



IPY funding a big boost to scientific research

The New Zealand Government's recently announced funding package for International Polar Year (IPY) heralds an exciting new era in Antarctic science, says Antarctica New Zealand Chief Executive Lou Sanson.

International Polar Year was launched in Paris on 1 March, and is the largest internationally co-ordinated polar research programme in 50 years. It will span two full annual cycles, from March 2007 to March 2009, in order to ensure full and equal coverage of both the Arctic and Antarctic. It is expected to involve 50,000 scientists from more than 60 countries. They will carry out 220 science and outreach projects under six major themes: status; change; global linkage; new frontiers; vantage point and human dimension.

In this year's Budget Prime Minister Helen Clark announced the Government will spend an additional \$11.1 million over three years for research into Antarctica's role in climate change and global environmental systems, as part of International Polar Year. The funding package included a contestable fund of \$4.5 million to support IPY research and \$9.7 million for a major international marine biodiversity study, the Census of Antarctic Marine Life (CAML) in the Ross Sea.

The Census of Antarctic Marine Life will be carried out using the NIWA research vessel *Tangaroa*, which will head to the Ice at the end of January 2008 for 50 days. Led by the Ministry of Fisheries, the project will involve researchers from NIWA, various New Zealand universities and Italy. The project will help scientists to better understand biodiversity and ecosystem function in the Ross Sea. The three sample areas will be the Antarctic Shelf, the Slope and Abyssal plain. The CAML project includes \$6.7 million for the voyage and \$1 million per year for three years for the scientific aspect of the project. (Land Information New Zealand already receives \$3.1 million every year for its Ocean Survey 20/20 initiative, bringing the total funding for CAML to \$9.7 million.)

Antarctica New Zealand's Manager Science and Information Dean Peterson said 24 bids for the contestable fund were reviewed, with six being successful. Three of the projects will be led by NIWA and one

each by the University of Otago, Victoria University of Wellington and Waikato University. The projects will study a wide range of subjects, such as summer biological activity in melt-water ponds (led by Dr Ian Hawes); the winter thickness of sea ice (led by Dr Pat Langhorne); the effect of climate change on micro-organisms that grow in sea ice (led by Dr Ken Ryan); the eco-systems of the Dry Valleys (led by Prof. Allan Green); understanding the Antarctic's unique marine ecosystems (led by Dr Vonda Cummings); and the Antarctic ozone hole (led by Dr Greg Bodecker).

"New Zealand should be extremely proud of the IPY initiatives," Peterson said. "We look forward to the outcomes of all these great projects, which I am sure will make a significant contribution to improving our knowledge and understanding of the icy continent."

Those sentiments were echoed by Lou Sanson, who welcomed the new funding.

"We are thrilled to be supporting the research that is made possible by this funding," Sanson said. "One of the objectives of International Polar Year is to spark a pulse of new polar science. The New Zealand Government has clearly answered that call, and recognised the importance of Antarctic research for addressing questions of global significance with our flagship research programmes CAML and ANDRILL."

Antarctica New Zealand will provide the usual logistical and field support that all New Zealand research groups receive when in Antarctica.

ANDRILL, the multi-national Antarctic geological drilling project, is another significant IPY-branded project. It involves approximately 60 scientists from New Zealand, the US, Germany and Italy, and an operational staff of 27 employed by Antarctica New Zealand, which is managing the project. Last season it was based on the McMurdo Ice Shelf, approximately 10 kilometres from Scott Base, and achieved great success by drilling a hole to a record depth of 1,285 metres below the sea floor and recovering high-quality core. Preparation is already underway for the second phase of drilling operations in

South McMurdo Sound, about 35 kilometres west of Scott Base, with an advance party setting up the drill camp and drill rig during September so that actual drilling can begin in October.

