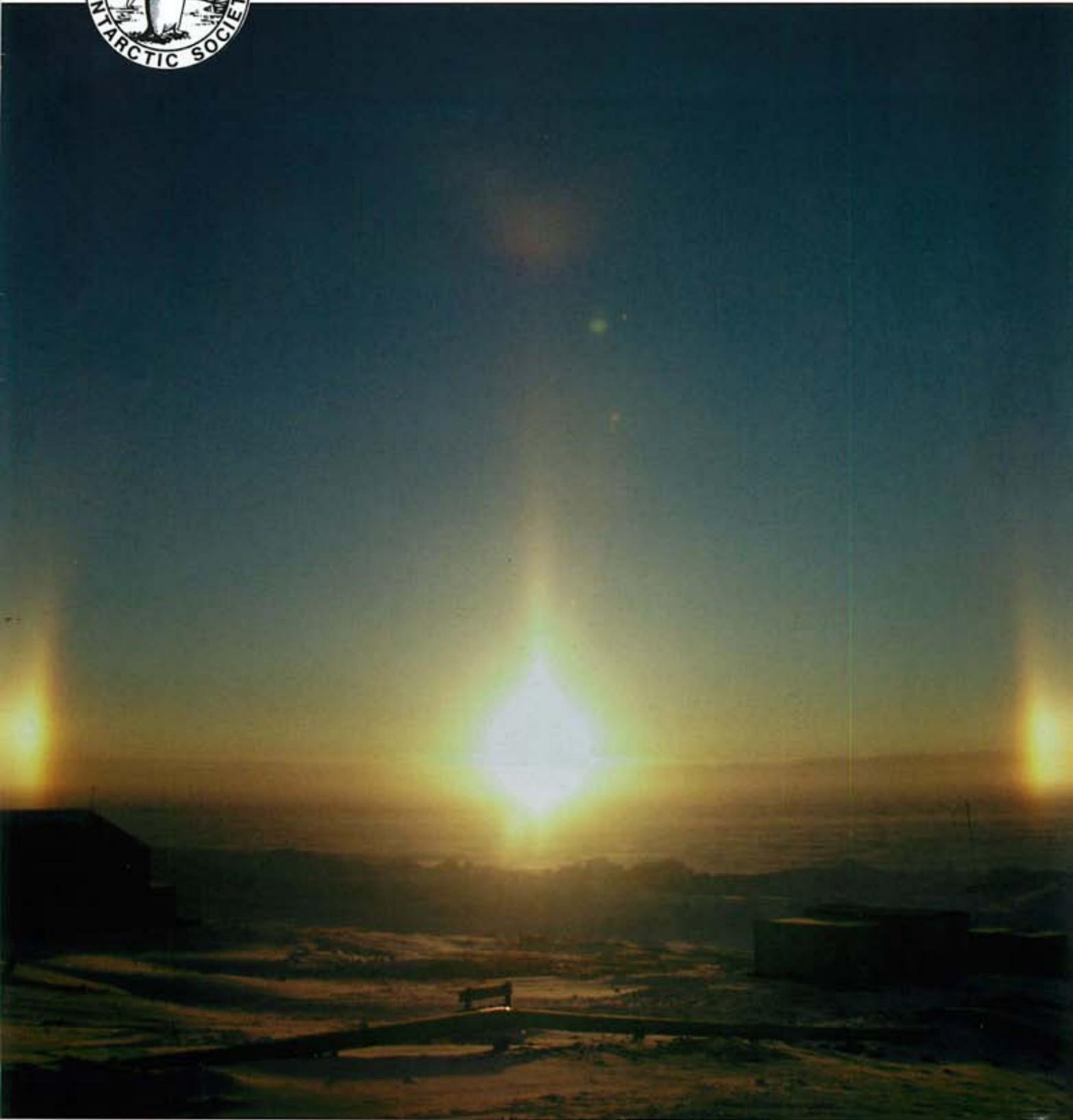


ANTARCTIC



The Journal of the New Zealand Antarctic Society Vol 22, No. 2, 2004



● Protection for
Dry Valleys

● Mrs Chippy
Unveiled

● McNeish - Hero
or Villain?

● Antarctic
Sea Ice



An aerial view of tabular icebergs calving from the side of Mertz Glacier on the George V Land Coast. (Photo by Colin Monteath).

COVER PICTURE



Cover photograph: Sundog over Scott Base. (Photo by Anthony Powell.)

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Protection for the Dry Valleys

A vast tract of ice-free land has become the first formally designated Antarctic Specially Managed Area (ASMA), thanks to collaborative efforts by New Zealand and the United States.

The Managed Area status was approved by the Antarctic Treaty Consultative Meeting (ATCM) in Cape Town in June.

Lou Sanson, Chief Executive of Antarctica New Zealand, said: "Achieving this special status for the Dry Valleys is the result of a very successful international collaboration".

The 15,000 km² area centres on the McMurdo Dry Valleys. The valleys are the largest expanse of ice-free ground in Antarctica. Just 0.3% of the Antarctic continent is ice-free. A quarter of that occurs in the McMurdo Dry Valleys.

They contain cold desert soils millions of years old, unusual biological communities, special geological features and minerals and spectacular scenery.

Karl Erb, Head of Polar Programmes for the United States National Science Foundation, called the designation of the ASMA "a major achievement in the protection of Antarctica for future generations."

Antarctica New Zealand and the United States National Science Foundation led the Dry Valleys ASMA proposal, which includes a comprehensive Management Plan. The aim of the plan is to manage human activities in the valleys for the protection of scientific, wilderness, ecological, educational, and aesthetic values. The plan includes requirements for all visitors to the valleys, as well specific guidelines for science and codes of conduct for Facilities and Tourism Zones and Special Features. A Management Group will be established by the national programmes active in the Area to coordinate implementation of the plan. Antarctic Specially Managed Areas are one of the environmental management tools available under the Protocol on Environmental Protection to the Antarctic Treaty, signed in 1991.

The provisions for Antarctic Specially Managed Areas came into force internationally in May 2002.

ASMA Management Plans are legally binding on New Zealanders and other Antarctic Treaty Parties have their own state legislation implementing the Proto-



col's provisions. One Managed Area, for Admiralty Bay, was proposed prior to 2002 and is expected to be resubmitted at a future ATCM for consideration for formal adoption. A second Antarctic Specially Managed Area proposal by Australia, to manage the historic sites associated with Sir Douglas Mawson at Cape Denison, was also adopted at the Cape Town ATCM.

ICY SLIPS

On page 7 of Antarctic Volume 22, No 1, 2004, in the *Shackleton's First Sledge Journey* article, the map in the top right was a tracing from the USGS map of Ross Island and Vicinity showing Shackleton's route to Mt. Heine & approximate position of their camp.

It was not a freehand sketch courtesy of the SPRI.



Above: Mrs Chippy, watched by Baden Norris of Canterbury Museum. The bronze likeness of the tabby cat is on Harry McNeish's grave at Karori Cemetery. Photo: Andrew Gorrie. Courtesy: Dominion Post.

Mrs Chippy Statue Unveiled

About 100 people gathered to watch the unveiling of a life-size bronze statue of Mrs. Chippy, McNeish's beloved cat, on his grave at Wellington's Karori Cemetery on 28 June.

McNeish was of course the carpenter on Shackleton's ship *Endurance*. His cat, known as Mrs Chippy, but actually a male, became the ship's mascot. The Wellington Branch of the New Zealand Antarctic Society has been instrumental in raising the funds required to commission the bronze sculpture of the cat.

The NZ\$6000 statue of McNeish's cat by sculptor Chris Elliot was commissioned by the New Zealand Antarctic Society.

"We can't go back and give him (McNeish) a Polar Medal, but this is one way of recognising what he contributed to the expedition," Mariska Wouters, chairwoman of the Wellington branch, said. At the unveiling,

Baden Norris, Canterbury Museum's emeritus curator of Antarctic history, recalled meeting McNeish in Wellington shortly before he died. "The only thing I ever remember him saying was that Shackleton had shot his cat." Baden also said McNeish's contribution to the expedition had been "hugely underwritten" over the years and he had played a pivotal part in the survival of the crew. McNeish was never awarded the Polar Medal.

However, his grandson Tom McNeish said the statue of the cat was a nice tribute. "I think the cat was more important to him than the Polar Medal." McNeish arrived in New Zealand in 1925 and worked on the Wellington waterfront. He died in 1930, and was given a naval funeral. However, his grave remained unmarked until the Antarctic Society erected a headstone in 1959.

Antarctic Treaty Meeting Report

The XXVII Antarctic Treaty Consultative Meeting (ATCM) took place in Cape Town, South Africa, from 24 May to 4 June 2004 at the Cape Town International Convention Centre.

Issues on the Agenda were wide-ranging and included Appointment of the Antarctic Treaty Executive Secretary, the Question of Liability, Safety and Operations in Antarctica, Relevance of Developments in the Arctic and in the Antarctic and the International Polar Year 2007/2008, Tourism and Non-Governmental Activities in the Antarctic Treaty Area and Science Issues.

After almost 20 years of substantive discussions regarding the establishment of an Antarctic Treaty Secretariat, there was agreement at the Meeting to appoint Mr Johannes Huber as the inaugural Executive Secretary based in Buenos Aires, Argentina.

Consultative Meetings afford rep-

resentatives of the Antarctic Treaty States an opportunity to exchange information and to consult on matters of common interest related to the Antarctic.

They formulate, consider and recommend to their Governments measures to promote the principles and aims of the Antarctic Treaty.

