decades should be recognised.

## Inscription from second Queenstown panel, Scott Memorial

.... "We arrived within eleven miles of our old One Ton camp with fuel for one hot meal and food for two days. For four days we have been unable to leave the tent, the gale is howling about us. We are weak, writing is difficult, but for my own sake, I do not regret this journey, which has shown that Englishmen can endure hardships, help one another, and meet death with as great a fortitude as ever in the past. We took risks; we knew we took them. Things have come out against us, and therefore we have no cause for complaint, but bow to the will of providence, determined still to do our best to the last. Had we lived I



The Scott and Oates memorial at Queenstown, New Zealand. Photo: Margaret Bradshaw.

*should have had a tale to tell of the hardihood, endurance, and courage of my companions, which would have stirred the heart of every Englishman. These rough notes and our dead bodies must tell the tale."*

The inscription ends "Captain Oates realised that he could march

*no more, and that his comrades would not willingly leave him. By going out to meet death, he left them free to push on and take the chance of life that remained to them. 'Greater love hath no man than this, that a man lay down his life for his friends' St John 15.13"*



The Hodge design Scott Memorial, now at Plymouth. Photo: Royal Geographical Society.

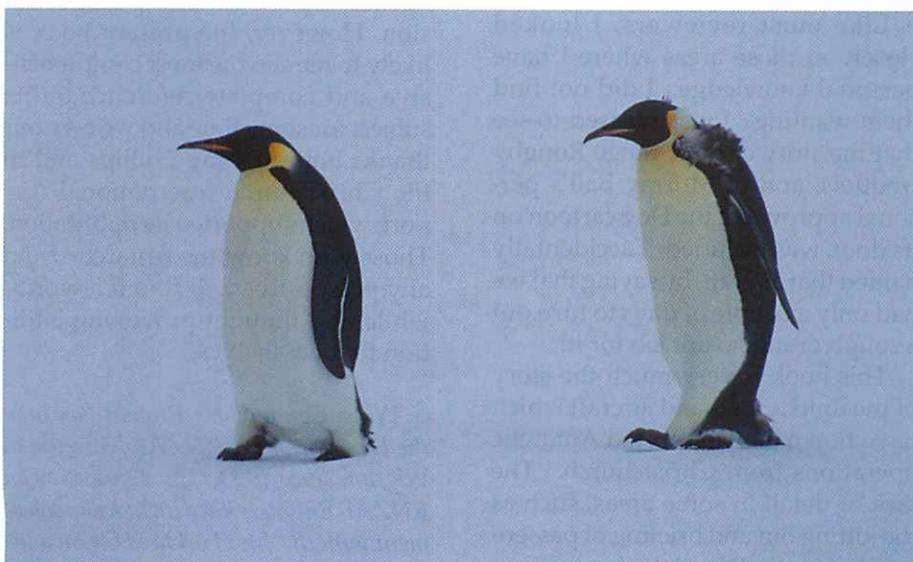
The Editor thanks David Yelverton for his assistance with this article.

## Energy Efficient Penguins

It may be ungainly but a penguin's waddling gait is actually quite efficient. Researchers had thought that waddling from side to side wasted energy, as penguins, when walking, use twice as much energy as other animals of a similar weight. To test this theory Timothy Griffin, University of California, and Rodger Kram, University of Colorado, measured the forces exerted by five emperor pen-

guins as they walked across a platform. The results showed that the penguins don't waste the "sideways energy", but instead store it up as potential energy in the same way that a swinging pendulum does. Griffin suspects that it's the bird's short legs that make walking such hard work for them. (Source - *New Scientist*)

*Below: Emperor penguins, McMurdo Sound. Photo: Margaret Bradshaw*



*A Ship Called "Huey"*  
Continued from Page 159

credit when his short film is complete.

The other strange thing was that I found myself naked on the deck of the ship in a minus 7 centigrade blizzard, and then even more bizarrely descending a ladder into the literally freezing waters of the Antarctic ocean. I must explain - being of Finnish origin, the *Sir Hubert Wilkins* has a sauna. After a hard day on the ice, it was just the ticket. One of our party, Einar the Norwegian, then suggested swimming, and peer pressure did the rest. The water was easily the coldest thing I have ever experienced, and I'm told I have a look of sheer horror on my face as I shot back up the ship's ladder. I'm afraid the photos tell their own story. Have I disgraced the BBC?

People come to the Antarctic and get hooked, compelled to return year after year. I'm not sure I'm one of them. Of course, once we were there I loved it, and it was a "once in a lifetime" experience. I don't for a second regret going. But you'd have to pay me good money to get on a 37-metre ship for another 30 day voyage - especially one called *Huey*.

