



The Expedition

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ELY SUM

Shackleton's Antarctic Visual Epic

Overview

On 5 December, 1914, Sir Ernest Shackleton and his team of 27 explorers set sail for the Weddell Sea, Antarctica. The mission was to be the first to cross the Antarctic continent, coast to coast via the South Pole. On 17 January, within sight of land, their expedition vessel the *Endurance* became frozen fast in ice floes. In May, the Antarctic sun set for the last time before winter. When spring arrived, the breaking of the ice and subsequent movement of giant ice floes splintered the ship's hull. On 15 November, 1915, the *Endurance* finally slipped beneath the ice. Stranded all alone, beyond all hope of rescue, the team was to endure the most uninhabitable, the windiest, and the coldest place on earth, surviving on penguins, seals and sea birds.

For five months, Shackleton and his men camped on ice floes, marched on ice for over 100 km and finally, on 9 April, the ice floe that they were camped on broke into two. Shackleton decided that the crew should enter the lifeboats and head for the nearest land. After seven days at sea in the three small lifeboats, the men landed on Elephant Island, but the island was also an inhospitable place far from any shipping routes and thus a very poor location to wait for rescue. On 24 April, 1916 Shackleton took decisive action and set sail for South Georgia with five of his most able men. South Georgia is a tiny island in the direct track of deep atmospheric depressions that roar through the Drake Passage between Terra del Fuego and Antarctica with near freezing annual temperatures. Miraculously they survived the 1300 km odyssey, which took two weeks in an open lifeboat across the world's most treacherous of oceans. The crossing is regarded as the most remarkable rescue saga in maritime history. The story of Shackleton's epic survival and subsequent rescue of his crew on Elephant Island (not a single crewmember was lost) is still hailed as the greatest epic of the century.

The Vision

Nearly a century later, in 2010, the heroic spirit of Shackleton lives on through a new team of explorers: To follow his footsteps, not for the glory of being the first to cross the Antarctic or the first to climb the highest mountain but to produce a momentous documentation of one of the most beautiful places on Earth. This production will serve as a gift for future generations with an imaging epic that guarantees to inspire, invigorate and challenge for preservation of planet earth. **Elysium** is a project that draws upon the world's finest nature artists and scientists to document the vista, flora and fauna of the Antarctica Peninsula and South Georgia. The area is regarded as one of the most enchanting wilderness regions of our planet, yet volatile and under severe threat from the warming of the world's climate. The production promises the most awesome and most stunning audio visual interpretation ever seen of Antarctica.



The Mission

The mission of the **Elysium** team is to encapsulate the splendor of the frozen continent, the sights and sounds of this enchanting region on the final year of the first decade of the new millennium into one exquisite book and film.



Objectives

1. To document the above and below scenes, flora and fauna that Shackleton and his team would have seen and missed after losing the Endurance - from the Weddell Sea to Elephant Island and the heroic sail to South Georgia. Visual documentation will also comprise of 24-hour non-stop shoots of selected sites.
2. To procure visual documentation of the diversity and biomass of animals, glaciers, land and seascapes captured at the end of the 1st decade of the new millennium – this will serve as an important reference for the monitoring of climate change. The Antarctic Peninsula is particularly sensitive as annual average temperature has increased about 2.5C in the last 50 years; this is 2 or 3 times faster than the rest of the world average. This makes the Antarctic Peninsula the most critical region for ongoing observation.
3. To produce a feature length movie and a book; this shall be the greatest and most compelling production ever undertaken of Antarctica concocted by the creative interpretation of the world's best nature conservation photographers, film makers, artists, musicians and scientists. The visual rendering of the book and film shall have a spiritualistic treatment to promote the beauty and conservation of Antarctica. Whilst the film will be in an artistic nonverbal format, prose, quotes and scientific facts will complement the visuals. An original cinematic style soundtrack including on site recordings of the sounds of the Antarctic, shall be composed for the production.
4. A broadcast documentary about **ELYSIUM** is in the plans to record the making of this landmark project.
5. Shackleton's Antarctic Visual Epilogue (SAVE) will become an image database derived from **Elysium** to serve as a reference index of the Antarctica Peninsula and South Georgia. A selection of imagery from the expedition shall be contributed towards the initiation of this archive. This archive is dedicated as an everlasting tribute to Sir E. Shackleton, the greatest hero of Antarctic explorations. A curator shall be appointed to manage the archive and curate new images of the region from 2010. This archive will be made available for educational and scientific reference of the Antarctic Peninsula and South Georgia for climate change study.