The Meetings are conducted in all four official languages of the Treaty, which are, English, French, Spanish and Russian.

The rules of procedure provide the order of the discussions.

The reports of the meetings contain a summary of the discussions and the text of any recommendation, measure, resolution or decision agreed by the Parties.

The complete Final Report from the meeting is not yet available, but when available it can be viewed at www.ats.org.ar/27atcm.

Iceberg revealed

The first known oil painting of Antarctica is to go on display. The iceberg picture hidden for more than two centuries under a tropical scene painted on Captain Cook's second southern voyage is one of 80 works on show by English artist William Hodges.

The iceberg was only revealed using x-rays, a photograph of the image will be displayed along side his tropical painting. Hodges, son of a London blacksmith, was 28 when he joined Cook's second expedition in 1772, he was a landscape artist.

The painting is currently on display as part of the exhibition entitled "William Hodges 1744-1797: the Art of Exploration" at London's National Maritime Museum and runs from 6 July - 21 November.

More information can be obtained at www.nmm.ac.uk.



Left: Snow covered desk inside the Scott Base Field Store. Above: Hanger at Scott Base full of snow, blown in during storm. Below: Overturned container. All Photos: Antarctica New Zealand Collection.

Biggest Storm in Ten Years hits Scott Base

One of the worse storms in living memory hit the Ross Sea Region of Antarctica in May 2004, causing damage to buildings, and equipment.

No one was injured but the 15-hour gale blew off a hanger door, blew in windows on vehicles and overturned two shipping containers at Antarctica New Zealand's Scott Base.

The winds peaked at 108 knots at times and parts of the Base looked "like a hurricane had gone through it."

Antarctica New Zealand Chief Executive Lou Sanson described the storm saying, there was a sustained force of 80-90 knots for at least 15 hours.

"Scott Base took quite a battering. The winter-over staff are currently carrying out a detailed damage assessment. Once that's complete, then the repair work can begin."

A number of containers were blown over.

The hanger door has blown in and iron removed from the roof.

A number of windows were bro-

ken and several roofing sheets were left flapping loose in the breeze with at least one lying on the ground. In addition a number of vehicles were damaged by the unusually strong southerly storm.

Base staff faced the task of considerable work in clearing all the summer field supplies and equipment of accumulated snow in -20 degrees C and 24 hour darkness.



Ice on my Palette

The Air Force Museum in Christchurch, New Zealand, has recently opened an exhibition which features the work of several artists, including paintings by the Royal NZ Air Force's official artist, Maurice Conly.

It is almost 50 years since the Royal New Zealand Air Force undertook its first venture on the Antarctic continent.

Two light aircraft flew in support of the Trans-Antarctic Expedition of 1956-1957 beginning an involvement which continues to the present day. The exhibition also features works by painters Austen Deans and Raewyn Atkinson.

Chris Cree-Brown's music accompanies the exhibition where there is also a display of modern and colourful clothing designed by Fieke Neuman entitled "Wearable Ice Art". "The Ice on my Palette Exhibit" runs until October and more information can be obtained at www.airforcemuseum.co.nz.

Honours

Gillian Wratt, former CEO of Antarctica New Zealand, was made a Member of the NZ Order of Merit in recognition of services to Antarctica.

She was proud to receive the award saying it was an acknowledgement of the work of the entire Antarctica New Zealand team. Gill is currently working for the New Zealand Ministry for the Environment in Wellington, New Zealand.

Arnold Heine was awarded an officer of the NZ Order of Merit, for contributing to outdoor recreation.

He was involved in setting up Scott Base and has been on 18 Antarctic expeditions.

Mawson Station Celebrations

Twenty staff at the Australian Antarctic Division's Mawson Station celebrated the Station's 50th anniversary in style on 13 February, 2004.

The day began with a congratulatory early morning conference call from the Australian Governor General, Major General Michael Jeffrey, in Hobart. After a "slap up" brunch of eggs benedict, the Inaugural Mawson 2004 Carpet Bowls Tournament was held all afternoon in the Red Shed. The special day was capped with a formal sit-down dinner in an "intimate restaurant" - *Selwyn's* - laid for 19 in a curtained off area in the centre of the main mess.

Here, amidst candle-light and soft music, chef Selwyn Saunders produced a mammoth six-course dinner, ably delivered to the table by "waiters" Jason Allen and Paul Kristensen, who normally perform as base plumbers. The 50th anniversary of the station was also marked in Hobart during June as part of Tasmania's Midwinter festivities. An exhibition, prepared by the Australian Antarctic Division, was mounted at the Mawson Pavilion on the Hobart Waterfront.

It was designed to celebrate all that is "Mawson" - the man, the expeditioners, the science and the station.



Pictured top: The Inaugural Mawson 2004 Carpet Bowls Tournament in full swing. **Centre:** Selwyn Saunders, (right) with waiters Jason Allen and Paul Kristensen. **Bottom:** All spruced up for the special 50th anniversary dinner. **L-R:** Joan Russell (Leader), Christine Spry, Don Frankcombe and Dale Main. **All Photos:** R. Hegarty.

Crean Expedition

Anthony Crean, relative of Antarctic Explorer Tom Crean, is planning his own Antarctic expedition for the upcoming 2004/05 season.

The aim of the proposed Crean Expedition is to ski to the South Pole from the point where, on the 1912 Terra Nova Expedition, Captain Robert Falcon Scott's last supporting party, which included Lieutenant

Evans, William Lashly and Tom Crean, turned back.

The objectives of the 2004 expedition are to draw attention to the life and achievements of Tom Crean and to launch the Tom Crean Foundation, established to provide outdoor education opportunities for Irish and British young people.

ANTARCTIC Exhibition Lectures

Te Papa, the National Museum of New Zealand, continues its exhibition of Antarctic Heroes and is also presenting a series of lectures by people who have worked in or been inspired by the Antarctic. The series began in July with a presentation by 1998 Antarctic Arts Fellow Margaret Elliot who has visited the Antarctic three times. The remaining lectures are as follows:

5 August

Penguin Adventures

Find out about Emperor and Adelie penguins in this illustrated lecture from Dr Murray Potter, Senior Lecturer in Ecology at Massey University.

12 August

Mapping Antarctica: the Old versus the New

Surveyors Peter Otway and Graeme Blick compare their methods of surveying and mapping in Antarctica. In the 1960s Peter retraced Scott and Shackleton's footsteps by dog sled. This contrasts with the modern surveying methods Graeme uses today, such as GPS and helicopters.

19 August

Ross Sea Discoveries

Dr Malcolm Clark's lecture is about the Ross Sea ecosystem and a new species found on a recent research expedition.

2 September

Mrs Scott's Antarctic

Antarctic Arts Fellow 2000, choreographer Bronwyn Judge, presents a video of her theatre work Kathleen's Antarctic and talks about her research into the life of Kathleen Scott, wife of Robert Falcon Scott.

For more information see
www.tepapa.govt.nz

HARRY MCNEISH - Unsung Antarctic Hero or Boorish Villain?

By John Thomson

Reading Andrew Leachman's article on Shackleton's carpenter, Harry McNeish, in the 'Antarctic' (Vol 21, No 3 & 4) brought a great deal of pleasure and excitement. What has he uncovered, I wondered, that has not been published and is worthy of publication now?

Quite a lot actually.

Andrew has done good research and I was fascinated with the factual detail. He presented a portrait of an interesting character, a man alone in many respects, and certainly one who knew his own mind and was prepared to voice and defend his conclusions: a socialist in days when being a socialist (particularly one who expressed his views openly) wasn't often the most popular person around.

In his article, and later in more detail for his talk (March 22) to the Wellington Branch of the society, Andrew emphasised the harsh background for a young man learning the shipwright trade, an experience that doubtless shaped McNeish.

What came from that hard, years-long experience, and in the time at sea that followed, was a superb ship's carpenter, a man worthy of selection by Sir Ernest Shackleton for his 1914-17 Imperial Trans-Antarctic Expedition: surely an Everest for ship carpenters.

And there is no doubt that Harry McNeish displayed his skills in a manner that assisted Shackleton greatly in performing the deeds to which his name is credited. Such were McNeish's achievements it is clear that his was one of the guiding hands that helped 'The Boss' to a successful Weddell Sea party rescue.

Thus he should never have been denied the Polar Medal. In this, Andrew and I are at one. In fact — and we have never discussed this — I suspect we would also agree that any man who survived that incredible journey deserved to be recog-

(Editor's comment: John Thomson submitted this piece in response to Andrew Leachman's article and lecture regarding McNeish. John states in his letter to me that he hoped that I would print it as an article and not as a letter to the editor. I sent this contribution out for review, asking my reviewer how best to proceed. The response was "...he is responding to something written earlier — we like that, it means the Journal is becoming a forum for discussion..." With this comment in mind I am convinced that the article should be published here and hope that we as a Society continue to discuss and debate significant Antarctic issues—both past and present. I thank both John and Andrew for their contributions to our discussions.)

nised with award of the medal...or none of them.

That means a medal each for McNeish, John Vincent, Ernest Holness and William Stephenson, the four men who were denied the honour on Shackleton's recommendation.

About this point, Andrew and I start to part company.

Where we differ is in Andrew's easy acceptance of a glib and unsubstantiated comment by Dr Alexander Macklin, suggesting that Captain Frank Worsley "may have influenced Shackleton" during that period when Shackleton and Worsley travelled together from South America to New Zealand in late 1916, resulting in McNeish being denied the medal.

