

ANTARCTIC



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ANTARCTIC



COVER



The MV Ushuaia wedged in fast ice during the journey. Photo by Charlotte Taylor.

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SOUTHERN OCEAN GUARDIAN AWARDED CONSERVATION MEDAL

The World Wildlife Fund's (WWF) highest accolade, the Duke of Edinburgh Conservation Medal, has been awarded to Dr Denzil Miller, Executive Secretary for the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR). Denzil received the award for implementing significant innovations by CCAMLR that have directly enhanced the preservation of the Southern Ocean.

"Dr Miller has shown exemplary leadership, responding to the global fishing crisis by pioneering new ways to safeguard our seas, particularly in the Southern Ocean... his contributions make him a worthy recipient of the Duke of Edinburgh Conservation Medal," said WWF International's Director General James Leape at the awards ceremony held in London.

The Duke of Edinburgh Conservation Medal is awarded annually by WWF for outstanding service to the environment. At its inception in 1970 it was known as the WWF Gold Medal, but on Prince Philip's retirement as WWF

International's President in 1996, it was renamed the Duke of Edinburgh Conservation Medal as a tribute to him.

Dr Miller received the award from WWF International's President Emeritus, HRH The Duke of Edinburgh, at a ceremony at Buckingham Palace.

Dr Miller said, "I see my award as strongly reflecting the good work undertaken over many years by a large number of extremely dedicated scientists, policy makers and diplomats as well as by the Commission for the Conservation of Antarctic Marine Living Resources. Our generation has an awesome responsibility in passing on a sustainable marine heritage to future generations. Governments, scientists, fisheries managers and civil society all play a role in the management of our oceans."

A high level of destructive and illegal fishing occurs in the Southern Ocean. Pollution, invasive species and climate change also threaten this unique environment. At the ceremony, WWF urged other regional fisheries management



Dr Denzil Miller receiving the Duke of Edinburgh Conservation Medal from WWF International's President Emeritus, HRH The Duke of Edinburgh. Buckingham Palace, London, UK. © Lynn Hilton.

organisations established to control high seas fisheries to follow CCAMLR's lead and establish science-based management regimes. WWF is also calling for an ecologically representative network of marine protected areas covering at least 10% of the 35 million km² (13.5 million square miles) Southern Ocean by 2012 in order to sustain a healthier marine environment.

EXTENDED ANTARCTIC SUMMER SEASON

After a successful Antarctic summer season, Antarctica New Zealand, supported by the United States National Science Foundation, will extend its 2007/08 Antarctic summer season until mid-April.

Under normal circumstances New Zealand's season for scientific field work runs from the first week in October until mid-February, when both Scott Base and McMurdo Station say farewell to their summer crews on the final flight north until WINFLY in August. This year though, the United

States Air Force C-17 aircraft will be used to make the first ever late-season flights in mid-April.

Antarctica New Zealand Chief Executive Lou Sanson said the longer season would provide researchers with valuable information on how Antarctic ecosystems shut down for the long winter period. "We have made this decision because a number of International Polar Year (IPY) initiatives have shown there is a need for an extended summer season, in order to better understand the adapta-

tions to the Antarctic and Southern Ocean environments. This has also given us the ability to work with the US on their flagship International Polar Year research programme."

Scott Base Winter Manager, Grant Hill said "Normally our only physical contact over winter is the mid-winter flight in August. We are looking forward to the April extended season and the challenges of keeping the scientists out in the field in the extreme conditions of an approaching Antarctic winter."

Dr Fred Davey Awarded New Zealand Polar Medal

Dr Fred Davey's major contributions to our knowledge of Antarctica over the past forty years was recognised, when he was awarded the New Zealand Polar Medal. He started his Antarctic geophysics research career in the UK and made four visits to Antarctica in the 1960s, when he made the first seaborne gravity measurements in the Antarctic and interpreted the structure of the Antarctic Peninsula in the then new, plate tectonic context. He made his first visit to the Ross Sea region in the early 1970s where he discovered, in collaboration with US colleagues, the major sedimentary basins that form the continental shelf there. This research provided the locations and scientific rationale for the Ross Sea Deep Sea Drilling Project sites. Since then his research has concentrated on the major rifting along the western side of the Ross Sea. He made the definitive Ross Sea morphology map that has been regularly updated and is widely used.

As Director of Geophysics Division, DSIR, in the 1980s, he encouraged the development of the over-snow crustal seismic studies where NZ scientists, in collaboration with US colleagues, were world leaders at the time, and strongly supported the CIROS drilling project. At this time he worked on two geophysical projects on the Ross Ice Shelf and contributed scientifically to the CIROS project and to other geophysical surveys. In 1991, he jointly initiated and was co-Principle Investigator on the highly successful Cape Roberts Drilling Project.

As a result of his work, Fred published 45 reviewed research



papers and five maps of Antarctica. He is a Fellow of the Royal Society of New Zealand. He has made 12 visits to Antarctica with durations ranging from 5 days to 6 months.

Fred was actively involved in the work of the Scientific Committee on Antarctic Research (SCAR) having just completed 20 years (1986 - 2007) as the New Zealand Delegate or Alternate Delegate to the organisation. During this period he was elected as the Secretary of SCAR for 1996 - 1998 and, subsequently, as a Vice-President of SCAR for 1998 - 2000. He held many other positions within SCAR, including chairing the Working Group on Solid Earth Geophysics. He contributed significantly to the ANTOSTRAT programme, leading the working group on the Ross Sea region and preparing the proposal for international offshore drilling. Fred was also the geoscience technical member of the NZ Delegation to the Antarctic Treaty Special Consultative Meetings on Antarctic mineral resources which was

successfully concluded, but not subsequently ratified.

He was a member of the Ross Dependency Research Committee from 1988 to 1996, contributing to the preparation of the NZ research strategy during this time. From 1990 to 2002 he chaired the Royal Society of New Zealand National Committee on Antarctic Research, during which time he made a significant contribution to environment protection through contributing to and reviewing the revision of NZ management plans for the Antarctic Specially Protected Areas. He also led the successful resolution of a US-NZ disagreement over the installation of a NZ satellite communications system in a protected area, the Arrival Heights SSSI (Site of Special Scientific Interest), Ross Island. Fred's contribution to Antarctic conservation continued through the work of the Antarctic Heritage Trust on which he represented the President of the Royal Society of New Zealand for seven years (1999 - 2006).

AIRCRAFT DAMAGED ON ANTARCTIC TAKE-OFF



Photo of the damaged Basler aircraft shortly after the accident.

Members of a US Antarctic field party were unhurt after a Canadian-owned Basler aircraft crashed and was damaged while attempting to take off from a remote research field site in West Antarctica in the 2007/08 season.

It was reported by one of the passengers on board at the time that the National Science Foundation (NSF) chartered aircraft sustained heavy damage in late December 2007 after one side failed to lift off, catching the ice and shaking the passengers and equipment.

The Canadian-owned charter plane, returning from fieldwork dropping global positioning system units and seismic sensors, was severely damaged.

The 10 passengers were delayed from leaving the West Antarctic Ice Sheet for a further 20 hours before two Twin Otter aircraft from the US McMurdo Station came in to complete the removal of the passengers and equipment and inspect the damage to the aircraft.