*The limited edition (2010 copies) of **Elysium** is targeted for release in 2013 to commemorate the 100th Anniversary of Shackleton's Imperial Trans-Antarctic Expedition (1914-1916).*

ELYSIUM – the 2010 Odyssey (10 February – 01 March)

To achieve the desired outcome, some of the world's most celebrated explorers have been selected for the principal team which includes David Doubilet, Jennifer Hayes, Wyland, Amos Nachoum, Heather Angel, Leandro Blanco, Jonathan Shackleton, Göran Ehlme, Paul Nicklen, Michael AW and Jamie Watt. Opportunities now arise for individuals who wish to be part of an expedition among the giants of twentieth-first century explorers in a benchmark project that will leave behind a legacy of achievement and discovery for this generation and the next.

Expedition Team: 56

Route: Ushuaia – Weddell Sea (Antarctic Peninsula) – South Georgia - Ushuaia

Elysium is a non-profit project organized by **OceanNEnvironment Ltd Australia Expedition Facilitator & Diving Support** - Waterproof Expeditions (WPX)

Principal Team

Project Director: Michael AW, Ocean Geographic, NHM BBC Award winner

Expedition Leader: Göran Ehlme, Waterproof Expedition, NHM BBC Award winner

Principal photographer: David Doubilet, National Geographic Photographer

Principal Photographer: Jennifer Hayes, National Geographic

Producer Deepwater 3DHD Unit: Emory Kristof, National Geographic

Principal Photographer: Paul Nicklen, National Geographic. NHM BBC Award winner

Principal Photographer: WYLAND, Wyland Foundation

Principal Photographer: Amos Nachoum, Big Animal Inc, NHM BBC Award winner

Principal Cinematographer: Leandro Blanco, BBC Award Winner,

Principal Video crew: Stuart Ireland, World Underwater Pictures Winner

Director of Diving: Peter Szyszka

Deputy Expedition Leader: Jamie Watts, marine scientist, explorer

Principal Photographer: Heather Angel, Royal Photographic Society, UK, Biologist

Historian: Jonathan Shackleton. Fellow of the Royal Geographical Society, London

Front Scout: Álvaro de Marichalar, 11 world records, Personal Watercraft (TBA)





The Expedition Platform

Professor Molchanov (callsign UAKA, Russian: Профессор Молчанов); is a Finnish-built Oceanographic Ice-Class Research Vessel now refitted to a comfortable passenger expedition vessel. Manned by skilled Russian crews of 20, she will serve as a stable platform for the Elysium shoot. The vessel has a large bridge and good open-deck viewing areas as well as a full complement of Zodiac landing crafts. The ship has a dining room that also serves as a lecture room, a lounge with bar, sauna, laundry and a medical room with a doctor. The 72 metre, 1753-ton Professor Molchanov was specially built for the Russian Institute of Science in 1982 and used in the USSR between 1983 and 1991 for polar and oceanographic research. As a Soviet research vessel she made 34 research cruises, including three global expeditions held by Murmansk Hydro meteorological Administration.

Technical data

Length: 69.7m

Breadth: 12.8m

Draft: 4.5m

GRT: 1753 tons

Engines: 2 Diesel ME, 3120 HP

Ice Class: UL

Speed: 10 knots

Crew: 20 (31)

Registry: Russia

What is in a name? Professor Pavil Alexandric Molchanov, the man, was born in the USSR in 1893. He was a famous meteorologist and specialised in the Arctic. He developed radio signals for weather balloons and was the first Soviet person to captain a Zeppelin Airship.