*Dominic Hughes is a journalist with the BBC, and for the last three years has been working freelance in Australia.*

# Gateway to the Ice

## Christchurch International Airport - Antarctic Air Links from 1955

By Tony Phillips (Christchurch International Airport, 2001)  
112 pp: NZ \$39.95

Anthony A Phillips' background with the NZ Fire Service and interest in aviation has led him, via books on the Christchurch Fire Brigade and on the Christchurch Airport Fire Service, to this compendium of Antarctic Aviation from Christchurch. The book is very largely about the air support of the US and NZ Antarctic activities. While Italian, and other nations', operations from Christchurch are mentioned, and their aircraft are listed, there is little about their activities.

The breadth of research which has gone into the book is shown by the large number of acknowledgements. The author makes the point that the size and format of this publication meant that he had to be selective in the events and details included. Considerable space is also taken up by a very good and well reproduced selection of photographs, many in colour. Inevitably, some will find their favourite stories missing.

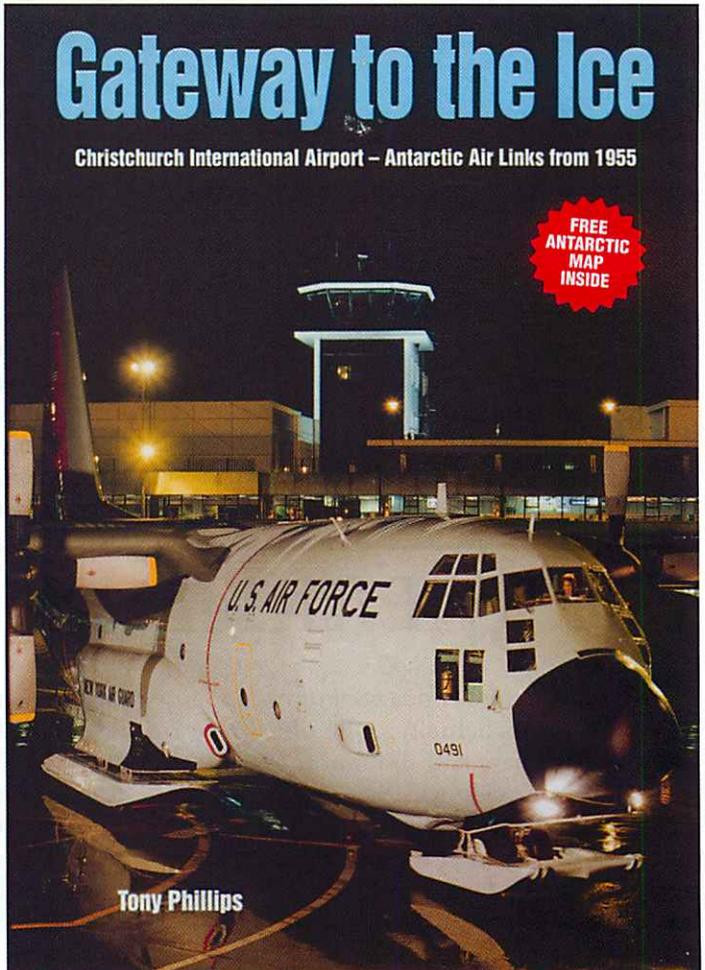
Starting with a brief history of New Zealand's Antarctic connections, the book swings into gear with a detailed account of the International Geophysical Year and the creation of Operation Deep Freeze. Subsequent chapters cover the development of aviation support in parallel with the various research programs. Considerable detail is given of some individual flights, and of the vast amounts of material moved at different periods. The many crashes which have resulted from operating aircraft in conditions that are on the brink of impossibility are covered. The point is made that no support aircraft has been capable of flying to McMurdo with a heavy payload and returning without landing if the weather is bad! Many of the 47 aircraft written off on the continent since 1955, and many of the 31 lives lost, have been because

this limitation has forced crews to land in appalling conditions. A good account is given of the recovery of several damaged aircraft from the ice: any engineer will boggle at the difficulties of replacing major parts, such as wings and engines, in Antarctic conditions, and of resurrecting a hulk which has been frozen under snow for several years.

The Air New Zealand Erebus crash in 1979 is also covered, although strictly speaking it lies outside the book's subject area. Mr Phillips' summary of the causes of this tragedy follows the conclusions of Justice Mahon. Some of the story still makes very difficult reading.

Like most reviewers, I looked closely at those areas where I have personal knowledge. I did not find them wanting. I was pleased to see that the story of the Orange Roughy Iroquois, and of Murray Ball's personal approval of the Dog cartoon on its door, was included. I accidentally named that aircraft, by saying that we had only a couple of days to turn out a rough orange paint job for it!