One of the passengers was running an information site with details of the accident at: http://www.canadiancontent.net/commtr/canadian-basler-aircraft-crashes-antarctica_857.html.

WORLD'S LARGEST DINOSAUR BONES FOUND NEAR SCOTT BASE

Fossil remains found near New Zealand's Scott Base have been identified as the largest creature to ever walk the Earth.

The fossils, dug out of rock near the Beardmore Glacier, are said to be from a four to six ton creature that is estimated to have been seven to eight metres (26 feet) in length.

The dinosaur has been named *Glacialisaurus hammeri* and the age of the bones identifies it as living about 190 million years ago. *G. hammeri* has been classified as a massive plant-eating primitive sauropodomorph (a cousin of the true sauropods) and is a new genus and species. A description has been published by scientists in the journal *Acta Palaeontologica Polonica* and is based on the fossil partial foot, leg and ankle bones that were found. The fossils were carefully removed by a research team from the ice and rock using jackhammers, over the course of two Antarctic field seasons.

The discovery shows that sauropodomorphs were widely distributed in the Early Jurassic-not only in China, South Africa, South America and North America, but also in Antarctica.

CHINN AWARDED DOCTOR OF SCIENCE

Trevor Chinn was awarded the prestigious degree of Doctor of Science (DSc) at a recent University of Canterbury, Christchurch, graduation ceremony for his significant original contribution to science in the fields of glaciology and alpine processes, Antarctic glaciology and polar processes.

Trevor's portfolio comprises an enormous volume of high-quality work sustained over nearly 40 years. His contributions to New Zealand snow and glacier research are recognised as pioneering, and the field investigations and data monitoring that he established form the basis of the ongoing understanding of the state of the cryosphere and its trends. The issues that emerge from Trevor's work are not only regional, they contribute to the scientific understanding of climate change and the impact on the global cryosphere.

Trevor compiled a definitive inventory of the more than 3000 New Zealand glaciers. His inventory makes a valuable contribution to the global glacier inventory maintained in Zurich. Similarly in Antarctica, his field measurements of the Dry Valleys were far-seeing. He pioneered the study of glaciers that feed into the Dry Valleys. He grappled with such issues as flow, mass balance and melt of these glaciers.

Scouts on the Ice

It has been 100 years since the Scouting movement began. As part of the wider centenary celebrations New Zealand Scouts Matt O'Sullivan, Tim Johns, Tom Williams and Andy Bartle, accompanied by scout leader, John Dale, departed for Antarctica in December hosted by Antarctica New Zealand. Throughout their eight-day stay at Scott Base they will undertake Antarctic Field Training and participated in International Polar Year educational outreach projects.

The 100th anniversary scouting party was a continuation of a proud tradition of Scouts in Antarctica. The most well-known Scout in Antarctica was Paul Siple who served during Operation High Jump (1946 - 1947) and was the inaugural scientific leader at



Scouts on Ice pulling a Nansen sledge during field training (left to right: Tom Williams, John Dale, Matt O'Sullivan, Andy Bartle, Tim Johns) © J Watson, Antarctica NZ Pictorial Collection: K250 07/08.

the US Amundsen-Scott South Pole Station (1956 - 1957), during the International Geophysical Year. Paul's passion for the ice began as a representative of the Boy Scouts of America on Admiral Byrd's first Antarctic Expedition in 1929.

Scouts have been visiting Scott Base since 1960 as part of the early youth to Antarctica programmes which have now evolved into the

current Antarctic Youth Ambassador scheme. This programme is jointly administered by Antarctica New Zealand and the Sir Peter Blake Trust.

Whilst at Scott Base the 100th Anniversary Scout group assisted in the construction of a trail between McMurdo Station and Scott Base further cementing relations between these important partners in Antarctica.

DWARF PLANET FRAGMENTS FOUND IN ANTARCTICA

Two pieces of meteorite found in 2006 in the Graves Nunataks area of Antarctica are likely fragments of a dwarf planet destroyed in the solar system's youth, *New Scientist* reports.

Detailed studies of the two meteorites, dubbed GRA 06128 and GRA 06129, revealed that they contain 75 - 90% of the mineral feldspar, indicating their parent body underwent differentiation, in which dense material settles towards the centre of molten, magma bodies in their first few tens of millions of years. Only larger planetary bodies undergo such differentiation. A scientist who studied the meteorites from the Lunar and Planetary Institute in Houston,

Texas, said that "the amount of feldspar in the two meteorite fragments suggests they are remnants of a very large body that differentiated in a similar way."

This conclusion is backed by other studies of the meteorite remains, by teams from the University of Maryland, the University of New Mexico, and a third by Washington University in St Louis, Missouri. All concur that "the parent body must have been massive enough to have separated into layers."

The University of Maryland team also ruled out the possibility that GRA 06128 and GRA 06129 were bits of the Earth, Mars, Moon or Venus. The conclusion was that this is a piece of a dwarf-planet

size body that apparently no longer exists, a sample of a strange world, a sample we've never seen before. The feldspar concentrations suggest that the body was probably smaller than the 3,500 kms (2175 miles) wide Moon but larger than Vesta, the third largest asteroid in the solar system at 578 kms (360 miles) across. The evidence to back this calculation comes from meteorites believed to come from Vesta which contain solidified lava, but not large concentrations of feldspar, suggesting its gravity was not strong enough to form a distinct layer of the mineral. How this dwarf-planet body disappeared is unknown.

ANTARCTIC ENERGY SOLUTIONS

Creative solutions to Antarctica's energy needs have won nine New Zealand secondary school students scholarships to study engineering at the University of Canterbury (UC). Antarctica New Zealand CEO, Lou Sanson, and Director of the UC's Electric Power Engineering Centre, Professor Pat Bodger, presented the awards at a ceremony in Christchurch.

Sixty students from around New Zealand took part in the 2007 Energise Your Future Challenge. Working in teams of three, the students were asked to design a standalone renewable energy system for a research station in Antarctica. Students had to determine the total energy requirements for the station and the best form of renewable energy taking into consideration policy, environmental and social issues associated with Antarctica.

Team Penguin from Christ's College in Christchurch won first prize for its engineering solution that focused on wind and solar energy. Tristan Read, James Moore

and Sam Hamilton each won scholarships worth \$NZ4000 over two years while the college was awarded a prize of \$NZ2000. Team Ramrod from Onslow College in Wellington was placed second with Cian Morrissey, Alex Neiman and Hamish Williams each awarded scholarships worth \$NZ3000 over two years. In third place was Team Poison Ivy from Auckland Girl's Grammar School with Suwan Meng, Shelley Lin and Divya Pasupula each awarded scholarships worth \$NZ2000 over two years.

Speaking at the prize ceremony, Antarctica New Zealand CEO Lou Sanson told the students that their work was of real relevance to the international community which was striving to address the issue of renewable energy in the Antarctic. "The question is how do we operate in the harshest climate on earth with the lowest possible carbon footprint", saying he would put forward the students' ideas to the energy management group at Antarctica New Zealand.

WARMING RISKS ANTARCTIC SEA LIFE

Non-native crab species are poised to return to Southern Ocean shallows, threatening native creatures such as giant sea spiders and floppy ribbon worms, a joint research team from the US and UK warn.