Joining the ELYSIUM Shackleton Expedition

Who can participate?

Anyone relatively fit from the age from 15 to 65; conservation minded with a great passion for the natural world may apply. Write to info@ElysiumEpic.org for application form.

Is this a diving only expedition?

No, this expedition focuses to capture fauna and flora images above and underwater. There will also be lectures, photographic workshops, landings and if you wish you can shoot alongside the topside or underwater supporting shooters.

Do I need to be a scuba diver?

No; the expedition will focus both above and below water. Topside and underwater activities operate independently, you can choose to be solely topside or both.

Can I scuba dive and shoot alongside the principal and lead shooters?

Yes – but numbers are restricted and you have to be trained to dive in extreme cold conditions. Selection will be on a first come first serve basis.

Do I have to work very hard during the expedition?

We can assign you with a specific task or you can just come along as an observer and enjoy the production in real time. You can participate in the landing, snorkeling, scuba and shoot as much or as little as you desire! You should discuss this with the expedition co-coordinator. Do let us know if you have special skill you think it is relevant to the production.

Will I be part of the expedition team?

Absolutely – you will be credited in the book, film and web site. You will be issued with the official expedition jacket, fleece and equipment from the project sponsors. Your name will also appear on the official expedition flag and scroll. You will also receive a personalized copy of the limited edition of Elysium value at 210 Euro

Can I contribute my images or footage to the Elysium film, book and database?

Yes – we will be delighted to review your work for the final production; you will be paid for usage. You can choose to keep the fees or donate your money to the on-going maintenance of The Shackleton's Antarctic Image database – the climate change reference index.

What types of cabins are available?

The cabins are comprised of triple share, twin standard, twin with en-suite, superior and one state suite. Subject to availability and price varies from 9000 to 15000 Euro pp.

Where and when do I have to go to join the expedition?

12 February (embarkation at 16.00 hours in Ushuaia, Argentina) till 02 March 2010 (disembarkation at 09.00 hours in Ushuaia, Argentina)



Joining the ELYSIUM Shackleton Expedition

Editorial & Broadcast Right

OceanNEvironment claims full copyright to the project, storyline, interviews, scripts, research documents/data, book, program and films. Unless on specific assignment with signed agreement, copyright of images, film /video footage are of respective author. However OceanNEvironment has the option for first right of use but exemption may be negotiable.

Can I use my own images or video footage for commercial usage prior to the release of the books and film?

While we do not insist on an embargo period, we will like to keep specific images/ scenes special for the book and films. However address this issue on a case to case basis with the coordinator and in most instances, this should not be a problem.

Can I produce my own video about Elysium for commercial broadcast purpose?

For obvious reason, this is not possible. However do share your idea with us and we will be happy to discuss this further with you.

Can I produce my own video about Elysium for competition and promotional use?

Absolutely – please discuss this with the coordinator, we may be able to share some other materials with you and help you with your production.

Can I write my own story about Elysium for magazines, newspaper and on-line media?

Absolutely – but the production, crew and sponsors need to be accurately credited. We would like the privilege of reviewing your copy and images prior to publication. A press officer will be assign for this purpose.

Can I use of my images, film /video footage from the Elysium shoot for editorial, film, DVD that are unrelated to the Elysium project?

Absolutely; except for images/footage selected for use in the Elysium book/films, you have full access of your work. Stocks that are under consideration for the Elysium production maybe considered for use on a case to case basis.

How soon can I apply?

Write to info@ElysiumEpic.org for application form immediately.