Macklin's comment was no more than a stray thought, and I believe he was well off the mark.

It suggests to me that the doctor could not bring himself to believe that Shackleton would be so mean-spirited as to punish McNeish in this way, even though he signalled his intention to do so because of the carpenter's moment of madness on the ice in December 1915.

This was the occasion when McNeish refused Worsley's (well, Shackleton's through Worsley) command to continue trying to haul the three small boats across rough ice. Neither Worsley nor McNeish liked the bashing the boats were receiving. The difference between them is that Worsley was obeying his command-

er's orders, and McNeish decided to challenge them in a rude and most public manner.

The threat of mutiny was so great that Shackleton could see disintegration of the chain of command and eventual anarchy. McNeish, in many ways more at home with the lower deck men who needed to be occupied now that the *Endurance* was gone, was probably seen as a quasi spokesman for the eight seamen and firemen — their 'representative', as it were, in the wardroom.

And therein lies, I believe, the cause of the crisis: not some vague attribution by the youthful second doctor years after the event, but the discipline Shackleton needed through his wardroom staff. McNeish was a member of that staff.

I believe Shackleton had every right to expect obedience from the wardroom. Without it no expedition attempting such a task as that expedition was on would have any hope of achievement or indeed survival.

A wardroom individual directed to achieve Shackleton's ends might well disagree with the method outlined, and there are examples of this from that very expedition, but that situation would be debated in private, and the outcome — be it 'The Boss's' original order or some compromise — should be followed to the letter and without further question.

McNeish either did not understand this regimen or he deliberately allowed his emotions to take charge

in the matter of hauling the lifeboats over potentially damaging ice. Either way, the owner's right to expect loyalty and obedience from his ward-room staff was challenged.

The fact that Shackleton, a few days later, abandoned the man-hauling of the boats is irrelevant: his decision then pleased a lot of people, Worsley and McNeish among them. He did so because it was the correct thing to do in the fickle weather conditions, not because of McNeish's outcry.

What Shackleton also did was to write in his diary: 'Everyone working well except the carpenter. I shall never forget him in this time of strain and stress.'

And that, I suggest, is what he did at an appropriate time post-rescue, by denying McNeish the medal.

Andrew has made much of McNeish's wonderful work for the expedition, and nobody who has read deeply of that ordeal would dispute his excellence as a carpenter.

But did McNeish do anything that he was not hired to do? I suggest not. The fact that he worked in conditions that were, to say the least, extreme, is not the point: he was chosen as Shackleton's carpenter because he

was deemed the best available, and he probably was. And that makes him a very good artisan. Had McNeish stuck to what he was hired to do he doubtless would have received the medal, but he did not: he challenged his employer's orders, lost his respect and ultimately paid for it.

Consider a similar craftsman, the cook Charles Green. His task of keeping hungry and critical men at least a little satisfied, in conditions that were to him as strange (perhaps more so) than those faced by McNeish, did not drive him to near-mutiny.

Green stuck to his work and earned the respect of everyone in the party. He did what he was paid to do, and on those occasions when he was strained to continue, Shackleton (as he did for McNeish) made sure he had support.

Macklin's petty remark about Worsley I believe insults both Worsley and Shackleton. 'The Boss' was not a man to back off once he had decided on a course and he needed no cajoling. He clearly planned to punish McNeish and there is a strong case for that very action.

As for Worsley, well, as I told Andrew at the Wellington meeting he has managed to do something I could

not find anyone — including some who knew Worsley personally — could honestly state, and that is to find an element of mean-spiritedness in the man.

It would simply have been well out of character for Worsley to continue a campaign against McNeish on a matter that fundamentally the two experienced seafarers agreed on.

Andrew describes McNeish colourfully in some depth and states, "Had Harry McNeish possessed the diplomatic and verbal skills to match his craftsmanship he would have received the silver Polar Medal.'

I doubt it: McNeish's fate vis-a-vis the Polar Medal was established the day he challenged Shackleton's order on the ice. What Shackleton threatened, Shackleton delivered.

How much better it would have been for Shackleton to have overlooked McNeish's infraction (which after all came to nothing, and was simply ignored in the official account, 'South') and recommended all members of his *Endurance* party receive the blasted medal...or none of them, on the grounds that nobody in that party at that time actually set foot on the continent of Antarctica.

NEWS

Antarctic Society Receives Lotteries Funding Grant

The New Zealand Antarctic Society has been awarded \$NZ11,000 to continue a project which records the oral histories of past Antarctic explorers.

The project entitled: "Preserving the New Zealand Heritage of Antarctic Exploration through Oral Interviews: Completion of interviews associated with the 1956-58 TAE and IGY" will continue to record and archive the stories of the New Zealand members of the Commonwealth Trans-Antarctic Expedition (TAE) and the participants in International Geophysical Year (IGY) research.

These members include Sir Edmund Hillary and George Lowe.

The award will also cover the collection of stories from some of the

wives of the members of the expedition, who stayed behind, looking after the home and the children on their own, delivering parcels and mail to the airport so that they could keep in touch with their husbands on the ice.

This project follows on from the interview and archive work already completed by the Antarctic Society in 1996-1997.

The goal will be to talk with, record, preserve and make available audio tapes of the members that have yet to be recorded.

Many people are aware that New Zealand undertakes research in Antarctica today, but few know of its earlier vital contribution during the TAE and IGY.

The oral histories will preserve this

information and provide a historical review of the period from a New Zealand perspective.

The histories are being collected by oral historian, Jacqui Foley, who will record and transcribe the interviews over the next several months.

This valuable collection of histories and stories may be used in a number of ways in the future but is especially important to preserve the words and thoughts of the historic TAE and IGY members.

The New Zealand Antarctic Society is grateful to the New Zealand Lotteries Grant Board for their generous support for this project.

Mid-Winter Celebrations

The middle of the Antarctic winter rolled around on 20 June, and was celebrated with a fantastic dinner for the 10 winter-over staff at New Zealand's Scott Base.

The crew decided to clear the bar area, and a table was set that could have graced any fine restaurant on the globe. This always offers the chance for everyone to dress up to the nines in their own individual styles. Never has the food there been anything less than fantastic, but this was a chance for Donna, the chef, to shine and the result was to die for! The entrée was gnocchi bound in home made tomato and basil sauce with shaved parmesan. The main course was seafood selection with pan seared blue cod.

All resting on garlic potatoes with sautéed garlic scallops, king prawns, and char grilled homegrown courgettes with a drizzle of roasted red pepper béarnaise sauce. This was accompanied by a side of honey glazed carrot and garlic asparagus. The grand finale was a dessert of hand made caramel boxes brimming with a caramel hazelnut mousse and decorated with hand painted chocolate butterflies. The whole affair was accompanied by fine wine and beer that had been stashed away since February. It was a very enjoyable evening and truly worthwhile of the event that it signifies.

The next day was of a slightly different tone, though no less enjoyed. The middle of the winter cannot be completely saluted, it seems, without a swim!! A hole was



The crew at Scott Base.

prepared during the previous week and on a relatively balmy (-30 °C) Sunday afternoon the neighbours came over for a dip.

"The positive lift in morale brought on by mid-winter is apparent everywhere, as everyone now works toward the end of their stay and we all start to look north, for the next big event....the return of the sun", said Dan Mathers, this year's Scott Base Winter-over Manager.

Research Scholarships

Antarctica New Zealand recently awarded four post-graduate research scholarships for study in the upcoming 2004/2005 summer season. The scholarships are for \$NZ10,000 each plus logistical support.

Two scholarships are generously sponsored by New Zealand Post and Kelly Tarlton's Antarctic Encounter and Underwater World. Antarctica New Zealand funds the other two scholarships. The first is named after Sir Robin Irvine in commemoration to his contribution to the Ross Dependency Research Committee and the establishment of Antarctica New Zealand in 1996. The second is the inaugural Latitudinal Gradient Project (LGP) scholarship aimed specifically at studies contributing to the goals of LGP. **This Year's Scholars are:**

Andrew Clifford of University of Otago, who has been awarded the Sir Robin Irvine Scholarship for a Masters project aimed at investigating the influence of a remnant volcanic crater identified under the Southern McMurdo Ice Shelf with the use of ground penetrating radar.

Andrew Martin of Victoria University of Wellington, who has been awarded the New Zealand Post Scholarship for his Doctoral work on the role of bacteria on Antarctic sea ice.

Esme Robinson of the University of Canterbury, who is the recipient of the Kelly Tarlton's Antarctic Encounter and Underwater World Scholarship for her Masters work on the adaptability of Antarctic fish to changes in water temperature.

Erica Hofstee of Waikato University, who has been awarded the first Latitudinal Gradient Project Scholarship for her Masters research at the Cape Hallett LGP site on the soils and hydrology of the area.



The mid-winter swimming hole being prepared.

APPOINTMENT

Melanie Lindroos took over the position of Human Resources Manager for Antarctica New Zealand on 19 July. Melanie has over 6 years experience in the Human Resources field, accompanied by degrees in Psychology, Education and HR and a keen interest in sport.



Mawson Station - Australia



The Main Power House at Mawson Station. Photo: Australian Antarctic Division.

Australia has been operating Australian National Antarctic Research Expeditions (ANARE) since the 1947-48 season and is an original signatory to the Antarctic Treaty.

Today it has three permanent stations on the continent – Mawson, Davis and Casey, and a fourth on sub-Antarctic Macquarie Island.

Mawson Station is situated at Horseshoe Harbour on the coast of MacRobertson Land west of the Amery Ice Shelf.