In the last 50 years, sea surface temperatures around Antarctica have risen by 1 to 2°C, which is more than twice the global average and this warming environment will mean creatures that could not usually survive in Antarctica will move in, establish themselves and eventually become invasive. This could fundamentally change the Antarctic ecosystem, leading to the loss of some species as invasive alien species are one of the greatest threats to biodiversity globally.

"Sharks are going to arrive in Antarctica as long as the warming trend continues, a bit more slowly than crabs - crabs are going to get there first," said Professor Cheryl Wilga of the University of Rhode Island (URI), US. "But once they do get there they are capable of eating the organisms that live there." Antarctic shrimp, ribbon worms and brittle starfish are likely to be the most vulnerable to population declines.

Global warming is removing barriers to invasions and we've seen recently that crabs, especially king crabs, are on the doorstep of Antarctica. Alien species can now be brought into these waters, for example through ships' ballast water, and chances are the conditions will be more suitable to their establishment. The researchers are calling on actions to protect this pristine environment.

The Committee for Environmental Protection (CEP) will be considering the issue of non-native species in the Antarctic at its upcoming meeting (CEP XI) as part of Antarctic Treaty Consultative Meeting XXXI in June in Kiev.

AIR ACCIDENT INVESTIGATOR KILLED

The man who was chief inspector of air accidents in New Zealand at the time of the Mt Erebus accident was killed by a car while walking outside of his home several weeks ago. Mr. Ronald Chippindale, author of the "Chippindale Report" on the 1979 crash of the Air New Zealand plane into Mt Erebus, died aged 75, after a car struck him as he was taking a morning walk near his Porirua home, north of Wellington, New Zealand.

The Chippindale Report, which Chippindale led as the Chief Inspector of Air Accidents at that time, was the result of a six-month inquiry into the tragedy. In his report, he blamed the crew of the DC10 for the accident which killed all onboard. A year later, a report by Justice Mahon would blame the airline. The New Zealand Court of Appeal would later find Mahon's findings went beyond his jurisdiction.

The driver of the car which killed Chippindale was shaken but unhurt and an investigation into the circumstances surrounding Mr. Chippindale's death was a possibility.

Polar Stratospheric Clouds: Beautiful Destroyers

By Adrian McDonald & Rebecca Batchelor

Every spring since the early 1980s, a hole in the ozone layer has formed over Antarctica. Since the ozone hole was discovered in 1985 by scientists at the British Antarctic Survey (BAS), a huge amount of scientific research has been conducted to monitor and understand the intricate processes that drive this phenomenon. Surprisingly, the depletion of ozone by man-made pollutants, particularly Chloro-fluorocarbons (CFCs), was not unexpected. Atmospheric chemists in the USA had identified the potential for ozone depletion based on gas-phase chemistry. But, what did come as a surprise to scientists was the rate and sheer magnitude of the depletion observed over the Antarctic.

Scientists had also predicted that the ozone depletion would occur significantly higher in the atmosphere, above 40 kms (25 miles), than balloon and satellite measurements showed the depletion to be occurring. This was between roughly 12 and 24 kms (7.5 and 15 miles) – right in the peak of the ozone layer. After much work, the missing factor in the equation was identified. Special chemical reactions were occurring on the surface of Polar Stratospheric Clouds (PSCs). These beautiful clouds, first identified by the early polar explorers and often called nacreous clouds because of their lustrous rainbow-like play of colour (Photos 1 and 2), allowed chemical reactions to occur that released chlorine in a form where it could catalytically destroy ozone.

PSCs play two vital roles in ozone destruction; first, they provide the mechanism to change chemicals from pollutants, particularly CFCs, into an ozone-depleting active form; and second, the cloud particles trap molecules that would otherwise change the ozone-depleting chemicals back into safe forms, thus increasing the amount of ozone destroyed. Additionally, the cloud particles are large and sticky, so ozone and the activated chlorine particles may become attached to their surface, increasing the probability of interactions between these chemicals. This is technically termed heterogeneous chemistry.

Ozone, the Earth's shield against ultra-violet (UV) radiation, is mostly contained in a layer (the ozone layer) in the stratosphere. The stratosphere is the region between roughly 10 and 45 kms (6 and 28 miles) above the Earth's surface. It is very dry and the air is very thin, thus extremely low temperatures (less than -80°C / -112°F) are required for clouds to form. This is why PSCs are only produced in the polar winter stratosphere, and why ozone depletion is most significant at

the poles. Figure 1 displays the temperature evolution in the Arctic (1a) and Antarctic (1b) regions. It is the difference in temperature (the Antarctic is colder), and thereby the difference in the number of PSCs, which explains the relatively small amount of ozone depletion observed in the Arctic compared to the Antarctic.

While the role of these clouds is well-known, the difficulty in measuring PSCs at the altitudes at which they form (approximately 12 to 24 kms / 7.5 to 15 miles above sea level), and in trying to simulate them in a laboratory, means that there are still a number of questions to be answered. For example, current theoretical calculations have trouble predicting the quantity of PSCs that are observed, and we don't yet understand the formation process of certain PSC types above the temperatures necessary to form ice in the stratosphere.

Continued over...



Photo 1: Polar stratospheric clouds (PSCs) from the Arrival Heights Laboratory, Ross Island, Antarctica, 14 August 2006. Rebecca Batchelor.



Photo 2: Polar stratospheric clouds (PSCs) observed from Scott's Hut, Hut Point, Ross Island, Antarctica, 2007. Courtesy of Scott Base staff 2007.