Principal Team Biography

Michael AW- Project Director

Michael AW is the founding director of OceanNEnvironment, a charity organization listed with the Registrar of Environment Australia. As founder of Asian Geographic and publisher of Scuba Diver from 1998 to 2005, he used the magazines to support the conservation efforts of OceanNEnvironment. Taking conservation and education of the ocean to the next level, in 2007 Michael convened an editorial board comprising of Stan Waterman, David Doubilet, Emory Kristof, Gerry Allen PHD, Carden Wallace PHD, Alex Mustard PHD, Doug Perrine, Jennifer Hayes, and Christopher Lee to launch the hallmark of publication for the sea – Ocean Geographic. Pursuing the art form of documentary photography, Michael AW is well known for his saturated colour imagery. His work on environmental issues and natural history, has been featured in BBC Wildlife, National Geographic, Asian Geographic, GEO, Underwater GEOGRAPHIC, Nature Focus, Action Asia, Scuba Diver, Smithsonian magazine, Ocean Realm (USA), Times, Asia Week, DIVE, Unterwasser, Tauchen, and Aquanaut, to name but a few. His photographs have received more than 50 awards from several international organizations including the prestigious Nikon International Photo Contest on three occasions. Michael is a three time winner at the World Festival of Underwater Pictures, Antibes. In 2002 he won Best Music Adaptation for Video, the Gold Diver statue for Best Black & White print in 2005 and the Bronze stature for Portfolio the most prestigious category of festival in 2006. He is also a recipient of two awards from the Natural History Museum BBC Photographer of the Year Wildlife Competition in 2000 and in 2006 he won the Best Winner award in the underwater category.

Michael has produced and directed two 24-hour photographic documentaries of corals reefs in the Australian Great Barrier Reef and the Maldives in 1995 and 1999 respectively. These extended sojourns have been encapsulated in books and a broadcast video documentary for National Geographic. His first book, 'Beneath Bunaken' about the marine park in Sulawesi received the accolade of being the Presidential 'Gift of State' for Indonesia at APEC 1994. Subsequently in 1996 he produced for the Maldives – "Dreams from a Rainbow Sea", which was used as official gift for the president, fishery and tourism offices. The Four Season Resort Maldives also used this title as premier gift for their guests. He was the co-author and photographer for TANAH AIR, bio-diversity of Indonesia. He has authored 25 natural history books about fishes, corals, invertebrates and he has also contributed to the Encyclopedias of Malaysia and Indonesia. He has collaborated with Dr. Carden Wallace in one of the most definitive book about the staghorn corals of the Indo-Pacific. His recent accomplishment include the launch of "Celebrate the Sea" and Underwater Jungles both high quality case-bound collectors edition published in 2002. In 2003 he completed "Richest Reefs – Indonesia", a visual extravaganza from some of the most beautiful reefs in the world – this book is adopted by the Indonesian government as an official gift of state. A feature documentary of the same title was also produced in 2003. His most recent work is 'Beneath North SulawesiSea' released in October 2006 with a world wide launch in Birmingham, London, Antibes, Orlando and Singapore. Michael Aw was awarded the prestigious 2008 Peter Benchley Shark Conservation Award by SRI president Stan Waterman at 2008 Celebrate the Sea Festival in Manila. The award honors the memory of the late Peter Benchley is awarded for Michael's a highly-effective and unrelenting campaign against shark fin soup consumption in the *Asia Pacific region*.



Göran Ehlmé – Expedition Leader

Göran, originated from Sweden, has planned and led many field trips to the polar areas, and was the first to lead diving expeditions to the Arctic and Antarctica. He has 24 years diving experience, is a certified PADI Instructor and has been diving the polar areas since 1993. He dives both open water and under the ice during summer and is particularly experienced with Walrus, Emperor Penguins and Leopard Seals. As an underwater cameraman Göran has been on assignment filming many documentaries for Animal Planet, BBC, Canal Plus and National Geographic. Goran won the overall award of the BBC's Shell Wildlife Photographer of the Year competition with his image of a feeding Walrus underwater in North East Greenland. He has filmed Beluga, Narwhal, Seals, Walrus and other mammals in the Canadian Arctic, Greenland and Svalbard. In Antarctica, he filmed on Humpback and Minke whales and all members of the Seal family including the Leopard. He has also captured most penguin species, including Emperors, and many invertebrates on film. In the Azores (Faial & San Miguel) he spent four seasons diving with Sperm Whales, and since 1985 he has been diving with Orcas in Norway and became experienced with the whales themselves and the logistics and techniques involved in getting close to them. Göran's footage has been used in numerous series and films.