It was officially opened 13 February 1954, and was named after one of Australia's best known Antarctic explorers, Sir Douglas Mawson, who had been a persistent lobbyist for an Australian research presence in Antarctica.

The station's site was selected from aerial photographs by Dr Phillip Law, who led the initial 1953-54 party. Men and building materials were delivered by the *Kista Dan*, and the story of the base's establishment is admirably told by Phillip Law in his book *Antarctic Odyssey* (Heinemann 1983).

Ten men over-wintered at the new base, which lay five metres above sea level on an ice-free rock surface.

By the end of 1954 the Living Quarters, the Works Hut, the Engine Shed, two Store Huts and a Carpenter's Shop had been erected. An aircraft hangar was added in 1956, the first to be built in Antarctica.

By 1966 the number of buildings had increased to more than fifty, but many have been replaced by more modern buildings, that today total 35. Mawson has the distinction of being the oldest established station south of the Antarctic Circle, and one of the longest to be continuously operating in Antarctica. The base can accommodate up to 60 individuals in the summer, and 20 over an average winter. It is completely self-contained for medical emergencies, with a doctor and full operating and X-ray facilities. The nearest station, Davis, is 636 km away.

The weather is not particularly kind. The maximum recorded temperature is 10°C, the minimum -36°C, and high winds are common. Ice breaks out usually in late January and reforms early April. Power is generated by four Caterpillar 3306, turbo-charged diesel generator sets in the



The Enercon-E30 wind turbine at Mawson. Photo: J. Edenberg



A view of Mawson Station and Horseshoe Harbour. Photo: Australian Antarctic Division.



A view of Mawson Station from the sea with Mt Henderson in the distance. Photo: Wayne Papps, Australian Antarctic Division.

Main Power House, each of 125 kW capacity, and by two wind turbines. The total power generation capacity is 850 kW. About 520,000 litres of low wax light diesel oil are used annually.

The waste heat generated by the engine cooling and exhaust systems is captured and used to heat the station. There is also an emergency power house as a backup in case of major power failure.

The two high-tech wind generators were erected two years ago. The Enercon-E30 turbines are mounted on 30 m high steel towers.

The three blades of each turbine are 15 m in length, made from a glass-epoxy composite material. The housing (nacelle) at the top of the tower includes the generator, yaw mechanism, and other electrical and control equipment.

The total mass of the nacelle and rotor is 17.9 tonnes, including the blades, each of which weighs 700 kg. The wind turbines are designed to withstand wind speeds of up to 324 km/h. Just as well, considering that the maximum wind speed recorded during the 2002 winter was 248 km/h! The wind turbines will generate power in wind speeds up to 122 km/h, but beyond that they will automatically shut down, moving their blades to the 'vane' position.

Normally, this particular model of turbine is built with a taller tower, but this was kept short for the Antarctic conditions.

The power control system in the Main Power House is completely computerised. It controls and balances diesel and wind generation in accordance with station load demands and system stability.

Continued to Page 39

The Makings of an Antarctic Novel

By Laurence Fearnley, Antarctica New Zealand Arts Fellow 2003 / 2004

For as long as I can remember I have wanted to go to the Antarctic. I carry memories of the sound of aeroplane engines warming in pre-dawn Christchurch – flights, my father told me, that were destined for 'The Ice'.

I have a card sent to me for my fifteenth birthday. It bears a postmark from Scott Base, a Ross Dependency stamp and I can remember carrying it with me for many months, placing it on my school desk to remind me of life beyond Avonside Girls High and the suburb of Shirley.

In 1997 I was fortunate to be accepted into Bill Manhire's Creative Writing course at Victoria University. Because the course was a MA, I was to complete a research topic – in my case a study of Antarctic writing.

Throughout the year I read works of non fiction, diaries, novels, plays and poems by authors as diverse as Nabokov, Keneally and Orsman and I was often struck by the fact that almost all of the long fiction I encountered was either of the action/thriller type or a re-telling of Scott's journey to the Pole.

The moment a dream becomes reality is always, I suppose, bittersweet. Reality is finite. I spent two weeks in the Antarctic and it is unlikely that I will ever be able to return.

This fact alone sets my experience apart from that of many scientists. Scientists make return trips to the Ice; spend years developing research projects, gathering material and processing data.

When they arrive in the Antarctic they know where they will be based, what they will research. They have a frame of reference, something to focus on.

It seems to me that artists visiting the Antarctic don't share that certainty, that security. I sometimes – frequently – felt dumb: the slowest person in the class, the one who never knows where to begin.

The moment you arrive in the Antarctic and disembark from the plane is disconcerting. The voices of American Air Force personnel urge you to hurry: there's no time to take in the view, don't take photos, don't stand around chatting. Get off the plane and onto the bus as quickly as possible.

For as far as the eye can see everything is white. It's as if the pilot has somehow managed to touch down on cloud – that limitless expanse of cloud you fly over at thirty thousand feet.

The sense of haste and disorientation remains with you. Certainly in my case, I felt the need to grab at every opportunity, take in as much as possible so that, by the end of two weeks, I would have accumulated enough material to write a novel.

Most people in the Antarctic, it appeared, had an idea for a 'good' novel. And, as described to me, every single one of those novels had a murder victim – a corpse thrown into a crevasse or crack in the sea ice. I was often asked if I had found inspiration, if I had written anything since

my arrival – if I had written anything, ever? I am conscious of the fact that the plot of my own novel would probably be a disappointment to many of the people I spoke with, should they read it.

Before travelling to the Antarctic I had a very clear idea of what it was I wanted to write. And it wouldn't have worked.

The novel I'm writing now is far more ambitious, more complex and more demanding than the one I had planned. Three inter-connecting stories: the first a character confined to Scott Base. She hates it; hates the lack of privacy, the lack of space, the absence of warmth, 'nature', trees, beaches and so on.

The second – an older scientist at Cape Royds. He's studying the skua population. This is his ninth or tenth season on the Ice, his last. The third section develops a short story I wrote in 1997. It tells of a composer who travels to the Antarctic and encounters silence. The stories inter-connect and achieving that is tricky.

While I was in the Antarctic I was conscious, at all times, of a feeling of longing. Being sensitive to the fact that I would soon be leaving often made me experience the present as the past. There was a constant sense of looking back, of remembering.

I have never felt more happy and content than I did during those two weeks in the Antarctic. Every experience was new and, because of that, I felt alive, excited. And now, when I sit down to write, I place myself in a world I am unlikely to see again – in reality.



Photo: Gateway Antarctica GCAS photo collection.

A Stormy Place

The Australian base at the northern end of Macquarie Island suffered a major storm on 31 May 2004, exactly one year after an even more violent one in 2003 that destroyed one building and damaged several others.

The Met Bureau in Hobart, Tasmania, warned the base staff to expect winds gusting up to 100 km and a storm surge 11 metres above normal sea level. During the day the wind steadily increased and base staff prepared for the inevitable. No rain or snow fell during the storm, but sand was blowing up to eye level in the howling wind. The maximum wind gust recorded was 144 km/hr (the previous year it had been 170 km/hr). At 11 pm waves began to wash over the isthmus that connects the accommodation and mess to the outer science buildings and mechanical workshops, crashing over the central light structure along the road, that miraculously remained lit up. Base staff went to bed that night wondering if they would be confronted by two islands



Left: A winter view of Macquarie Base looking south along the isthmus, with Buckles Bay on the left. At the height of the storm waves were breaking right over the isthmus. Photo: Scott Tremethick, Australian Antarctic Division.



Waves building up as the storm began to increase during the day. Photo: J. Sheridan.

with a seaway between them after the storm had passed. But despite some minor damage, and extensive erosion to the beach on the east side of the isthmus, that exposed water pipes and cables, the base survived in tact.

BAS Searches for New Base Design

The British Antarctic Survey (BAS) recently called for Expression of Interests from multi-disciplinary design teams for a concept design competition for new scientific laboratories and living accommodation in Antarctica.

The new buildings would be a replacement for the Halley site on the Brunt Ice Shelf which has been occupied by the British for almost 50 years. Four earlier bases on the site had to be abandoned because they were crushed and buried by snow, then forced into the sea by the ice. The first Halley was established in the International Geophysical Year (IGY) and named after the astronomer Edmond Halley.

The current research station, Halley V, opened in 1992, is occupied permanently by up to 60 people studying climate change. It is jacked up on steel stilts each year to keep it above the snow, this is the first Halley base that has not been crushed. However, BAS is aware of an increasing risk that the 150 m thick ice shelf it sits on could break off within the next decade. It is therefore necessary to design and build a replacement station, Halley VI, for operation by the 2008/09 season.

The winning design will be announced in September 2005. See www.antarctica.ac.uk for details.

Antarctic Mid-Winter Events

The Antarctic Society was pleased to offer the first showing of "Endurance" in New Zealand at the Soundings Theatre, Te Papa, Wellington. The film recounts one of history's greatest tales of survival - Sir Ernest Shackleton's 1914 expedition to Antarctica.

It included historic footage from Hurley, interviews with descendants and original filming. The 35 mm film was kindly lent to the NZAS by its producers George Butler and Caroline Alexander, and funds raised went to support the Mrs Chippy project.

The three showings attracted an audience of over 600 people. Following the film, the Antarctic Research Centre (ARC) hosted the launch of its Endowed Development

Fund Appeal. There was a short launching ceremony by ARC Director Prof. Peter Barrett and Co-Patron of the Appeal Dr Barrie McKelvey, as well as displays of the Centre's work and history.