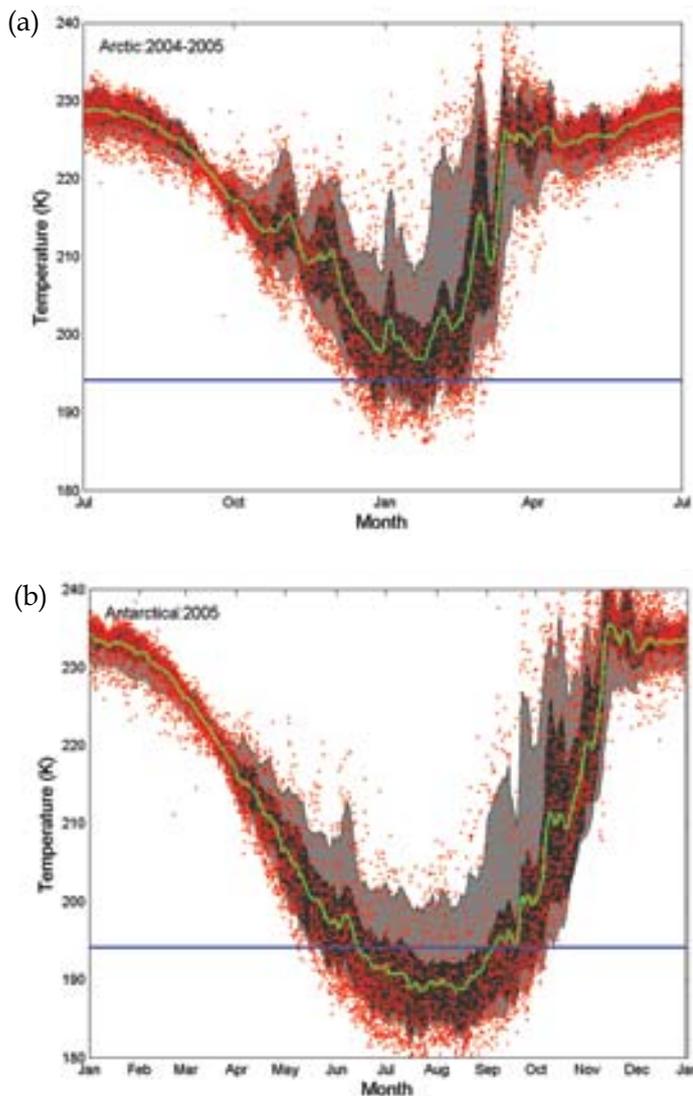


Figure 1: Seasonal variation of stratospheric temperature for the Northern (a) and Southern (b) hemispheres. The solid data line indicates the mean temperature. The dots display individual measurements from the CHAMP satellite. The horizontal line indicates the approximate formation temperature for PSCs. Both sets of observations show the temperature at an altitude of 16 kms/10miles. (Degree K = Degree C + 273).

Various potential ways to enhance the production of PSCs have been proposed. The most likely seems to be the presence of small-scale rapid variations in temperature. One common small-scale temperature variation that is observed in the stratosphere and which may potentially impact the production of PSCs are "Mountain waves". Mountain waves are oscillating motions in the atmosphere which are induced by the wind flow over a mountain. These are generally observed on the lee side of the mountain range.

To observe these waves and to study their impact on PSC production, the French space agency launched 27 super-pressure balloons in September and October 2005 from Ross Island, Antarctica, during the Strateole/Vorcore campaign. These special weather balloons, which

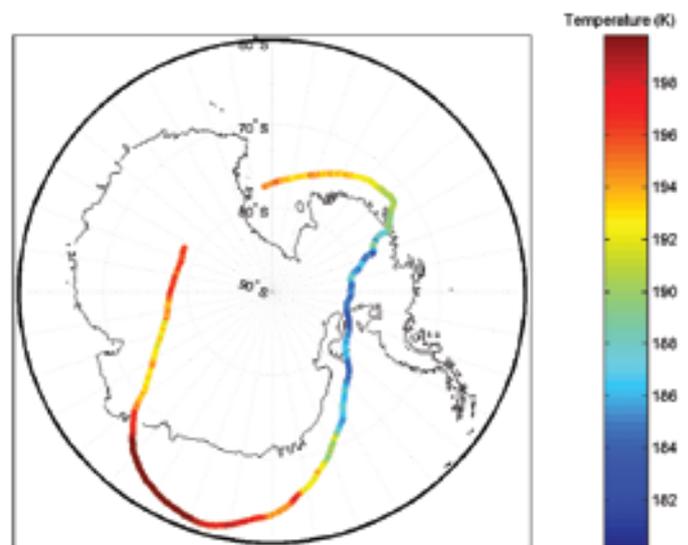


Figure 2: The diagram above displays the temperature in K measured along the trajectory of a five-day period of a super-pressure balloon flight associated with the Strateole/VORCORE campaign.

have lifetimes of months rather than hours, provided a uniquely detailed spatial and temporal description of the Antarctic stratosphere. Figure 2 shows the temperature (colour scale) measurements made over a five day period displayed along the balloon's trajectory. While the overall temperature pattern (e.g. cooler temperatures near the Antarctic Peninsula) can be observed from normal weather balloons and satellite measurements, the small-scale structure (e.g. regions going from light to dark near the Peninsula) can only be observed accurately by this type of measurement. The measurements made during this campaign are being used to study Mountain wave motions and the resultant PSC formation. Researchers at the University of Canterbury (UC), Christchurch, New Zealand, have begun initial collaborations with French researchers to examine these waves and the clouds that they form. In particular, the UC researchers are comparing the long-duration balloon measurements with satellite observations to gain a greater understanding of the limitations of the large-scale, but less detailed, satellite observations. Funding from the Brian Mason Scientific and Technical Trust is supporting some of this research.

Between August and November 2008 a second program called CONCORDIASI will launch more of these super-pressure balloons from the US McMurdo Station. This program will use improved technologies to provide better measurements and will also add extra instrumentation to the suite housed in the balloon gondola. These unique measurements will examine whether Mountain waves play a role in PSC formation at the start and end of the Antarctic winter. This second set of measurements should provide definitive answers to some of the unsolved questions about PSCs, and hopefully allow the next generation of models to accurately determine the future evolution of the Antarctic ozone hole.

ROBERT (BOB) THOMSON

1927 – 2008

Bob Thomson's association with the Antarctic was almost unparalleled. In a career stretching 30 years beginning in 1958, he made 78 trips to the ice. For 23 years he was the head of the New Zealand Antarctic Programme. Bob died, aged 80, on 3 January 2008 in the United States.

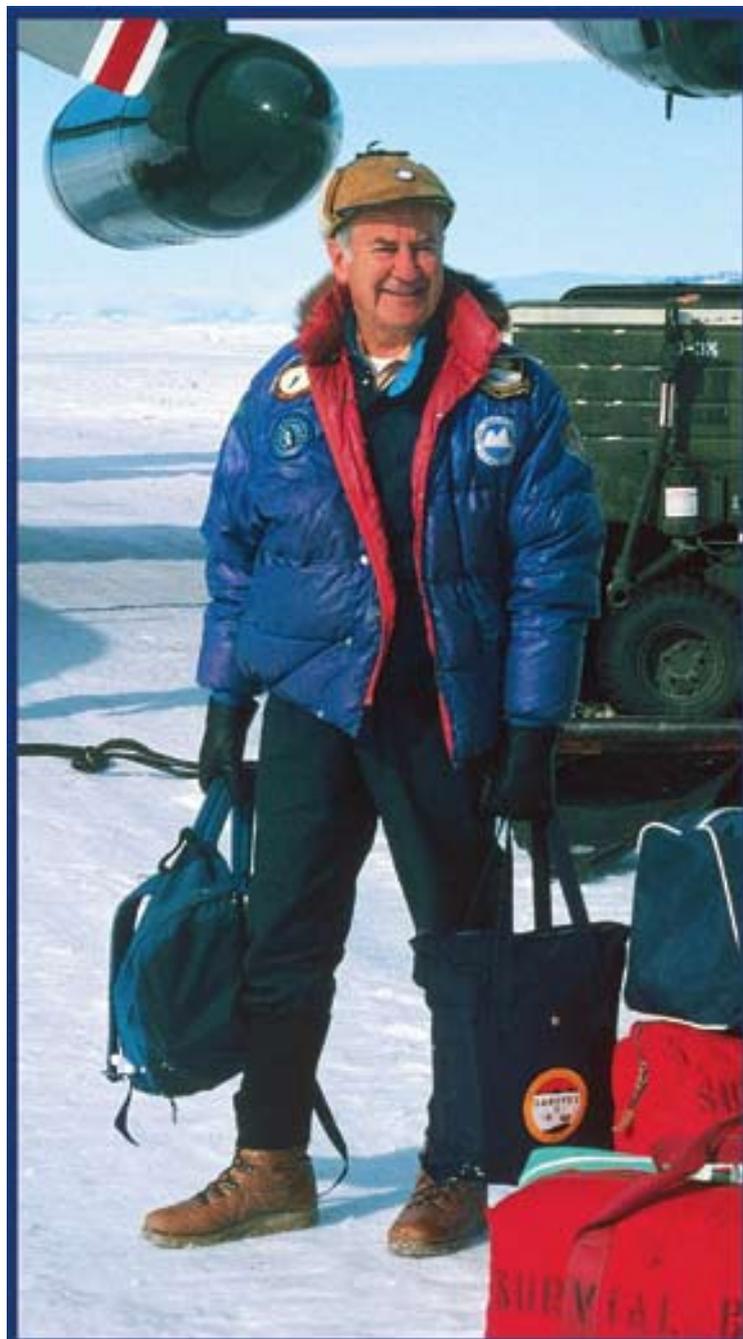
Born in the North Island of New Zealand, he studied at New Plymouth Technical College and then at the University of Melbourne, Australia. Bob served what he called "his polar apprenticeship" in 1958 - 1959 when he lived and worked on the subantarctic Campbell Island as senior ionospheric observer. He followed that year with a winter-over in 1960 at the joint US / NZ station at Cape Hallett, where he was the station leader. After that, he spent the following year at Scott Base as public relations officer and postmaster.