His credits include: Emperor Penguins under water in the Hollywood Production "March of the Penguins", 2006, Lord of the Ice, Leopard seals (Discovery/Saint Thomas Productions, 2003) What do the Walruses know? (SVT,DR, 2003), Wildlife Special-Killer Whales (BBC/Discovery, 2003), Hunt for the Red Whale, Killerwhales (Survival, 2003), Blue Planet - Frozen Seas (BBC/Discovery, 2002, Narwhal, Walrus & Emperor penguins), Toothed Titans (National Geographic, 1999, feeding Walrus sequence), White whales & Narwhals chattering of Ghosts (Canal+, 1999), The Leopard Seal (Saint Thomas/Canal+, 1998), Avaq-The Arctic Toothwalker, Walrus (Scandinature), Svalbard-Where the Polar Bears Reign, Walruses (Scandinature). For his company, Waterproof International in Sweden, Göran is the head-designer. Göran is the co-founder of Waterproof Expeditions, the expedition facilitator of Elysium. As world's expert on Polar Diving, Waterproof Expeditions organizes expeditions around the world focussing on pristine underwater eco-systems, nature and photography.

David Doubilet – National Geographic – photographer in residence & Jennifer Hayes

One of the world's leading underwater photographers, David Doubilet has shot more than 60 stories for National Geographic magazine since 1972. Doubilet's undersea reporting has taken him to the Red Sea, Pearl Harbor, the South Pacific and beyond. He has captured groundbreaking images of great white sharks, flashlight fish, shark-repelling flounders, creatures of the undersea desert, fluorescent coral, WW II wrecks and much more. A consummate artist, award-winning photographer David Doubilet began photographing underwater environments at the age of 12 in the cold, green seas off the northern New Jersey coast. He used a Brownie Hawkeye camera wrapped in a clear plastic bag, and he's been behind the lens ever since. Doubilet's first work for National Geographic Magazine was published in 1972. Since then, as a Contract Photographer for NGM, he has produced over sixty stories for the magazine, in recent years adding author to his credit line of photographer. His warm-water work has taken him throughout Indonesia, Micronesia, Australia and New Guinea in the Pacific; Sri Lanka and the Seychelles in the Indian Ocean; and all over the Caribbean. The Red Sea, his favorite "underwater studio", has produced at least ten different stories for the magazine. Cold-water work has immersed him off the



coast of England; in Scotland's Loch Ness, the Okavango in Africa; into the teeming waters of the Galapagos; around the mysterious shores of Japan; and deep in Canada's Northwest Pacific. He has also worked off the entire eastern coast of the United States -- from Maine to the Florida Keys -- and California. Doubilet's photography has won many prizes including in 1969 the prestigious "Sara Prize and International Award" given by Mondo Sommerso Magazine in Italy. He was the first American and the youngest person to win this award. In 1975 he was named "Diver of the Year" by the Boston Sea Rovers, one of the diving world's most honorable organizations. He has also received several honorable mentions by the National Press Photographer's Association over the last decade. In 1993 he was honored in France by winning first place trophy in the Professional Category of an international contest sponsored by C.M.A.S. (World Underwater Federation); and by appearing as Guest of Honor at the 20th World Festival of Underwater Photography in Cap D'Antibes. Although most of Doubilet's photographic time is spent working for the National Geographic Society and its diverse publications, his work has also appeared worldwide in other magazines and books. His commercial work includes several ad campaigns for clients such as Kodak, Fa Soap, Vitaspa, Seagrams, and Microsoft. He did the still photography for two films -- THE DEEP and SPLASH. A popular speaker and instructor, Doubilet has appeared on the "Today Show" on NBC-TV and is in demand for his lectures and slide shows at universities, underwater film festivals and clubs (the Explorer's Club and the Harvard Club both in NYC) around the world. About his work for National Geographic, Doubilet says, "My job description is to make a picture of a place no one has ever seen before...or to make a picture that's different of a place that everybody's seen before."