Finally, as part of IPY, a New Zealand Youth Steering Committee (YSC) has been set up to encourage the participation of the next generation of polar scientists. The YSC is a network of student groups from around the world with an interest in polar research from a broad range of disciplines encompassing both the sciences and social sciences. Leaders of the international and national IPY Youth Steering Committees and Association of Polar Early Career Scientists (APECS) will meet in Stockholm in late September.

Scott Base has a very Happy Birthday

Scott Base celebrated its 50th anniversary in style in January, with VIP guests Sir Edmund Hillary and Helen Clark travelling to Antarctica to participate in a range of festivities and official functions.

Chief Executive of Antarctica New Zealand Lou Sanson declared the four days of celebrations a huge success, saying it was an honour and privilege to have an iconic New Zealand legend and the country's Prime Minister at the base together to share in such an historic occasion.

"To see the excitement at Sir Ed's return to Scott Base, 50 years to the day after the New Zealand flag was first raised by his 1957 TAE expedition, was a truly unique experience shared by all our Scott Base staff," Sanson said.

The Rt Hon Helen Clark, her husband Professor Peter Davis and Sir Edmund Hillary arrived in Antarctica on 18 January. They were joined by invited visitors such as Lieutenant General Jerry Mateparae, Chief of the New Zealand Defence Force; Garry Moore, Mayor of Christchurch; Graham White, representing the NZ Antarctic Society; Paul East, Antarctic Heritage Trust chairman; and Jan Cameron, founder of the Kathmandu clothing and outdoor equipment stores. Wing Commander Bill Cranfield also attended.



James Blake, who as the youngest person on Base, had the honour of raising the flag at the 50th anniversary celebrations of Scott Base

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Cranfield was one of the pilots for Hillary when Hillary led the Ross Sea Party supply-support team for the 1957/58 Commonwealth Trans-Antarctic Expedition (TAE) led by Britain's Sir Vivian Fuchs.

As the man who established Scott Base, Sir Edmund Hillary was given plenty of attention during the 50th celebrations, and reciprocated by providing enthralling interviews for the 12-strong media contingent that travelled to the Ice for the event.

On 20 January, the official 50th birthday, Scott Base staff and dignitaries and invited American guests from McMurdo Station gathered outside around the flagpole. After several speeches, James Blake (son of the late Sir Peter Blake) raised the New Zealand flag as the youngest person on Scott Base that day. Fifty years ago, at 1pm on 20 January 1957, Scott Base had been officially opened when Able Seaman Ramon Tito had raised the New Zealand flag for the first time in Antarctica.



The oldest and the youngest: Sir Edmund Hillary with James Blake at the 50th anniversary celebrations of Scott Base

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Wreaths were then laid to recognise the New Zealanders lost in Antarctica – Thomas Couzens, Jeremy Sykes, Garth Varcoe and Terry Newport – as well as the 257 people on board the DC-10 that crashed on Mount Erebus in 1979.

Sir Edmund Hillary then signed Scott Base commemorative first day cover envelopes (collectable stamp products). New Zealand Post issued just 100, all officially certified as mail posted from Scott Base on 20 January 2007. Sir Edmund was the original Post Master of Scott Base when it was first set up.

Sitting in the Trans-Antarctic Expedition (TAE/IGY) hut – the first building that he erected at Scott Base 50 years ago – the mountain climber and explorer kept the media entertained with his down-to-earth manner and frank comments. Sitting in his Extreme Cold Weather gear (ECWs), including a bulky Canada Goose down jacket, Sir Edmund joked that "I don't quite know why we have all this junk." Of course, all those years ago when he and his team of hardy adventurers were building Scott Base with their bare hands, they coped with the harsh conditions in much less suitable clothing.

Birthday celebrations ramped up at lunchtime on 20 January, with New Zealanders mingling with US invited guests before the Prime



Lou Sanson watches Sir Edmund Hillary and Prime Minister Helen Clark cut the anniversary cake

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Minister cut the birthday cake in the Hillary Field Centre. This was a fitting location as its namesake had officially opened the centre, which is a heated bulk stores facility and field operations support area, in November 2004.