In the early 1960s he worked for the Australian Antarctic Programme as stores and logistics officer and then as officer in charge of the joint US / Australian Wilkes station. It was during this time that he and five others traversed from Wilkes to Vostok station and return, by tractor, in 120 days. At that time, it was one of the longest Antarctic traverses on record, covering a total of almost 2900 kms (1800 miles). Bob was awarded an OBE in the Australian honours list for his leadership of scientific observations during this time.

After working for the Australians, he returned to New Zealand and became deputy leader at Scott Base and technical officer with the Geophysics Division before his appointment as Superintendent of the Antarctic Division in 1965. In difficult times, he advocated successfully for the continuation of New Zealand's Antarctic science programme and secured government funding of that science.

Bob was awarded a second OBE in the New Zealand honours list for his work in the aftermath of the Mount Erebus tragedy. He was also awarded the New Zealand Polar Medal.

Robert (Bob) Baden Thomson died in Virginia, USA, where he had moved to, from Christchurch, in the early 1990s. He was 80 years old. A framed photo, along with a list of some of his many achievements (shown here) will be hung in Scott Base in his memory.



Robert Baden Thomson
OBE, Polar Medal

Senior Ionospheric Observer, Campbell Island 1958 - 1959
 Scientific Leader, Hallett Station (Joint US/NZ) 1960
 Public Relations Officer and Postmaster Scott Base 1960 - 1961
 Officer-in-charge, Wilkes Station (Joint Aust/US) 1962
 Leader Vehicle Traverse from Wilkes to Vostok (USSR) 1962 - 1963
 Deputy Leader Scott Base 1963 - 1964
 Superintendent / Director Antarctic Division, DSIR 1965 - 1988
 Chairman, Antarctic Treaty Consultative Meeting (ATCM) Working Group 1979 - 1980
 Influential in improving air safety in Antarctica following the Erebus tragedy
 Awarded Order of the Sacred Treasure, Gold Rays with Neck Ribbon by Japan 1993
 Author, *The Coldest Place on Earth* 1969
 Thomson Peak and Thomson Massif are named in his honour

SIR EDMUND PERCIVAL HILLARY

1919 – 2008

Mountaineer, adventurer, philanthropist.

Born: Auckland, New Zealand, 20 July 1919

Died: Auckland, New Zealand, 11 January 2008

Sir Edmund Hillary was often given the title of greatest living New Zealander, but he always rejected this title. "I like to think that I'm a very ordinary New Zealander," he said in 2003 at a New Zealand Parliament celebratory event which marked the 50th anniversary of his conquest of Mt. Everest. He backed this up by insisting people called him "Ed". But, when he and Sherpa Tenzing Norgay reached the Himalayan pinnacle Mt. Everest, he became one of the most famous men in the world.

He was the first person to ever stand atop the North and South Geographic Poles and Mt. Everest, a hat-trick that was added to his lists of firsts in April 1985 when he journeyed to the North Pole.

The Antarctic Society will remember Ed for his work as Patron of the New Zealand Antarctic Society, an honour bestowed on him by the Society for his work as co-leader of the Commonwealth Trans-Antarctic Expedition (TAE) of 1955 - 1958. During the TAE, Ed led his New Zealand Ross Sea Party in the building of Scott Base and on an overland traverse by tractor from Scott Base to the South Pole, the first overland journey there since Robert Falcon Scott and his group reached the pole. The TAE was, at that time, called "the biggest adventure offered" in New Zealand, and the leader, was Ed. New Zealand's TAE personnel are listed in the definitive book *Antarctica* written in 1964 by Helm and Miller. In that book, on page 76, is a description of Sir Edmund Hillary, *Leader*, it reads:

"Sir Edmund Hillary, mountaineer and apiarist, had achieved world fame in the Himalayan regions before his selection as Leader of the New Zealand Party of the Trans-Antarctic Expedition. Born in Auckland in 1919, he was educated at Auckland Grammar School, and after two years at Auckland University College he tried a variety of jobs before settling down at his father's bee farm until 1943, when he joined the Royal New Zealand Air Force. He served in the Pacific Theatre in 1944-45 as a



Sir Edmund Hillary arriving in Antarctica for the Scott Base 50th anniversary.
© Mike White, Antarctica NZ Pictorial Collection: K250 06/07

navigator on Catalina flying boats. Upon demobilisation he went into partnership with his brother on the apiary.

A keen mountaineer, he gained his experience in the Southern Alps before joining the New Zealand Garwhal Expedition to the Himalayas in 1951. Earle Riddiford, later to be a member of the Ross Sea Committee, George Lowe, who was to be one of his companions on the Everest Expedition and with Dr Fuchs on the Crossing Party, and Ed Cotter were his companions. While on this expedition he was invited to join the British Everest Reconnaissance, 1951. Later he served with the British Cho Oyu Expedition in 1952; and in the British Everest Expedition 1953 he became, with Sherpa Tenzing, the first to reach the summit of Mt. Everest. This was in May 1953, just prior to the Coronation of Her Majesty Queen Elizabeth II. In 1954 he was the Leader of the New Zealand Himalayan Expedition. Hillary was married with, when selected, one child.

His publications included *High Adventure* 1955, and (with George Lowe) *East of Everest* in 1956. Among the honours he has been awarded were: Knighted (K. B. E.), 1953; Hubbard Medal (US), 1954; Star of Nepal First Class; and the US Cullum Geographical Gold Medal, 1954."

The success of the TAE led to even further honours, including the award of the Polar Medal in 1958 and an induction into the Order of New Zealand in 1987. In 1995 he was made Knight of the Order of the Garter.

In 1953, he married Louise and they had three children, Peter, Sarah and Belinda. In March 1975, he lost Louise and their daughter Belinda in a plane accident in Kathmandu. In 1989 he married June Mulgrew, now Lady June Hillary.