Jennifer Hayes is a natural history writer and photographer with a background in aquatic ecology and zoology. Jen is a co-founder of Undersea Images Inc. and her words and images have appeared in numerous books and publications worldwide. Jen and David Doubilet collaborate to co-produce assignment features for numerous domestic and international publications, ad shoots, book projects and global marine conservation projects

Paul Nicklen

Paul Nicklen is one of National Geographic's top photographers and he has won the World Press Photo in 2006 (Nature). Paul grew up on Baffin Island, Nunavut, Canada where his family was the only non-Inuit families in a small settlement of 140 Inuit. The Inuit taught him how to survive in the Arctic, read the weather and, to be patient. As a kid, without television, radio, and computer games, he spent most of his time in the hills watching wildlife, weather and the light play shadow games across the landscape. At that young age, the seed to become a nature photographer was deeply planted. He worked as a wildlife biologist for four years in the Northwest Territories and was fortunate enough to work on species as lynx, grizzly bears, bison, caribou and polar bears. A few years later he went on a three-month solo expedition into the high arctic to live on the open tundra with the bears, wolves and open sky. That trip helped him to confirm that he could better serve wildlife populations by becoming a nature photojournalist rather than being a biologist or just a wildlife photographer. His goal is to continue bridging the gap between excellent scientific research and the public by producing stories for magazines such as National Geographic. Since 1994, he has published in hundreds of magazines around



the world and had three stories recently appear in National Geographic Magazine, all working towards this common goal. He recently published an article on Leopard Seals in Antarctica for National Geographic which was awarded for the World Press Photo 2006. Paul is also a winner of the 2000/2001 BBC Wildlife Photographer of the Year competition.

Emory Kristof

Emory is an explorer and an inspiring hero of the seas; Emory's extraordinary pursuits include the successful hunt of the Titanic, locating deep sea volcanoes and gigantic squids; and laying to rest the truth of the cryptic Loch Ness Monster of Scotland. After more than 40 years of traveling the world, covering mostly scientific, high-tech and deep underwater exploratory expeditions for the National Geographic, Emory's accomplishments scale higher than Mt Everest and deeper than the Mariana Trench. Like with all great explorers, Shackleton, Hilary, Cousteau an inexplicable niggling begins in the gut that eventually blooms into an idea to go beyond and see what no one has ever seen, done or heard before. His ventures are mostly extreme, peculiar and more immense than space exploration. In his early years at the Geographic, observing the reduced quality of deep water imagery, Emory rose to the challenge experimenting with wide angle lenses, and a variation of lighting techniques. Along the way, Kristof has pioneered the use of robotic cameras and remotely-operated vehicles (ROVs).