Later that day, Helen Clark opened the Arrival Heights research facility at Scott Base. Located in an Antarctic Specially Protected Area (ASPA) overlooking McMurdo Station, the laboratory is protected to prevent disturbance to an electromagnetically quiet and atmospherically clean area containing highly sensitive equipment. The Prime Minister was given a guided tour of the laboratory and chatted to the science technicians about the work that will be carried out there.

That night, the National Science Foundation (NSF) hosted a dinner at McMurdo Station for New Zealand dignitaries. The favour was returned the next night when, in recognition of the amicable relationship and co-operation between the US and New Zealand in Antarctica over the last 50 years, 20 US guests dined at Scott Base. As well as Lou Sanson and Garry Moore, National Science Foundation director Dr Arden Bement addressed the audience.

Rounding off the celebrations, on 21 January the Prime Minister's media contingent and VIP guests visited the historic huts of Robert Falcon Scott at Cape Evans and Ernest Shackleton at Cape Royds. Helen Clark and Sir Edmund Hillary both expressed their concern and disappointment that Britain was not helping to fund the restoration of these significant monuments. (Since then, the British Government announced it would give \$NZ 703,234 to the project.)

James Blake, Helen Clark and Sir Edmund Hillary then launched the Antarctic Youth Ambassador scheme, a partnership between Antarctica New Zealand and the Sir Peter Blake Trust. The Prime Minister then went to see the Dry Valleys, one of the last truly remote places left on earth with no cover of ice or snow and no rainfall.

Dignitaries and media flew back to New Zealand on 22 January. Sir Edmund Hillary had requested to stay on so he could spend a night reminiscing about the good old days in an old A-frame hut on the Ross Ice Shelf. He described this night as "magic," while Lou Sanson said it was a fitting end to a very sentimental trip.

"The work of our Scott Base staff and the warmth of the US co-operation made for such a special occasion," Sanson said.

Academic's 50-year legacy recognised

George Knox's outstanding 50-year contribution to Antarctic marine science was recognised recently at a special function in Christchurch.

Knox was presented with the New Zealand Antarctic Science 50th Anniversary Award by Dr Clive Howard-Williams, chair of the Royal Society of New Zealand's Committee on Antarctic Science, on behalf of the New Zealand Antarctic community. A small family group joined Knox's friends and former colleagues from the University of Canterbury at the Christchurch offices of Antarctica New Zealand for the ceremony.

Emeritus Professor Knox, now aged 87, was born in Pleasant Point and educated at Timaru Boys High School. He was first appointed to the then National Committee for Antarctic Research in 1959 and sat on the Ross Dependency Research Committee between 1965 and 1992. He was the New Zealand delegate to the Scientific Committee on Antarctic Research (SCAR) from 1974 to 1986 and President of SCAR between 1978 and 1982, the only New Zealander to hold the post. Knox also sat on several other international committees, including being Secretary General and then President of the International Association for Ecology (INTECOL) from 1978 to 1982.

Knox's long-standing public service and impressive academic record in the environment and conservation sectors throughout New Zealand led to his MBE in the Queen's Birthday honours list of 1985.

Knox retired in 1984 after a distinguished academic career spanning 35 years at Canterbury University, including almost 20 years as head of the Department of Zoology. He began a long-term marine biology Antarctic research programme in 1960 and directed the team for 12 years. Incredibly, Knox participated in 13 field parties to the Antarctic and has published more than 100 scientific papers – including 25 on the Antarctic and Southern Ocean. His most recent book, the 1000-page *Biology of the Southern Ocean*, is the standard international reference work on the oceans surrounding Antarctica.