He returned to the land that he loved many times after he established the Himalaya Trust in 1961 and during his time as High Commissioner to India, Nepal and Bangladesh from 1985 - 1989.

He made his last trip to the Himalayas in April 2007 and his last trip to Antarctica in January 2007.

During 2007, Antarctica New Zealand and the New Zealand Antarctic Society organised events to commemorate the 50th anniversary of the TAE and International Geophysical Year (IGY). Ed was part of the celebrations, returning to Antarctica in January 2007 with Antarctica New Zealand and participating in the New Zealand Antarctic Society



Sir Edmund Hillary relaxing at the A Frame on his last visit to Antarctica January 2007

© Mike White, Antarctica NZ Pictorial Collection: K250 06/07

organised jubilee event in Christchurch, with Lady June, as honoured guests in the September weekend of celebrations. The Christchurch event was one of the last public events Ed attended.

It is impossible to write a fitting tribute to a man who was larger than life. And many writers who knew Ed well have commented that the modest man would have been uncomfortable with all the fuss being made of his death. Ed is often noted as saying that he hated the idea of being immortalised in statues and explicitly said would prefer the continuance of his Himalayan Trust to be his permanent memorial. On his last trip to Antarctica, Ed was taken to the Dry Valleys, where the giant man stood overlooking its profound landscape and said that it was one of the most beautiful landscapes he had ever seen. During that trip he also enjoyed quiet times with others who loved exploration and the peace that wilderness provides. All who meet him during his Antarctic visits will certainly remember him for their own personal reasons. Hopefully, in his quiet way, he would be pleased with that.



Sir Edmund Hillary introducing a husky pup to children in Dunedin as part of the public farewells to the TAE team as they left New Zealand in December 1956.

Antarctica NZ Pictorial Collection: TAE 261

Antarctic Society Laments Loss of Hero

(press release of 11 January 2008)

The New Zealand Antarctic Society today described the loss of Sir Edmund Hillary as "a time of huge sadness and the closing of a heroic era in New Zealand exploration."

"The Society hails the magnificent contribution of its longstanding patron to our country and the world," said Mr Norm McPherson, president of the Antarctic Society.

"We were privileged to recently welcome and honour him in Christchurch in September 2007 at the national anniversary of New Zealand's 50 years in Antarctica," said Mr McPherson. "He was acclaimed in Christchurch by its citizens as a national hero as much now as in the '50s."

"Sir Ed launched that wonderful half-century with his leadership of the New Zealand party during 1957-58 which saw the building of Scott Base and his historic journey by tractor to the South Pole."

"We will all share the loss of a man of great courage, iron will and quiet strength of character. The New Zealand Antarctic Society extends its condolences to Lady Hillary, to Peter, and families."

Norman McPherson
President NZAS

STUDENTS ON ICE VOYAGE – ONE TO REMEMBER!

New Zealand IPY Youth Steering Committee (YSC) Polar Contest Winner, Charlotte Taylor, recalls her Antarctic trip with “Students on Ice” – the fabulous prize that she received for her winning entry in the 2007 NZ YSC Polar Contests.



The MV Ushuaia wedged in fast ice during the journey.

In the early hours of the morning of January 4, 2008, the *MV Ushuaia* pulled out of Port Lockroy to begin our last day in this frozen wonderland. The weather was breath-taking, the sky was so blue it looked as if someone had taken to it with a paintbrush. The sea, glass calm, created reflections of the huge mountains and glaciers in colours that can't be caught on film nor described to anyone. I think this day sticks in my memory the most. As we cruised further into Wilhelmina Bay, the Captain spotted fast ice over uncharted waters and surprisingly continued full steam ahead ramming the *Ushuaia* into the ice. As crew members disembarked to test the thickness of the ice, we all stood on deck watching and waiting for our leaders to disappear. Given the go ahead we all piled into the zodiacs for the extremely short cruise to the ice, the sheer size and beauty of the surroundings – as corny as it sounds – made you wonder what you were doing here in Antarctica and on this planet. The crashing of snowfall from these peaks and glaciers made you appreciate the awesome power mother nature has and the two penguins playing tag on the ice during our moment of silence made you realise what a special place we were in. This frozen continent has the power to both give and destroy life-who knows what will happen in its future.

All I know for certain is that it was here in this unnamed, uncharted bay, that we truly became ‘Students on Ice’.



First prize winner Charlotte Taylor (front, right) and second prize winner Carina Donald (front, left) at the awards ceremony. Standing in the background (left to right) is Lou Sanson (CEO Antarctica New Zealand), Daniela Haase (IPY YSC Vice Chair), Melianie Raymond (IPY YSC Chair), and Professor Bryan Storey (Director Gateway Antarctica).

I have caught Antarctic fever

Antarctica – It was amazing, awe-inspiring, majestic, and thrilling, a sense of adventure and isolation. When I tried to tell people about it on my return I found it very hard to describe. I could show them the pictures and whilst they were impressed with the colours, scenery, animals and experiences, I wanted to tell them that these photos were nothing like the real thing. I realised that of all the thou-

sands of photos I took (thank goodness for digital cameras) nothing really managed to encompass the place – especially the spirit of it.

Something extraordinary about this continent is the silence, something I realised that I don't hear living in a city. The other incredibly special culture of Antarctica is that no-one, individual or Country seems to want to dominate it, not that it would be an easy land to tame. When we landed at the bases you came to appreciate that everyone we met was trying to keep Antarctica unspoilt. This is such a difference to any other country that I have ever visited where history has always had conquerors with monuments erected to their glory. I think this trip taught me that really special moments cannot be captured on film but rather grow inside you. Antarctica is a place that I would gladly suffer seasickness again to return to. It really is that special.

I am so lucky to have been given this opportunity, not only to be part of ‘Students on Ice’ but to have been part of such a historical event as the International Polar Year. We were lucky enough to be joined by Dr Fred Roots on our trip; he was present in Antarctica during the last International Geophysical Year, 50 years ago. It made me hope that I would be lucky enough to be back on the ice in 50 years time, seeing it unchanged as the day I left it.

Learning on Location in Antarctica

By Stephanie Gray

On a blistering hot Waitangi Day (4 February), 46 people across New Zealand were thinking about thermal clothing, thick socks and woolly hats.

As members of the inaugural Victoria University Antarctica Peninsula study tour, they were preparing for a once-in-a-lifetime expedition on the *Professor Molcanov*, chartered to voyage around the islands scattered at the tail of the Peninsula that curves towards South America like a scythe.

Led by geologists, Professor Peter Barrett and Dr Dan Zwartz, the 11-day tour departed from Ushuaia, a tourist hot-spot on the very tip of Argentina.

A beautiful region where steep mountains and plunging glaciers flank narrow channels filled with an amazing variety of icebergs, the Peninsula attracts the richest array of wildlife to the Antarctic.

For many people the tour realised a long-held dream, and the opportunity to travel with, and learn from, Professor Barrett – Wellingtonian of the Year 2006 and one of New Zealand's leading Antarctic climate change researchers – was too good to turn down.

For all the information relating to Antarctica out there – in the media, threaded through literature and art – being able to turn to our guides with questions, on location and in the thick of it, was invaluable.