Emory's most illustrious accomplishment must be the 1985 teaming up with Robert Ballard at Woods Hole Institute to find and film the Titanic. This quest actually began in the 1970s, when he invented the designs of the electronic camera system for the ARGO submersible which eventually found the Titanic. In 1991, Emory further produced a Soviet-Canadian collaboration to shoot three-dimensional IMAX (Image Maximum) production of the Titanic. The expedition used two Russian submersibles equipped with 10,000 watts of high-intensity HMI lights mounted on arms to light up the mammoth wreck. To date it remains the most powerful set of lights ever set up to work in the deep ocean. The shoot produced the most published images of the Titanic. In fact it was Emory who inspired Oscar-nominated director James Cameron to film the now famed epic. Emory revealed to Cameron the techniques of illuminating and shooting the humongous wreck resting in the dark abyss. Emory also introduced Cameron to the agile MIR submersibles which were featured in the opening scenes of the Hollywood version of the 'Titanic'. According to Joseph MacInnis, executive producer of the IMAX version of the Titanic, Kristof mounted the twin cameras outside the pressure hull of the submersible and spent 50 hours filming the wreck from every conceivable angle. Emory was the person behind the imagery. "We all know the story and most of us have seen the movie but with 3-D film it is now possible to make a virtual visit to the wreck. It's so real you want to touch it." Emory quips, "Deep water represents about 70 percent of the planet, so it gave me a lot of room to roam. I like the challenge of it." With his passion for, exploring the cold, dark, and mysterious depths of our oceans, notwithstanding the honour of working on high-profile projects, Kristof declares that his enthusiasm is still in animal imagery. A prime example is discovering new life forms swirling around hydrothermal vents in the volcanic hot springs of the Galapagos Rift. With his life long friends Ralph White and Mike Cole at National Geographic they created the design for a timer-controlled camera (Ropacam) baited to attract marine life up to 5kms deep. Until 1977, we didn't know anything about the



science of the deep sea. Emory's Galapagos shoot revealed for the first time, a whole new ecosystem that exists in the deep ocean. It was to be the greatest biological discovery of the century documented in an Emmy award winning feature titled, - Dive to the Edge of Creation. Emory is at the forefront with his vision of exploring and sampling the deep sea of the heart of the coral triangle. In September 2007 after four years of planning, negotiations and false starts, surviving both political and security red tape he lead a 30-man team of scientists, ROV pilots, film crew, Navy Seals into the Southern Philippines, dodging pirates and terrorists to explore the deep water of the Celebes Sea.

Emory is first a photographer; his work has uncovered the un-explored worlds of the deep sea. Kristof and Bill Curtsinger's article "Testing the Waters of Rongelap," published in National Geographic magazine in April 1998, records oceanic life in the nuclear weapons-contaminated waters surrounding the Marshall Islands. In August 1998 Kristof's pictures of the Titanic were presented in the National Geographic magazine article, "Tragedy in Three Dimensions." The pictures, taken in 1991 using high-intensity lighting systems, achieved unprecedented detail due to advances in 3-D computer video-editing. He has produced over 40 articles for National Geographic magazine. Kristof's accomplishments have earned many awards for both writing and photography, including the NOGI Award for Arts from the Underwater Society of America in 1988 and an Explorers Club Lowell Thomas Award for Underwater Exploration in 1986. That same year Kristof and Robert Ballard received the American Society of Magazine Publishers Innovation in Photography Award for their photographic coverage of the Titanic. Kristof was presented with the 1998 J. Winton Lemen Fellowship Award by the U.S. National Press Photographers Association "for being one of our profession's most imaginative innovators with particular attention to pictures from beneath the ocean brought to the readers of National Geographic magazine."

WYLAND - Artist of the Sea

Marine Life Artist Wyland has earned the distinction as one of America's most unique creative influences, and a leading advocate for marine resource conservation. An accomplished painter, sculptor, photographer, writer, and SCUBA diver, he has traveled the farthest reaches of the globe for more than twenty-five years, capturing the raw power and beauty of the undersea universe. His non-profit Wyland Foundation has supported numerous conservation programs since 1993, including Wyland's monumental Whaling Wall mural project — an epic series of 100 life size marine life murals that spans twelve countries on four continents, and is viewed by an estimated 1 billion people every year. His most recent wall is painted in Beijing for the 2008 Olympic. The artist's efforts, moreover, have been recognized by the United Nations, Sierra Club, the Underwater Academy of Arts and Sciences, where he is listed among its Diving Hall of Fame, and private and public institutions throughout the world. Hailed a "Marine Michaelangelo" by USA Today, Wyland's work is sought by millions of collectors and his galleries throughout the United States are considered a must-see on the itineraries of travelers everywhere. His equally successful Wyland Foundation, in partnership with the Scripps Institution of Oceanography, is actively engaged in teaching millions of students around engaged in teaching millions of students around our oceans, rivers, lakes, streams, and wetlands. Listed in Who's Who in American Art, the Guinness Book of World Records, and many other national and international publications,



the multi-faceted artist has even hosted several series for television, including, "Wyland's Ocean World" on the Discovery Channel's Animal Planet Network. Today, he is considered one of the most influential artists of the 21st Century, with artwork in museums, corporate collections, and private homes in more than one hundred countries.