At the ceremony Knox's son Warwick spoke on his behalf. George had a major stroke in September 2006 and his speech is now limited, but his family said he thoroughly enjoyed the presentation and appreciated the recognition. As well as Clive Howard-Williams, Antarctica New Zealand Chief Executive Lou Sanson also acknowledged what a key figure Knox was in Antarctic marine science. Sanson also revealed that Knox had lectured him when he was a student at university.



L to R: Dr Clive Howard-Williams, Emeritus Professor George Knox and Lou Sanson after Knox received the New Zealand Antarctic Science 50th Anniversary Award

Photo courtesy of Duncan Shaw-Brown, University of Canterbury

Artists put their creative inspiration on ice

Author Tessa Duder and multi-media artist Ronnie van Hout are the successful recipients of the 2007/08 Artists To Antarctica programme.

Auckland-based Duder and Melbourne-based van Hout will travel to Antarctica between October and November this year. A joint initiative between Antarctica New Zealand and Creative New Zealand, the Artists To Antarctica programme is open to artists who are either prominent in their field or highly-regarded emerging artists.

Creative New Zealand Chief Executive Stephen Wainwright said the Artists to Antarctica programme brings together art, science and the natural environment to encourage the creation of innovative New Zealand art.

“The residency allows New Zealanders to discover the amazing Antarctic environment through the eyes of our artists,” Stephen Wainwright said.

Antarctica New Zealand Chief Executive, Lou Sanson said, “There were a number of high-calibre applicants for the 2007/08 programme, and he was delighted that both Duder and van Hout had long-held ambitions to travel to Antarctica.



Tessa Duder

Tessa Duder’s novels for young readers include *Night Race to Kawanui*, *Jellybean*, the *Alex* quartet, *Mercury Beach*, *Hot Mail* and the *Tiggie Tompson* trilogy. She has won three New Zealand Children’s Book of the Year awards, was awarded an O.B.E. in 1994 and the Margaret Mahy Medal for a distinguished contribution to children’s literature in 1996.



Van Hout

Van Hout, who was born in Christchurch, won a Laureate Award from the New Zealand Arts Foundation in 2005 and has exhibited widely in New Zealand and Australia.



John Walsh

Antarctica New Zealand has also invited John Walsh, a painter who works primarily with oils, to travel to Antarctica this summer as its Invited Artist and honorary Antarctic Arts Fellow.

Previous Invited Artists include painter Grahame Sydney, sculptor Neil Dawson and painter/printmaker Dick Frizzell.

International experts flock to conference



Dr Dean Peterson, Antarctica New Zealand Manager Science and Information, addresses the 50th anniversary Antarctic conference

Photo courtesy of Robert Catto www.catto.co.nz © all rights reserved

This year’s one-off conference to celebrate 50 years of success in Antarctica attracted an impressive line-up of international speakers.

Antarctica: 50 Years On the Ice – Just the Tip of the Iceberg, held in Wellington in early July, was co-hosted by Antarctica New Zealand and the Royal Society of New Zealand.

The conference was opened by Minister of Science, Research and Technology, Steve Maharey, who commented that his appreciation for Antarctica and the work being done there by New Zealanders became much greater once he had seen it for himself first-hand. Minister Maharey visited Scott Base last November, and showed some photos from his trip to conference attendees.

With an average of 160 people turning up to each of the five days, the speakers had an attentive audience. Highlights were the talk by Dr David Carlson, the UK-based director of the International Programme Office for International Polar Year (IPY); the overview of Antarctic Earth Science History by Professor Peter Webb; and the presentation on Antarctic Atmospheric Research by Dr Susan Solomon. Dr Solomon commented during a discussion panel that New Zealand had “a programme of profound excellence,” which was testament to the many highly-regarded experts in a range of fields of Antarctic research that are based in New Zealand.

A conference dinner was held at Icon restaurant at Te Papa, as well as a cocktail function at the Duxton Hotel (the conference venue). Outgoing Christchurch Mayor Garry Moore spoke at this function, and the recipients of Antarctica New Zealand’s 2007 Postgraduate Research Scholarship Programme were also announced.