A series of pre-tour lectures made for a better Antarctic experience and proved an excellent chance to learn about the history, geology and ecology of Antarctica as well as the pivotal role the continent plays in climate change. They were also a chance to get to know each other a little before leaving.

Of all the wonderful wildlife and places we saw, highlights of the tour included:



This young Gentoo penguin has not obviously read the environmental documents that require wildlife and people to keep their distance.

- Our first landing on Devil's Island in brilliant sunshine where we were greeted by hundreds of clamorous Adelie penguin chicks in varying states of moult.
- A cruise in the zodiacs where we manoeuvred through "growlers" and "berggy-bits", getting up close to these amazing chunks of ice, and to a leopard seal resting on a floe.
- Dancing on deck while anchored in the calm of Cierva Bay.
- A visit to an Argentine research station on the Antarctic continent itself. For some of our group the visit ticked off the last of all seven continents travelled.
- Writing postcards at Port Lockroy, a former British naval base and historic site that is now a museum.
- Swimming in the thermal waters of a volcanic caldera on Deception Island.



Tour members were treated to a late-afternoon cruise in Cierva Bay, where we enjoyed close encounters with berggy-bits, growlers, and a beautiful leopard seal.

A more detailed daily account of the tour can be read at:
www.slice-of-ice.blogspot.com

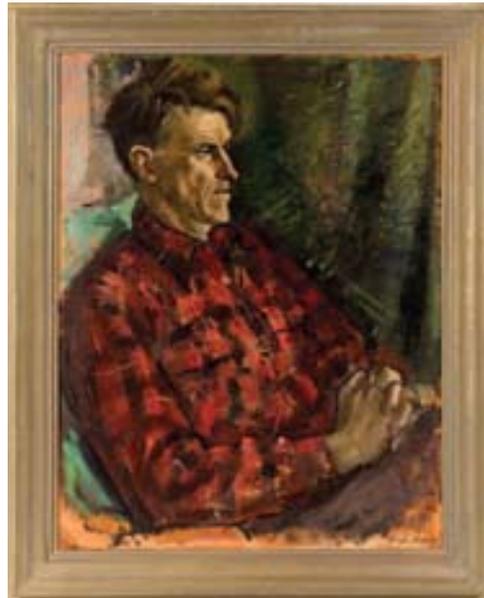
TREASURES FROM CANTERBURY MUSEUM: PORTRAIT OF SIR EDMUND HILLARY

By Natalie Cadenhead

In 1960, Jack Thwaites, a well known Tasmanian bushwalker, arranged an expedition to show Sir Edmund Hillary a little of the Tasmanian wilderness. The party consisted of Thwaites, Bruce Davis, Jim Brown, Sir Edmund Hillary, and his friend Dick Tornquist. On arrival in Hobart, Hillary and Tornquist stayed overnight at the home of artist Jack Carrington Smith. Due to the temporary loss of Hillary's luggage the expedition was delayed in starting, which allowed Carrington Smith the opportunity to begin work on a portrait in oils of Sir Ed.

The expedition covered 15 days from March 29 until April 12 1960. The party visited Lake Pedder, traversed the Arthur Plains and climbed into the then seldom-visited Western Arthur Range. They followed the Old Port Davey track down to Bathurst Harbour and Port Davey.

Jack Carrington Smith (1908 - 1972) was an artist and teacher born in Tasmania, Australia. He was interested in art from an early age and as a 15-year-old he had two water-colours accepted by the Launceston Art Society. He gained recognition in the 1930s and in 1936 he won a scholarship to study at the Royal Academy of Arts, London. He returned to Australia in 1939 and held his first one-man exhibition in Sydney before teaching first at Launceston Technical College, then Hobart Technical



Portrait in oils of Sir Edmund Hillary by Jack Carrington Smith, painted at the artist's home, Lower Sandy Bay, Tasmania in 1960. Canterbury Museum Pictorial Collection: 1984.16.1.

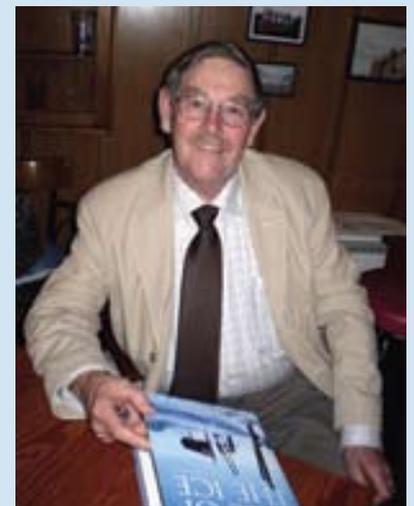
College in 1940. In 1963 the College became the Tasmanian School of Art and he remained its head until his retirement in 1970.

He participated in numerous solo and group exhibitions in Australia and overseas, winning numerous prizes for his work including five awards for portraiture. The subjects of his paintings were diverse from realistic scenic views to overtly abstract works. He was perhaps best known for his portraiture, in which he strove to portray the essence of his sitters. Widely considered to be the most important Tasmanian painter of the twentieth century, he is represented in every major Australian gallery and many galleries and museums throughout the world.

Call of the Ice Book Launch

Many an Antarctic filled the Canterbury Club in Christchurch for the launch of David Harrowfield's new book *Call of the Ice*. The book, launched during the week of events as part of the Christchurch Antarctic Festival 2007 and in the lead up to the weekend of celebrations commemorating the 50th Anniversary of New Zealand in Antarctica, is a tribute and celebration of the achievements of the men and women who have been at the cutting edge of Antarctic exploration and research.

The book documents the experiences of New Zealanders in Antarctica and provides a useful record of New Zealand's first 50 years in Antarctica. The book includes over 150 colour and black and white photographs and a series of maps of Antarctica created especially for the book.



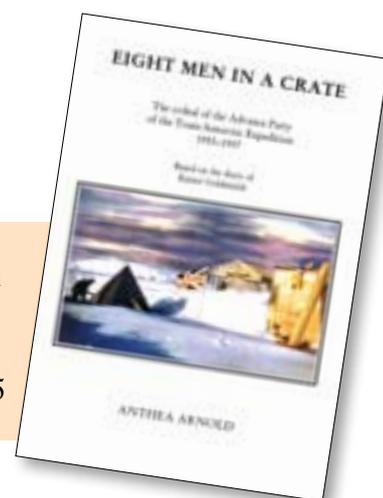
David Harrowfield with his latest book, Call of the Ice, after the book launch in Christchurch. Photo by Michelle Rogan-Finnemore.

EIGHT MEN IN A CRATE

By Anthea Arnold

The ordeal of the Advance Party of the Trans-Antarctic Expedition 1955-1957
Based on the diary of Rainer Goldsmith,
Medical Officer, Veterinary Surgeon and Dentist

Published by Bluntisham
Books – Erskine Press,
Bluntisham, UK, 2007
ISBN 978-1-85297-095-5



Review by Stephen Hicks

The so called 'heroic age' of Antarctic exploration is thought by many to have ended with Sir Ernest Shackleton's *Endurance* expedition, his epic yet futile attempt of 1914 to cross Antarctica. This gripping account, almost forty years later, of the survival of eight members of Sir Vivian Fuchs' Trans-Antarctic Expedition (TAE) advance party, deposited in haste on the hostile fringe of the Filchner Ice Shelf in the Weddell Sea, is a poignant reminder that heroism is also found in more modern times.