Antarctic enthusiasts then celebrated mid-winter with a buffet dinner and were entertained by Dr Barrie McKelvey, geologist and member of the first Victoria University Antarctic Expedition in 1957.

Barrie has had a long career in Antarctic geology and was an entertaining speaker. Other NZAS Branches celebrated mid-winter in their areas as did the staff at many stations wintering in Antarctica (see Scott Base story page 28).

Undersea Volcano Discovered off Antarctic Peninsula

Source: Antarctic Sun

Scientists working in the waters near the Antarctic Peninsula on the research vessel Laurence M. Gould, have found what they believe is an active and previously unknown volcano. The volcano lies in an area known as Antarctic Sound, at the northernmost tip of the Antarctic Peninsula.

An international science team from the United States and Canada mapped the ocean floor and collected video images and data that indicate a major volcano exists on the Antarctic continental shelf. Evidence of the volcano came as a surprise as the science research team was actually investigating why the Larsen B ice sheet collapsed and broke up several years ago. The expedition's chief scientist said the volcano stands 700 meters (2,300 feet) above the seafloor and extends to approximately 275 meters (900 feet) of the ocean surface.

He estimated that the volcanic cone contains at least 1.5 cubic kilometers (.36 cubic miles) of volcanic rock.

By comparison, Mount Erebus on Ross Island near Scott Base and McMurdo Station, is approximately 3,800 meters (12,400 feet) above sea level. Sonar maps made of the seafloor during a research cruise in January 2002 first suggested that the volcano existed. The absence of gla-

cial scours indicates the volcano is fairly young in geologic terms.

But it was not until April of this year that scientists were once again able to return to the region to examine the area further.

In addition to mapping, the research team used a bottom-scanning video recorder, rock dredges, and temperature probes to survey the sides and crest of the submarine peak. The video survey revealed a surface that is heavily colonized by bottom-dwelling organisms. Rock dredges recovered abundant, fresh, basalt volcanic rock and sensitive temperature probes moving across the bottom of the volcano revealed signs of geothermal heating of seawater.

These observations indicate that the volcano has been active recently. This scientific evidence corroborates mariners' reports of discoloured sea water in the area, which is consistent with an active volcano.

The research team comprised scientists from Hamilton College, Colgate University, the Lamont-Doherty Earth Observatory at Columbia University, Montclair State University in New Jersey, Southern Illinois University in Carbondale and Queens University in Canada. To see reports posted from the research cruise, see: <http://www.hamilton.edu/antarctica/>.

NEWS

ST Lee Lecture in Antarctic Studies

One of Victoria University's most distinguished Antarctic alumni, Professor James Kennett of the Department of Geological Sciences, University of California Santa Barbara will present this year's ST Lee Lecture at Victoria University on 12 August and at the University of Canterbury on 16 August.

The inaugural ST Lee Lecture endowed by Singaporean philanthropist Dr Lee Seng Tee through

the Victoria University Foundation, was given last year by Professor Rob Dunbar of Stanford University.

Professor Jim Kennett is a graduate of Victoria University and was a member of the University's 6th Antarctic expedition.

He is now Professor of Oceanography at the University of California at Santa Barbara, and a world leader in Earth Systems Science. He is internationally known for his pio-

Continued to Page 40

Polar Year Planning Underway

Source : Antarctic Sun

The ends of the Earth will be the centre of the scientific world in 2007-2008, if hoped for plans to create the next International Polar Year (IPY) come to pass. Planned for the anniversaries of the first and second International Polar Years, and the International Geophysical Year, scientists around the world are hoping the new IPY will lead to similar increases in exploration and discovery. The first International Polar Year in 1882-1883 launched two expeditions to the Antarctic, one setting up a research station on South Georgia Island. Fifty years later as part of the second IPY, Admiral Byrd spent a winter alone in the first inland research station in Antarctica. The current era of Antarctic research began with the IGY of 1957-58 when many Antarctic research bases were established. The IGY also led to confirmation of continental drift, launching of the world's first satellites and ratification of the Antarctic Treaty in 1961. A year ago the International Council for Science established an IPY Planning Group, with endorsement from the World Meteorological Organization. Interest in the event has been broad. When the IPY planning group asked for suggestions they received more than 200 responses. Fifteen countries have already established national IPY committees. The areas of proposed study include assessing large-scale environmental change in the polar regions, exploring the polar sea floor and subglacial landscape, and using satellite and remote observation techniques to ex-

Continued to Page 40

With the death of Ethel Cross on 27 February 2004, the New Zealand Antarctic Society and the Canterbury Branch especially lost one of its strongest supporters. As Secretary, Ethel steered with skill and compassion the Canterbury Branch for over twenty years, often through troublesome times. With a small group of women in support, she was the instigator of a programme which sent comforts such as cakes and chocolates to those serving at Scott Base during the 1960s.

She was a prime mover in securing a snooker table and for arranging its transportation south, a much appreciated luxury for Scott Base. Today, this may not seem like a big thing, but in the 1960s at a very basic base such as Scott Base, these gifts were much appreciated particularly at Christmas. Perhaps her greatest strength was her warmth and understanding towards young U.S. personnel heading south through Christchurch. With her husband, John, and daughter, Pat, their home was always open to these homesick lads. Tributes to her from former Deep Freeze personnel were read out at her service and they clearly attested to the appreciation these men felt towards this woman with a big heart. Personally, when setting up the Antarctic Gallery during the 1970s at the Canterbury Museum, I know that the good will of the Antarctic Society was vital to its success. Ethel saw to it that we enjoyed goodwill in full measure at all times.

Although ill health in recent years restricted her activities she never missed a mid-winter dinner. In June there was an empty chair at the mid-winter dinner table, closing yet another chapter of the Society's history. - *Baden Norris, Emeritus Curator Antarctic History.*

Ethel was such a wonderful, caring and loving person who gave her heart to us American boys who came to the Antarctic Program. She was our "Mother" in New Zealand, and personified what Kiwis were all about. For 14 years I went to Christchurch for the start of the Antarctic season and looked forward to seeing her at the Cathedral. She was

Ethel Cross



always so keen to see pictures of my family. Please pass on my condolences to Pat and John. - *Sam Feola, Former VXE-6 Helo Pilot.*

I was a young naval aviator who had recently arrived in New Zealand from California as part of the VXE-6 Antarctic detachment for 1980. Just prior to the departure I married my wife of 23 years, Kathi and was not looking forward to leaving her for an eight month deployment. Although I was very excited in wanting to see New Zealand, I was somewhat depressed at the same time.

All of the officers had been invited to a special party by the local base commander and the New Zealand Antarctic Society. I had just arrived and gotten something to drink when a lady accompanied by a dignified gentlemen came up to me and introduced themselves to me. I was captured by her warm smile, and easy going demeanor. Her laughter, sense of humor, and innocent conversation made me completely at ease and my depression completely disappeared.

That evening was one of the best times I had during my three year tour. I wrote numerous letters back to Kathi excitedly talking about the two wonderful people I met that evening. Over the next few days, I got to learn more about these two, eventually

starting to call them Mom and Dad. Not because they were older but because I respected and admired them. They were like anyone would have wanted in their own parents and more.

In that short period of time before we went down to McMurdo, we had developed a close relationship and I was excitedly telling them about a plan to have Kathi come down to visit. Ethel invited both Kathi and I to stay in their home while they went on vacation.

I was blown away. Here were two people who were willing to open their home to two people that they hardly knew. I was extremely honored and humbled.

No one could have given me a greater gift. That is the essence of who Ethel and John were. They were the most caring people, interested in what I was doing, what I was thinking and were willing to give whatever to help in any way.

In that short period that Kathi and I lived with them, it was some of the richest, most rewarding time I have ever had. I laughed till my sides couldn't stand it anymore, I embraced the warmth of the love they gave both Kathi and I, and shared a lot of memories that will always be with us. I remember sitting down with Ethel as she shared a wealth of knowledge on how to make a marriage succeed.

Kathi remembered how Ethel and Pat explained the use of a new device called a chamber pot.

I had already left for McMurdo and Ethel, John and Pat were headed to Akaroa for their holiday. Kathi was staying behind in their home. She was a bit nervous about staying in the house alone and was not sure she wanted to walk out on the porch to the "bathroom" late at night. Ethel with a twinkle in her eye, handed Kathi a chamber pot.

Kathi had no idea what it was, as she had never used one much less even heard of one. As Ethel explained the history and use of the pot to Kathi, it wasn't long before Mom, Sister (Pat) and Kathi were laughing so hard they all fell onto the bed.

We have lost a wonderful person but have many priceless memories and experiences that will be with us forever. - *Jim Rose.*

When Sir Ernest Shackleton's dreams of crossing Antarctica foundered with his expedition ship *Endurance* in the ice of the Weddell Sea in October 1915, he could only wonder what might have befallen his support party on the other side of Antarctica.

In the intervening 90 years, it became evident that history had inadequately treated the Ross Sea party whose task was to lay the all-important depots in support of the Shackleton traverse party. A new book, *Polar Castaways, the Ross Sea Party (1914-17) of Sir Ernest Shackleton* (Canterbury University Press and McGill Queens University, Toronto), launched at Canterbury Museum's Antarctic wing in July 2004, is a response to this deficiency. Written by Christchurch lawyer Richard McElrea, a past-president of the New Zealand Antarctic Society and past chairman of Antarctic Heritage Trust, and Antarctic consultant and historian David Harrowfield, the book covers the entire account of the Ross Sea party, including the drift of the expedition ship *Aurora* and the relief expedition. Richard McElrea began research for the book in the 1970s as a hut caretaker at the historic sites at Cape Evans, Hut Point and Cape Royds. David

Harrowfield joined the project in 1981. The authors interviewed three of the survivors of the expedition Richie Richards, Irvine Gaze and Commander Morten Moyes during their many years of research. They were aided too by the families of expedition members. The three decades of research has brought together a great deal of material, much of it original including diaries and private papers.