Angela McGaughan (Massey University) won the two-year Sir Robin Irvine (Antarctica New Zealand) Doctoral Scholarship; Julia Bull (Victoria University of Wellington) won the one-year New Zealand Post Antarctic Scholarship; and Natalie Robinson (University of Otago) won the one-year Kelly Tarlton’s Antarctic Encounter and Underwater World Antarctic Scholarship.

More award winners ...

Paul Hargreaves, chairman of the Board of Antarctica New Zealand, became an Officer of the Order of Merit in the 2007 Honours list. The former CEO of NIWA was recognised for services to business and the community.

Dr Clive Howard-Williams, NIWA General Manager (Freshwater and Coasts) based in Christchurch, received the New Zealand Antarctic Medal for services to Antarctic science. The award replaces the (British) Polar Medal. Howard-Williams has had a major interest in Antarctic and Arctic ecosystems, with polar work over the last 20 years covering the structure and function of inland lakes, glacier melt streams and ponds. He is also an Adjunct Professor at the University of Canterbury and Chair of the Royal Society of New Zealand Committee on Antarctic Science.

Associate Professor **John Bradshaw** (University of Canterbury Geological Sciences department) also received the New Zealand Antarctic Medal, completing a rare family double. Professor Bradshaw was awarded the inaugural medal in the New Year's Honours, while his wife Dr Margaret Bradshaw (also of Geological Sciences) was the last New Zealander to be awarded with its predecessor, the Polar Medal, 12 years ago.

Professor Peter Barrett, Director of the Antarctic Research Centre at Victoria University, won the 2006 Wellingtonian of the Year Award and the Science & Technology category. The award recognised Peter's leading contribution to Antarctic and climate change research, and to public understanding of these issues. Peter's recent work has been dominated by the Cape Roberts and ANDRILL projects. This summer season he will be involved in *The Tipping Point* film, a \$1.8 million production outlining scientists' perspectives of Earth's changing climate. Barrett says Antarctica will feature prominently in the film.

Dr Tim Haskell was awarded the Marsden Medal for a lifetime of outstanding service to science, with a special mention of his Antarctic research. Haskell, who works for Industrial Research Limited in Wellington, has been studying sea ice processes in Antarctica for more than 20 years. He received his New Zealand Association of Scientists Marsden Medal 2006 at the annual science honours dinner held in Auckland.



Dr Karl Erb with Prime Minister Helen Clark
Photographer Peter Cutts

Dr Karl Erb, a key figure in Antarctica New Zealand's close relationship with the United States, was awarded an honorary New Zealand Antarctic Medal for his outstanding service in support of the New Zealand Antarctic Programme. Dr Erb is head of the US National Science Foundation (NSF) Office of Polar Programs, based in Washington. He received his award in person from New Zealand Prime Minister Helen Clark.



Big Ice gets warm reception in Christchurch

Antarctica: The Big Ice, a highly successful exhibition at Otago Museum, arrived in Christchurch in early September. A launch event was held at the central city exhibition venue, Our City O-Tautahi.

Brought to the Garden City by Antarctica New Zealand and Christchurch City Council, *The Big Ice* celebrates 50 years of New Zealand scientific exploration and environmental work in Antarctica. The exhibition was developed by Otago Museum and attracted an outstanding visitor response from the Dunedin community. It was the most popular Museum-developed short-term exhibition ever at Otago Museum, and the first to tour other venues around the country.

Antarctica New Zealand Chief Executive Lou Sanson said he was extremely pleased that the display features a wide focus on the New Zealand Antarctic Programme, including science, arts, history and geo-politics.

Prominent Central Otago artist Grahame Sydney is displaying his photographs of Antarctica, taken when he visited Scott Base as an Invited Artist of Antarctica New Zealand. The exhibition also features historical artefacts such as the ice pick used by Sir Edmund Hillary on his trek to the South Pole.