On 14 November 1955, Dr. Rainer Goldsmith, along with members of Sir Vivian Fuchs TAE party, as well as Sqdn Ldr John Claydon of New Zealand's Ross Sea Party, sailed from London headed for Antarctica. Their mission was twofold, first, to carry out reconnaissance and gain experience in the area of Vahsel Bay in the Weddell Sea, that same sea that had been the ruin of Shackleton in 1914. Second, they were to establish a base, to be named 'Shackleton', from which to launch their voyage across Antarctica the following year.

Rainer Goldsmith was a young 28 year old Cambridge graduate and medical doctor out of St Bartholomew's Hospital when he applied to join the TAE. He was selected to be one of the eight who would winter over in Vahsel Bay. It fell upon him to provide not only for the medical and dental

needs of the expedition but also the veterinary needs of the expedition's husky dogs. His diary provides a unique record of one of the most interesting periods of the TAE, covering, as it does, the voyage south on the *Theron* and a key portion of the eventful year leading up to the Antarctic crossing.

Anthea Arnold has combined her own descriptive prose with Dr. Goldsmith's vivid diary entries to create a unique and mesmerising tale of polar adventure. Without doubt they had excellent material to work with. The little Canadian sealer *Theron* barely made it through the Antarctic ice pack without being crushed and arrived at her destination in Vahsel Bay one month later than planned. This delay severely time compressed the programme of activity. This was exacerbated by a multitude of other issues as they unloaded the stores for the coming winter and learned to drive the tractors in challenging conditions. Finally, and all too soon, with new ice forming and steam rising from the frigid waters to announce the end of summer, Captain Harold Maro gave Fuchs the signal that departure was mandatory. Eight men, under the leadership of Ken Blaiklock, a seasoned Antarctic scientist/explorer, were left awkwardly waving from their perch on the bay ice as their ship sailed north back to London.

The book offers additional insight into events such as the *Theron's* stopover in Montevideo

on the way south, and the visit to the South Georgia and its whaling operations. Arnold's description of the *Theron* unloading process is particularly revealing of the extreme time constraint that the advance party was under. This 'chaos' is attributed to a possible lack of experience of the party but also to the poor planning for this portion of the programme. The poor maintenance state of the tractors as they were unloaded is difficult to understand. The inability to transport vital supplies up onto the safety of the ice shelf led to near catastrophe when a portion of the sea ice broke off during a storm and tons of coal, fuel and a Ferguson tractor and other stores were carried out to sea. The fact that Ken Blaiklock and the seven other team members had to sleep in tents and eat in a converted tractor crate during the Antarctic winter while attempting to construct a complex untried base camp in twenty-four hour darkness only confirms the thin margin that existed between survival and disaster.

The book benefits greatly by the inclusion of several sketches, maps and photographs all of which help transport the reader both in time and space. I found it easy to imagine and almost to share in their adventure.

Eight Men in a Crate is an outstanding addition to the literature on the Trans-Antarctic Expedition and one that leaves the reader hoping for more.

Echoes in the Blue

An Eco-thriller from New Zealand wildlife biologist and award-winning novelist:

C. George Muller

Ignoring a 20-year moratorium on commercial whaling, Japan continues to send its whaling fleet deep into the Antarctic to kill whales under the guise of 'scientific research'. Thrust into this volatile situation is Richard Major, an unlikely hero sailing from New Zealand with a whale research expedition. On the windswept Southern Ocean he must confront a terrifying adversary – the ruthless fishing industrialists and massive multi-national conglomerates who would wipe out entire species to satisfy an insatiable lust for money and power. From the wild grandeur of the Southern Ocean to the opulence of corporate Japan, the battle must be fought on many fronts.

An unlikely hero, Richard is already searching for meaning in a corporate life that seems devoid of any. Faced with a life-changing decision, he must reach deep within himself to find the courage and passion to stand up for what he knows is right.

But how can one man possibly make a difference... and what is the price for standing up for what you believe in?

Mirroring a real-life tragedy looming in our own lifetime, this is a haunting exploration of mankind's continual conflict with nature, and the heroism of those who would risk everything to defend a future threatened forever.

"Very well researched including some extremely insightful observations about the nature of international politicking in the ongoing fight to protect whales."

Scientific Advisor to International Whaling Commission (IWC)



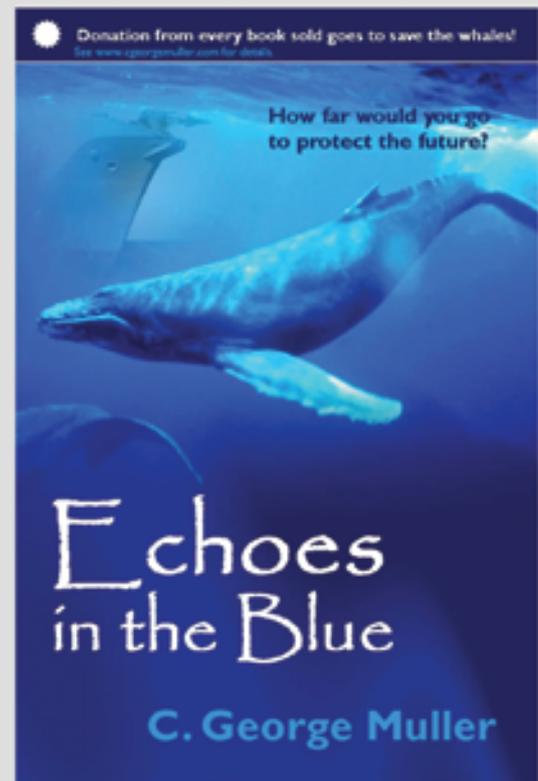
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C. George Muller is a New Zealand wildlife biologist and winner of the 2005 Richard Webster Popular Fiction Award. He wrote *Echoes in the Blue* to speak out against the illegal slaughter happening just out of sight over the horizon...A Donation from every book sold goes to 'Save the Whales'.

Muller gave up a career in the corporate world to follow his heart and become a professional wildlife biologist. With a Masters degree in biology, he has been involved in marine mammal research for the past 8 years. His travels have taken him across the globe, including Antarctica, Alaska, and many places in between where he has worked on projects for the US National Park Service, the New Zealand Department of Conservation, and more than one university.

Echoes in the Blue is his second novel, and was inspired by his experiences on the frontlines of wildlife research and conservation. It was written while living and working in Kaikoura, the whale watching capital of New Zealand.

www.cgeorgemuller.com



NZ ANTARCTIC SOCIETY MEMBERSHIP

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

A membership to the New Zealand Antarctic Society entitles members to:

- *Antarctic*, the quarterly publication of the Society.

It is unique in Antarctic literature as it is the only periodical which provides regular and up to date news of the activities of all nations at work in the Antarctic, Southern Ocean and Subantarctic Islands. It has worldwide circulation.

- Attend occasional meetings and fun events which are held by the Auckland, Wellington, Canterbury and Otago Branches of the Society.

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