The project was put aside for a decade until the manuscript was reshaped with assistance from Richard King at Canterbury University Press (www.cup.canterbury.ac.nz). The book launch by Canterbury University Press was itself a remarkable event with the drama of the Ross Sea party's plight strikingly captured in a presentation made by the authors compiled by Stephen McElrea. Also present were family members of Clarence Mauger, ship's carpenter on *Aurora*, Irvine Gaze, member of the shore party, Leslie Thomson, second officer on the ship, Richie Richards, member of the party that journeyed to Mt Hope, and Lionel Hooke, radio operator on *Aurora*. John Mauger, Tony Gaze, Malcolm Thomson, Patricia Lathlean and John Hooke, through their respective fathers' writings gave a brief picture of the polar castaways of 90 years ago.

The narration by Richard McElrea:

Hazardous Expedition is Recalled by New Book

In the early years of the twentieth century, an expedition to cross the continent of Antarctica was, by its very nature, an extremely hazardous enterprise. British explorer Ernest Shackleton, proposed such a plan - an enterprise he named the Imperial Trans Antarctic Expedition.

The ship *Endurance* would sail southwards from South Georgia to the Weddell Sea, to land a party of men and dogs to cross some 1800 miles of largely unknown territory. The trans-polar party was to link up with depots to be laid by a second party, travelling overland from the Ross Sea to the Beardmore Glacier. Shackleton knew this latter route well, having pioneered the ascent of the glacier in 1908.

The story of the Ross Sea party has been largely forgotten. The party fulfilled a promise to lay depots to Mt Hope despite enduring conditions that tested their will and their sanity. Over two seasons, the distance covered was equivalent to traversing the entire continent. They were severely disadvantaged in the second season through their expedi-

tion ship being carried away. Three men died.

"*Polar Castaways*", tells their story and that of the drift of the ship through 10 months of often tedious boredom and harrowing times when the ice threatened to crush the vessel to oblivion. Eventually a relief party, including Shackleton, picked up the survivors, who were in various states of shock and emotional, and in some cases, psychological, degradation.

Shackleton selected eleven members of the Ross Sea party in England. Among them was 22-year-old Clarence Charles Mauger, who hailed from Connemara, County Galway. Like several other members of the ship's company, he had served his time on sailing ships. Shackleton evidently took an instant liking to him.

The crew of *Aurora* and several members of the shore party were appointed in Australia before the ship sailed from Hobart on Christmas Eve, 1914. Among them was Irvine Gaze, aged 25, appointed as a 'lamp and oil man'. He was one of 10 men left at base when the expedition ship disappeared in May 1916.



Richard McElrea (left) and David Harrowfield launch "Polar Castaways". Photo: Eve Welch



Richard McElrea presents Patricia Lathlean with "Polar Castaways". Photo: Eve Welch

Tony Gaze: (reading from the diary of Irvine Gaze): *Getting well up along White Island, but have so far come across no crevasses. This is absolutely a most perfect day, sun shining beautifully and you can feel the crispness in the air that makes you feel as if you could jump out of your skin. In fact, I've never before experienced such a day, and feel it very good indeed to be alive and up and doing. The surface we came over this afternoon was very "troubled" and hard; for all the world like an "angry sea". Dogs went A1. Jolly good fun. By the way we easily did our longest tramp today; quite eighteen miles.*

Richard McElrea: A climax to the first season was the laying of a depot near 80°S by Mackintosh, Ernest Joyce, and Ernest Wild. In atrocious autumn conditions they just managed to return to base. All but two of 18 dogs used in the first season's sledging, died.

Lionel Hooke aged 18, from Melbourne, was appointed wireless operator on *Aurora*. During the drift he was repeatedly frustrated trying to transmit messages to Cape Evans, Macquarie Island and beyond. The eagerly anticipated Midwinter's day, 22 June featured football on the ice in the moonlight. Larkman said: 'for a wager Hooke raced right for'd and back in his birthday suit.'

John Hooke (reading from the diary of Sir Lionel Hooke): *We have been looking forward to this day for months. At last we sort of feel homeward bound... The wardroom is decorated with flags and at dinner actually using china dishes again, but a downcast air seemed prevalent, due no doubt to the absence of ten shipmates ashore.*

Richard McElrea: Australian, Leslie Thomson, aged 28, from Sydney, signed on as second mate, barely an hour before *Aurora* sailed. He was well qualified for the job, having served in square-riggers before becoming an officer in the Merchant Marine.

In early July, as the crew of the icebound *Aurora* outfitted lifeboats with sails and loaded in provisions, Thomson observed that these craft offered:

Malcolm Thomson (reading from the diary of Leslie Thomson): *"...a very poor chance of salvation, but about our only chance now, as sledging to the shore from here would be about impossible as there are numerous cracks in the ice which would be very dangerous. The only thing I can see to do in a case like this is to camp upon some floe with all possible provisions and hang it out until the ice breaks up and then try to get clear with the boats and try and make Macquarie Island or New Zealand as circumstances would permit. A very poor chance."*

Richard McElrea: Richard Walter Richards, a 22-year-old, from Ballarat was appointed to the scientific staff and joined the ship in Hobart. During the second season he was a vital member of the party of six men and four dogs that proceeded to Mt Hope. On their desperate return march, the party had to haul the padre, unable to walk through scurvy, on a sledge for 40 days.

Patricia Lathlean (reading from the diary of Richie Richards): *"We joked that the pity of it was that Mackintosh did not realise the folly in passing eighty one degrees south with Smith. I can see the two of them in my mind's eye neither able to pull much and both walking as I have now seen Hayward and as I fear, will shortly do myself; stiff, horribly stiff in both knees."*

Richard McElrea: Richards, Hayward and Joyce with four dogs made a forced march to the Bluff depot, in bliz-

zard conditions over 3 days from 23 February 1916, leaving Wild with the two invalids, Mackintosh and Spencer Smith. Richards wrote in his diary:

Patricia Lathlean: *"Heavy wind and heavy snowfall. Steering difficult and we do not know how we stand in regard to depot or whether in the weather we have strayed from course. We are very weak. Our pace is possibly 3/4 mile an hour..."*

Richard McElrea: Richards would reminisce in his diary during these days:

Patricia Lathlean: *"...We joked sometimes of the humour of Mackintosh and Spencer-Smith being taken to see the laying of the Beardmore Glacier by us – confident then of our full strength. How I wish we had more of it now. Then the long march back towing Smith, the obvious agony of the Skipper during some of the long marches. Then the great blizzard. That layup searched out our weaknesses, shortened our wind, knocked Hayward in the legs and smashed Skipper completely. And then our nightmare in making the depot, – starved. And through all, the continued blizzard never or practically never easing. And now we are here waiting, waiting, waiting for this blizzard to cease! And this seems to be the end of Mackintosh's folly in going south when done himself and with the company of another done man. Truth was, that neither Mackintosh or Smith were fit for the job. Mackintosh not the type of man and always too well looked after in civilisation. Even first year sledging Mackintosh suffered from bleeding very copiously from the bowels and that has continued since. Smith too was done last year after a short journey to the Bluff. I have written down these thoughts more to keep my mind occupied than anything else and now it's too cold on fingers and so I'll stop."*

Richard McElrea: The padre was a plucky, loyal and ultimately tragic character who died on Ash Wednesday 1916, a day or two short of reaching base. His cousin, Irvine Gaze, visited his grave in January 1917, shortly before the relief of the party.

Tony Gaze: *"It seems very hard to me that poor old AP should have got so close to home, and then to just miss it. Anyway, everyone spoke in the highest praise as to how he stuck it; was always cheerful in spite of the fact he'd been on his back for a month."*

Richard McElrea: On 10 January 1917, *Aurora*, now serving as the relief ship, reached the ice edge off the Barne Glacier, north of Cape Evans. Soon a sledging party approached the ship.

It was profound and shocking for Shackleton to learn that three of his men were dead, and to be confronted by these battered castaways who looked scarcely of this world.

After the relief ship arrived, Shackleton led a party to undertake a brief search in the environs of Cape Evans, for the remains of Mackintosh and Hayward. At midmorning on 16 January 1917, Shackleton, Joyce, Wild and Jack had a hasty meal at the Cape Evans hut, closed the building and returned to the ship.

In December 1955 a National Geographic photographer aimed a camera and flash through a window of the hut into the dark interior. The result was a ghostly scene set in silence – the half-completed meal, abandoned 39 years before, frozen in time. The depots on the Barrier and at Mt Hope, laid at such a cost by the Ross Sea party, have been lost to the eternal elements of Antarctica.

Philatelic Gap is Resolved

"Postmarks of the Australian Antarctic Territory 1911 - 2004"

By Colleen A. Woolley and Janet S. Eury

(ISBN 0 6 46 40171 8 ISSN 1449 3616)

Published by DC Desktopters P.O. Box 620, Victoria 3084, Australia. PRICE NZ \$39.95 114 pages A4

In the foreword to a new publication "Postmarks of the Australian Antarctic Territory" by Colleen Woolley and Janet Eury, the president of APTA, Tony Shields, says, "Fewer than 250,000 people have visited the Antarctic. More people attend football matches on an average weekend in Melbourne. The fact that so few people will visit the Antarctic because of its remoteness and extremes is the reasons collectors so love it."