"The exhibition also marks International Polar Year (IPY), a period of intensive research and discovery using today's technology," said Council Civic and International Relations Manager Julie Battersby.

Antarctica: The Big Ice runs until 27 October and admission is free.

New kids on the Antarctica NZ block

In the lead-up to the 2007–2008 summer season, Antarctica New Zealand welcomed three new staff members to its Antarctic Programme team.

Simon Trotter, Operations Planner/Programme Support Supervisor, is a familiar face to those at Scott Base and in the Christchurch office. He spent several summers working for Antarctica New Zealand in field training roles and as Programme Support Assistant. He said these opportunities were valuable in gaining an understanding and appreciation for the operational functions of business on the Ice – “not to mention providing great opportunities to work in some of the most beautiful and challenging environments.” Before working for Antarctica New Zealand he was employed in education, working for one of New Zealand’s leading and largest Outdoor and Environmental Education training programmes at Christchurch Polytechnic (CPIT). His new role as an Operations Planner involves pre-season planning, liaison and helicopter logistics for event teams heading to Antarctica. On Ice he is also responsible for the day-to-day operations and movements of science events at Scott Base, the Antarctic Field Training Team and Joint Antarctic Search and Rescue Training. Simon says the future of Antarctica looks to be very exciting in terms of organisational developments and science. “A goal of mine while working for Antarctica New Zealand is to continue a tradition of providing a high level of service and support to the science community at large. Another is to continue to strengthen the networks we have in the local community.”

Rod Strachan graduated from university with an Honours degree in Biology and a Masters in Crop Protection, “with a strong interest in working in some sort of environmental job afterwards and a hankering towards Antarctica at some point in the future.” This led to various contracts working on vegetation surveys, salmon river habitat surveys, developing a Pink-footed Goose Management Scheme and managing a coastal National Nature Reserve. Several of these contracts have involved working for Scottish Natural Heritage (the New Zealand equivalent of DOC). A keen interest in the outdoors led to “almost obsessive enthusiasm” for rock and ice climbing in Scotland, Wales, England, the French and Swiss Alps, and a tramping foray into North Alaska. With an interest in photography too, Rod won one of the categories for the International Wildbird Photographer 2006 with a picture of an Adelle penguin on an iceberg. He eventually succeeded in getting to Antarctica and spent six years with British

Antarctic Survey (BAS) in different roles as a Freshwater Field Research Assistant, Acting Base Commander at Signy Island and as a Station Support Manager at Rothera. Rod arrived in New Zealand at the end of last year and worked for a short period with a quality assurance and biosecurity company, before gaining his Operations Planner/Programme Support Supervisor role with Antarctica New Zealand.

Yvonne Boesterling, Scott Base Planner/Co-ordinator appears to be well suited to her new role: she spent her first night in an igloo at the age of 6. More recently, Yvonne comes from the hospitality industry. She spent more than 10 years in the Food and Beverage area and has a strong background in hotel management in New Zealand, the United States and the Caribbean, where she managed teams that provided up to 4000 meals per day. Event planning was a large aspect of the success of her departments. She spent a large portion of her career focussing on promotions and marketing to ensure there is continuous improvement in both service and revenue. “As Scott Base Planner/Co-ordinator I look forward to the challenge of integrating past experience with a new environment,” she said. “I look at my presence there as a privilege, and understand it for the opportunity of a lifetime that it represents. A smooth operation is co-ordinated by providing the service for our external customers, and providing the tools and resources for our internal customers. The fascinating thing for me is that all this will take place in a part of the world that will forever provide mystique as well as enabling science to discover answers. This is what makes this opportunity the epitome for me – to blend hospitality with a challenge of the mind and body.”



Rod Strachan



Yvonne Boesterling



Simon Trotter



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Cover Image

RV Tangaroa surveys the waterway between Possession Island and the Antarctic Mainland. Photo courtesy of John Mitchell, NIWA (2001).

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