This book is very much the story of the units, crews and aircraft which have flown and supported Antarctic operations from Christchurch. The lack of detail in some areas, such as the kitting out and briefing of passengers before flight and the frustrations of waiting day after day for the weather to improve to flyable levels,



can be remedied when, hopefully, the author has the time and support needed to produce an expanded version. However, the present book is likely to remain the most comprehensive and complete reference on its subject for some time and we owe our thanks both to Tony Phillips and to the Christchurch International Airport, which supported its publication. Those who know the Antarctic from any perspective will find it a worthwhile and thought-provoking addition to their shelves.

*Wing Commander Provan has been the Director of the RNZAF Museum at Wigram since 1993. His 42 years as an RNZAF Engineer have included involvement with the first Lockheed Orion winter airdrop at McMurdo, and with the first "Orange Roughy" Iroquois.*

# Private Meteorite Hunt

Thirty-three meteorites, some of them rare, were collected earlier this year along the Pecora Escarpment (Transantarctic Mountains) by a private tour group. The meteorite hunt was organised by the American "Space Adventures" company, which specialises in a range of space-related activities and has links with Adventure Network International (ANI) through its President, Mike McDowell. More tour-based searches are likely to occur following the success of this year's programme. The meteorite hunt followed a visit to the South Pole. Several earlier meteorite hunts have been organised by a different group, the Planetary Studies Foundation (PSF) supported by corporate sponsorship, but this was the first time that Space Adventures had been directly involved.

Professor Paul Sipiera, President of the Planetary Studies Foundation, led the ten-person party, who were, according to a Space Adventures spokeswoman Tereza Predescu, "neither scientists, nor members of the PSF [but] private individuals who paid \$US44,000 each to embark on

*Eric Tilenius finds his second meteorite of the day near the Pecora Escarpment. (Photo: Space Adventures)*



this discovery voyage". Professor Sipiera is a planetary geologist and meteorite expert who has had previous Antarctic experience.

The Pecora Escarpment in the Thiel Mountains lies about 400 km north of the South Pole and 200 km southeast of the Moulton Escarpment, where the Planetary Studies Foundation collected 19 meteorites two years ago. The escarpment is one of several blue ice areas where meteorites slowly melt out. The meteorites had fallen onto the ice cap over thousands of years and became frozen in. Lo-

cally ice becomes trapped behind mountains, and in blue ice areas, slowly evaporates away, concentrating the meteorites on the surface. Numerous meteorites were found at this site by a US national program team ten years ago.

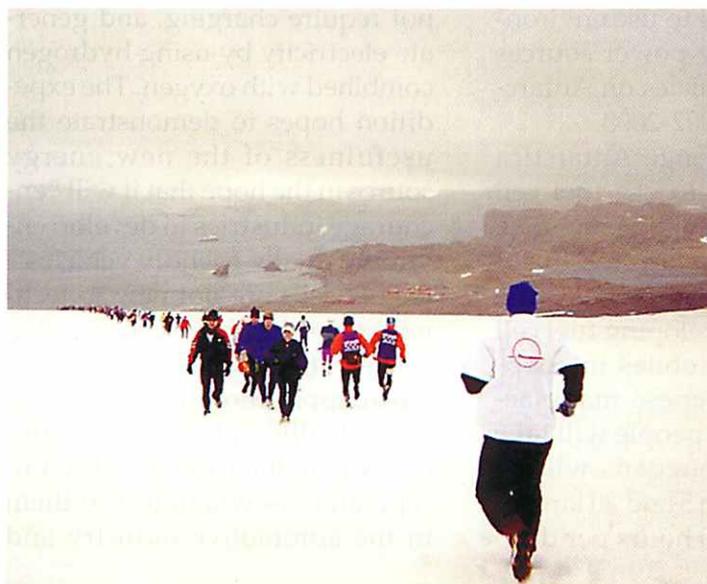
Working from a tent camp, the party searched for meteorites in blue ice areas along the escarpment for eight days in mid-January, using two motor toboggans and sledges. Several days were lost due to bad weather and problems with the motor toboggans.

## Fourth King George Island Marathon

Over 110 runners from 16 nations took part in the fourth marathon and half-marathons run on King George Island on 2 March. The races were organised by Marathon Tours (US), and took place in strong winds, snow showers and freezing temperatures.

Both races were run on the Fildes Peninsula, the south-western extremity of the island, with Russia's Bellingshausen station marking the start and finish of the race. The route crossed a variety of surfaces that included rocks, mud, snow and ice.