For years stamp collectors have been aware of a major gap in the philatelic knowledge about the Australian Antarctic Territory and the involvement there of the Australian Post Office. This book aims to fill the gap.

There are extensive references to Australia Post archives, the Philatelic Bulletins and Stamp Bulletins from 1953-2004, various Antarctic philatelic handbooks and Australian government records. "In 1840 the world's first postage stamp was issued and man first landed on ice near the Antarctic continent. Letters have been posted from most expeditions and most bases ever since," says Shields.

This book illustrates the possibilities for collectors. Australia did not assume responsibility for the Australian Antarctic Territory until June 1933. However, individual Australians were associated with various Antarctic explorations over earlier years and Australian postal history is assumed by the authors to have commenced in 1911.

During that year Dr (later Sir) Douglas Mawson of Adelaide requested the Hon. J Thomas, the Australian Postmaster General, to provide a special postage stamp for the use of the Australian Antarctic Expedition then being organised and of which Dr Mawson was the leader.

Dr Mawson had drawn attention to the stamps issued by New Zealand for the 1907 Shackleton Expedition and the 1910 Scott Expedition.

Apparently, Mawson in 1911 actually paid an artist to design a special postage stamp for that expedition "The stamp was drawn 6 inches square and was to be reduced to ordinary stamp size. It figured the spherical southern

end of the Earth's globe with an Emperor Penguin (in colour) standing on the South Pole. I was very pleased with the design. It was sent to the Postmaster-General of that time (Fisher Government). In reply I was advised that it would be a costly matter to reproduce it. We did not even get back our drawing." Mawson persisted throughout 1911 to gain the PMG's approval for a special stamp, to no avail.

Permission was granted for the use of rubber stamps for cancelling Australian stamps to be used on envelopes posted back to Australia. Two rubber stamps were used on the Australian Antarctic Expedition of 1911-14. One carries the inscription 'Posted at Macquarie Island' and the other 'Posted in Antarctica'. The initials 'AAE' at the base represented the name of the expedition. The ship's name is shown as S.Y. Aurora. Special covers from that era have sold at auction for A\$5,500 each.

The expedition is the starting point of a philatelic journey that will delight stamp collectors and those interested in Ice history. The book is lavishly illustrated with many covers, post-cards and maximum cards depicted in full colour (34 pages of colour illustrations). The book, includes the addresses of many polar philatelic societies and is fully indexed. Catalogue prices are also listed.

Terra Nova Connection

A recent item placed into stock at Classic Stamps Ltd, Christchurch, New Zealand, is a letter dated 18 March 1913, from James Mackintosh to William McDonald. McDonald was an Able Seaman on Terra Nova during Scott's second Antarctic expedition.

It is not known if McDonald received the letter which is addressed to him in Lyttelton Port in Christchurch, from which the Terra Nova had left for Rio de Janeiro five days earlier.

Further information can be found at
www.classicstamps.co.nz.



The Scottish Society of New Zealand

(INCORPORATED)

Rooms:—Manchester Street,
(Entrance Next to His Majesty's Theatre)

Christchurch, 18th March 1913

Mr Wm McDonald &
" Terra Nova
Lyttelton.

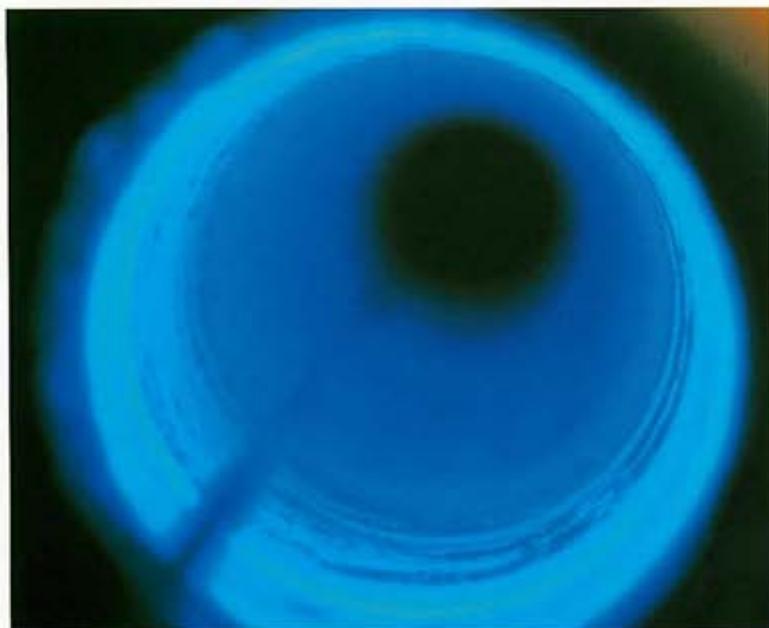
Dear Sir I have to apologize for delay
in replying to your letter of
18th January from Mr Murdoch
Sound. I shall treasure it
for all time as a memento
of the Expedition which ended
so tragically after achievements
which have won world-wide
admiration.

Wishing you all a safe
Voyage Home, I remain
Yours faithfully
James Mackintosh
Chief.

Decline in Antarctic Sea Ice

By Mark Curran and Tas Van Ommen, Glaciology Program, AAD and ACE CRC

Source: Australian Antarctic Magazine



Peering into the past.... A view down the borehole at Law Dome, Antarctica. Here scientists recovered an ice core that answers a climate mystery about sea ice extent. Photo: Mark Curran.

Antarctica remains an under-explored region of the planet, despite the fact that some expeditioners take a trip 'south' for granted. It is a difficult place to get to today and was obviously even harder in the past, limiting the amount of reliable scientific data. One area where this limit is felt is in the sparsity and shortness of climate records, which are needed to interpret recent changes and to test the longer-term applicability of climate models.

Key climate parameters from the Antarctic region are the extent of sea ice, and its potential response to climate change.

Antarctic sea ice forms an icy covering on the south seas each year – more than doubling the size of Antarctica and has often been termed the 'frozen skin of the Southern Ocean' (Nicol and Allison, *American Scientist* 85, 426-439, 1997). While it often hinders Antarctic operations, it is a vital component in the global climate system. It plays a major role in climate through its influence on heat exchange between ocean and atmosphere, it assists the formation of Antarctic Bottom Water (through brine rejection) which sinks to the depths of the ocean subsequently driving global ocean circulation, and it provides essential ecosystem support right through the food chain from microbes, phytoplankton, and krill, to penguins, seals, and whales.

Sea ice also acts as a sensitive indicator of climate change ... or does it?

The general scientific consensus is that global climate is warming, and this warming should be seen in Antarctica.

However, the picture is complicated, and the Antarctic continent cannot be viewed as a single climate regime. Warming is seen in the Peninsula region, and through most of coastal Antarctica, but the interior is generally cooling – most likely as a result of changes in atmospheric circulation.

Most climate models predict that sea ice should respond to ocean and atmospheric warming with a resulting decrease in sea ice extent. Records of whaling ship locations (de la Mare, *Nature* 389, 57 (1997) and penguin population survival tend to suggest Antarctic sea ice may be declining – however satellite

records of sea ice extent tell a different story. The advent of satellite imagery since the mid-1970s enabled scientists to remotely 'view' Antarctica and measure the extent of sea ice. This data shows little or no change, or possibly even an increase in sea ice extent since the 1970s. So what is happening? Is Antarctic sea ice extent increasing or decreasing? The answer is both! The effect seen depends on the timescale we are considering.

The problem is that there were no reliable records of sea ice extent prior to the mid-1970s, to look at long-term trends.

Enter the phytoplankton. These single celled algae live in and around the sea ice and release chemical signals to the atmosphere which gets trapped in snowfall on the continent.

This is locked away in the Antarctic ice sheet, waiting for glaciologists to drill ice cores and analyse them to reveal the hidden message from the phytoplankton. This message takes the form of methanesulphonic acid or MSA.

MSA is produced from oxidation in the atmosphere of dimethylsulphide, which is itself produced by certain species of phytoplankton and in the Southern Ocean. The distribution of these species is intimately associated with sea ice. Through analysis of ice cores from Law Dome, we have discovered that the amount of MSA in the core is related to the maximum extent of sea ice in that region.

This is because in years where there is more sea ice (greater northerly extent) there is more phytoplankton activity following sea ice decay and more MSA production. In a recent paper in the journal *Science*, (Curran et al., November 14, 302, 1203, 2003) we have calibrated the ice core MSA record against satellite records of sea ice extent since the mid 1970s.

Annual MSA concentrations significantly correlate with maximum sea ice extent around the whole of

Antarctica, with the highest correlation in the region (80-140°E) surrounding Law Dome.

This calibration enables us to use the MSA record from the Law Dome ice core as a tool to investigate past sea ice extent. So what happened to sea ice extent prior to the 1970s and the satellite era? The MSA record from the top 150 m of the Law Dome ice core gives a 'proxy' for sea ice extent over the period 1840 to 1995.

The two main findings presented in the paper are the discovery of these persistent, high-amplitude, decadal fluctuations and the dramatic decrease in sea ice extent over the last ~50 years. The high variability explains why satellite trends are confusing.

Detection of long-term change is masked by large fluctuations from decade to decade and it is these decadal fluctuations that have produced apparent short-term increases



Preparing ice cores for the methanesulphonic acid (or MSA) analysis. Sampling must be done in a freezer at -18° and in a laminar flow hood under clean conditions to avoid contamination. Photo: Mark Curran.



Above : Ice core evidence suggests that the sea ice south of Australia has retreated by around 1.5° of latitude (approximately 170 km) over the last 50 years, which represents a decrease of 20%. Photo: Mark Curran.

in the satellite data.

The large reduction of the northerly extent of sea ice in the region south of Australia (80-140°E) of 1.5 degrees of latitude equates to a 20% decrease since the 1950s.

While this research indicates the Antarctic sea ice is decreasing, we cannot say how unusual these changes might be over longer

timescales from centuries to millennia or more.

What we have is a better understanding of the past history of sea ice and this provides another piece in the puzzle of understanding the role of Antarctica in the global climate system.

Work is continuing to look deeper in the ice core, further back in time, to provide more knowledge of past sea ice changes and climate variations. This will improve our ability to predict future changes, guide policy and adapt as necessary.

Mawson Station - Australia

Continued from Page 30

This system tells each wind turbine how much power to generate, and then each wind turbine arranges itself to supply this power. Using data from an anemometer, the wind turbines continuously calculate how much power they are capable of generating from the wind conditions at the time.

The computerised control system also takes this information into account when asking the wind turbine for power. The wind turbines are able

to control the pitch of their three blades, varying them from the vane position (where they are fully out of the wind and thus prevent rotation), to the 'fully pitched' position (where the maximum surface area of the blades is presented to the wind) to produce maximum turning force on the generator. Almost 90 degrees of rotational movement exists in between the vane and fully pitched positions. Cables link the generators to the Main Power House through the tower, and they are designed to be twisted up to three times in either di-

rection as the nacelle follows changing wind directions. The number of turns is electronically monitored, and once it reaches its limit, the turbine stops temporarily and goes into an automatic cable de-twisting sequence. Mawson Base usually has two ship visits per season with resupply and helicopter visits in February. There is a Blue Ice airstrip surface 14 km from the base that is used by light aircraft. The base has a variety of tracked vehicles. Water for the base is derived from ice melting, with 1,200,000 litres being used per year.

Dear Editor,

Route to the Pole :

My Antarctic Midwinter celebrations this year included a reunion at Lake Ohau Lodge in South Canterbury, where "old" and not-so old "Southern Antarctic Explorers" (OAEs) met for a very convivial weekend with no worries about drinking and driving. The festivities included two excellent talks. One was given by Grant Gillespie, past dog handler and more recent snow pilot, about his experiences with the Scott Base dogs and his memories of helping move and settle them in the States during the mid-1980s.

The other speaker was New Zealand mountaineer Shaun Norman talking about his experiences as "Safety Expert" with the Americans on their 'Route to the South Pole' Project. Part of this story was covered in an article in Antarctic Vol 20, no 3 & 4, p 38-39. In his talk Shaun showed the route drawn on a large scale map of the Ross Ice Shelf and described the colossal problems the group had with a major crevasse field just 50 km from McMurdo. In the Antarctic article this zone is described as "beyond Minna Bluff" when in fact it is east of the tip of White Island, and Minna Bluff was never closely approached by the "route finding team".

Yours sincerely,

Margaret Bradshaw

Dear Editor,

I read the tragic news of the death of Kristy Brown, attached by a leopard seal.

I can contribute the story of two other attacks. (During seven voyages to the Antarctic, I took many pictures of leopard seals on the ice and while feeding.)

I also refer to pages 406-407 in my textbook entitled "Principles of Integrative Environmental Physiology" (2001, Folk, Riedesel and Thrift), which show what an alert and dangerous predator they are.

Also here is a personal account from Dr. Rich (R. L.) Penney, who was a visiting professor in my laboratory. He was an early penguin expert who recalled that early in the Antarctic tourist industry, in a small Zodiac, he was at the motor.

A well-fed woman sat in front of him. Part of her anatomy was outside the boat.

He watched as a leopard seal reared out of the water with open jaws trying to grasp her.

Fortunately, it missed! Rich never told the woman.

I hope these accounts will interest you.

Cordially,

Professor G. Edgar Folk

Polar Year Planning Underway Continued from Page 33

-tend the reach of IPY, the International Partnerships in Ice Core Sciences proposed an international project of coring coastal sites along the large ice sheets of Antarctica and Greenland and drilling deep ice cores to obtain the longest possible climate record. Other scientific organizations are planning an Electronic Geophysical Year (EGY) to coincide with the IPY as a means of providing an international focus for e-science and virtual observatory development across all the geosciences. The EGY is supported by the International Union of Geodesy and Geophysics, the Scientific Committee on Solar-Terrestrial Physics, the International Union of Geological Sciences, and the Society of Exploration Geophysicists. For more details go to: <http://dels.nas.edu/us-ipy/index.html>.

ST Lee Lecture in Antarctic Studies Continued from Page 33

-neering work in establishing the field of Paleoceanography and through his textbook "Marine Geology". For many years he has led panels and cruises of the Deep Sea Drilling Project, and its successor the Ocean Drilling Program, in studying ocean history from sediment cores from key locations around the world. His recent research has highlighted the role of methane in the global climate system. The lecture, entitled **Antarctica's Contribution to Abrupt Global Warming Events - Past and Future** will be held in Wellington on Thursday 12 August at 5pm in Lecture Theatre 1, Old Government Buildings; and in Christchurch on Monday 16 August at 7:30pm at the University of Canterbury. The public lecture is open to anyone interested. For the Wellington lecture please RSVP to Antarctic-Research@vuw.ac.nz by August 9th. No need to RSVP for Christchurch.

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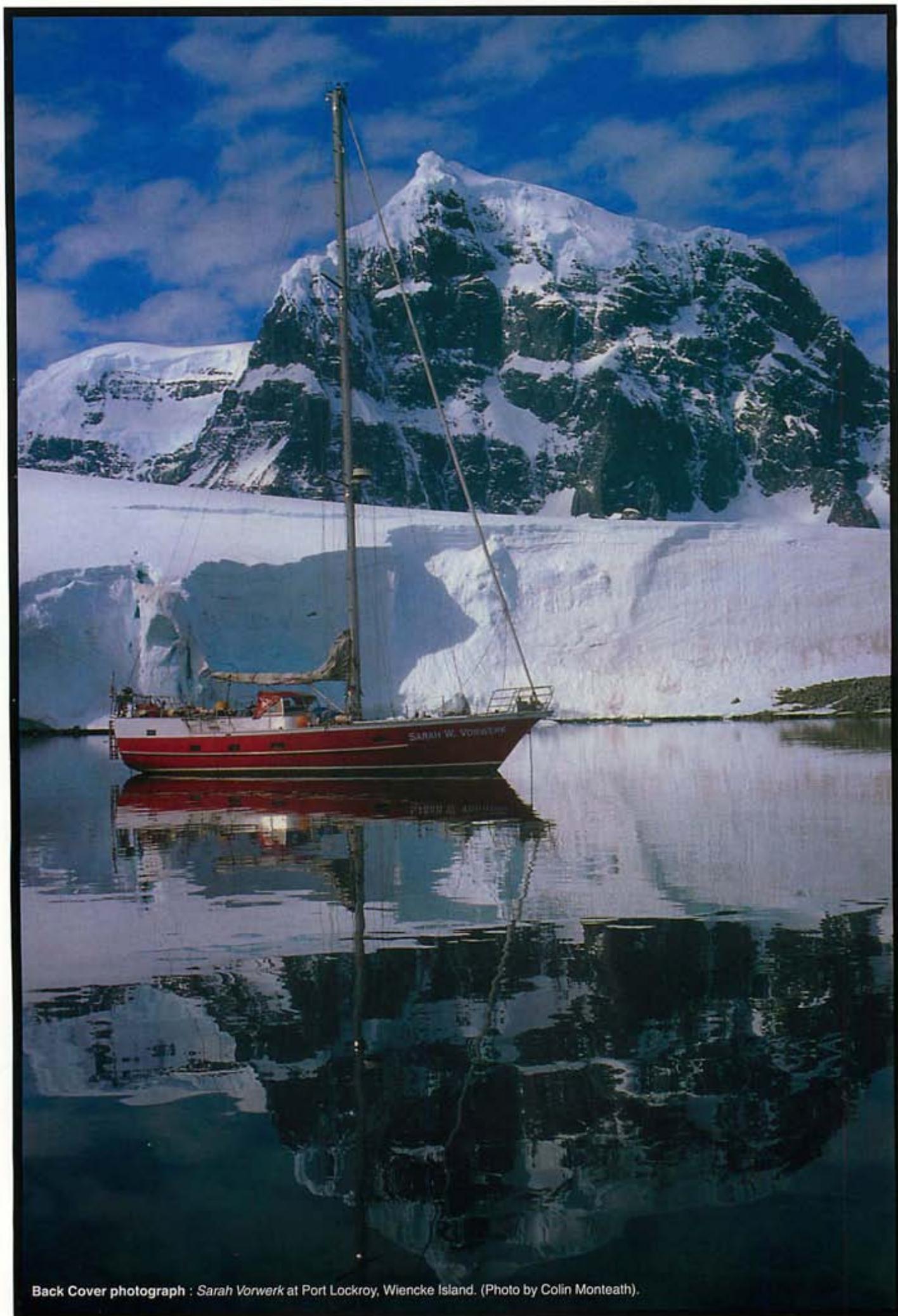
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