From Bellingshausen the course



*Marathon runners on the Collins Glacier, King George Island. (Photo: Marathon Tours)*

*Continued on Page 174*

*Fourth King George Island Marathon  
Continued from Page 173*

followed the road to and through Artigas the Uruguayan station, then 400 m along a stony beach before ascending the Collins Glacier for just over a kilometre. At this point, some 5.6 km from the start, the runners turned around and took the same route down the glacier and back to Bellingshausen to reach the 11.2 km point. They then continued on through Chile's Presidentie Eduardo Frei station and along the road to China's Great Wall Station (the 16 km mark), then retraced that leg back to Bellingshausen which marked the finishing point for the half marathon. Those running the full marathon repeated the route a second time covering a total of 42 km.

Eighty four runners completed the full marathon. The fastest time was 4 hours, 9 minutes and 31 seconds and the slowest time 8 hours, 1 minute and 51 seconds. Only one entrant failed to complete the 42-km race due to a pre-existing leg injury. Full marathoners have to pass the halfway mark in three

hours ten minutes to remain in the race. However, 27 of the 84 finishers took longer than this, but Marathon Tours' President, Thom Gilligan, said that the finishing time for the slower runners was extended as "the temperature was mild and personnel at Bellingshausen were very cooperative".

Thirty runners began the half marathon, and all but one finished. Times ranged from 1 hour, 56 minutes and 35 seconds to just one second under five hours. The winning times for both races were slow due to the high winds and a slightly longer course than used in the past.

Those who took part were from: Australia (2 in the full marathon/ 2 in the half-marathon); Austria (1/0); Canada (2/0); Chile (0/4); China (1/0); Germany (1/0); Japan (1/1); Mexico (1/2); The Netherlands (1/0); New Zealand (3/1); Russia (3/3); South Africa (1/0); the United Kingdom (9/1); United States (58/11); Uruguay

(0/3); and Venezuela (0/1). The majority of the runners were men, although sixteen women ran the full marathon and eight the half marathon.

Apart from Marathon Tours' commercial clients who travelled to King George Island on the tour ship *Akademic Ioffe* run by Peregrine Tours, (Australia), four Chilean, three Russian and four Uruguayan national programme personnel ran in the half marathon, while two Russians from Bellingshausen ran in the full marathon. A Chinese national programme member is reported to have run between Bellingshausen to Great Wall station "just for fun".

Gilligan said that the marathons had not conflicted with activities at Bellingshausen and that vehicles from some of the stations had "roved around to cheer on the runners". He said that many national program personnel in the area now "seem to look forward to this annual diversion".

## Traverses to Use Alternative Power Sources

Separate Japanese and Australian parties intend to use environmentally friendly power sources to drive their vehicles on Antarctic traverses in 2002-2003.

Japan's 'Challenge Antarctica 21' is proposing to use fuel cell powered motor toboggans for a seven-week, 2,700 km crossing of Antarctica via the South Pole. The expedition is developing fuel cell powered snowmobiles in cooperation with Japanese manufacturers. Up to six people will take part and the toboggans will be driven at between 5 and 20 km per hour for about 10 hours per day.

Fuel cells, unlike batteries, do not require charging, and generate electricity by using hydrogen combined with oxygen. The expedition hopes to demonstrate the usefulness of the new energy source in the hope that it will "encourage industries to develop environmentally friendly vehicles".

Fuel cells are not new to technology, as they have been used in spacecraft for over thirty years. Earth application has been more limited, although research is under way in the United States, Europe and elsewhere to use them in the automotive industry and

even in aircraft.

The Australian Solar-powered Expedition is being organised by Dick Smith and will traverse from the Weddell Sea to the South Pole. The main power source for its vehicles will be the "solar dog", powered by the sun. Prototypes are currently under trial in Australia. Late last year Dick Smith visited Belarus to inspect the factory that made the 'Snow Bugs' used by the Millennium Expedition in January 2000, and there is some speculation that these may be the type of vehicles used for the traverse.

# Membership

The New Zealand Antarctic Society Inc was formed in 1933. It comprises New Zealanders and overseas friends, many of whom have been to the Antarctic and all of whom are interested in some phase of Antarctic exploration, history, development or research.



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Members also receive a regular newsletter called *Polar Whispers*, an annual *Polar Log*, which records the decisions made by the Society's Council at its AGM, catalogues of the Society's mail-order 'Polar Bookshop' and occasional brochures from the Society's 'Sales Stall'. Occasional meetings are held by the Auckland, Wellington, Canterbury and Otago branches.

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