Amos Nachoum

Professional Marine and Wildlife Photographer Amos Nachoum has led National Geographic expedition teams with Dr. Eugenie Clark, Dr. Sylvia Earle, astronaut Buzz Aldrin, and has co-produced documentaries with Stan Waterman. He was the team leader for National Geographic's Red Sea, Great White Shark, and November '96 Killer Whale photo expeditions. Mr. Nachoum's photos and essays have appeared in more than 500 publications in North America, Europe, and Japan, including National Geographic magazine, Ocean Realm, Island, Outside, Rodale's Scuba Diving, Time, Life, The New York Times, Condé Nast Traveler, Le Figaro, Terra Sauvage, Airone, and Mondo Somerso. In addition, his work has been included in the books The Living Ocean, Oceans, and The World of Nature. He has been profiled in television appearances on National Geographic Explorer (Sept. '97), the Today Show, and Good Morning America, as well as in People, Esquire, and Money magazines.

In 1988 he won Nikon's underwater photography contest and in 1993, the Communication Arts Award. He is currently an instructor on the Nikonos team of professional photographers and also conducts his own SLR and advanced u/w photo seminars. Arising from the belief that private individuals should have access to the same sights as governments and large corporations, Amos has developed the cutting-edge adventure-travel program Big Animals Photography Expeditions specifically to provide opportunities to observe, photograph, and interact with the most imposing inhabitants of the sea, such as great white sharks, killer whales, sperm and humpback whales, dolphins, and more. Only through such observation and interaction, Amos Nachoum believes, can people learn to truly understand and respect some of the most impressive citizens of our water planet. Amos is a winner of the 2007 BBC Wildlife Photographer of the Year competition.

Leandro Blanco, Multi awards winner -Film maker

Born in Spain, Leandro is the most celebrated underwater music video maker in the world. In the year 2002, for the first time in the history of the World Festival of Underwater Pictures, Antibes, the judges awarded him a honorary award for his three videos "Ocean chronicles" "Shame on you" and "With the flow" for his creative expression and his commitment to the protection of the environment. In 2004 he was named Diver of the year in the United States at BTS (Beneath the Sea) in New York for his contribution to the art of film and in 2007 Greenpeace acknowledged Leandro Blanco the "Oceans Award" for his film "One for All". The same film also won the "Celebrate the Sea 2007" Rolex Award of Excellence" for short documentary. Leandro's passion for nature had already taken him all over the world. He had also written several pieces of music celebrating the beauty of the Amazon jungle and the vast deserts of Africa. His first short documentary got him first prize at the London film festival, and by 1990 he had already won several mayor awards, including "VIDEO FILM MAKER OF THE YEAR" BY THE BBC WILD



LIFE MAGAZINE, for his documentary skills for his video There's a place. In 1990 he made his first underwater documentary, which he wrote, narrated, edited, performed and wrote all the music. Leandro has received over 50 international awards for his documentaries, and his music scores have been acclaimed by magazines like BILLBOARD. He is also an honorary member of THE ROYAL PHOTOGRAPHIC SOCIETY, for his photography in the video "JUST PASSING BY TOO". In 1999 he received one of the most important underwater video award at the World Underwater Pictures Festival Antibes for the film "Missing You - a music documentary in memory of Jacques Yves Cousteau. Since then he is the only person that has won this prestigious award in eight consecutive years. He was the co-producer of several documentaries on the Maldives with MICHAEL AW. He has also worked with Michael on the "24 hours beneath a Rainbow Sea" documentary produced for the National Geographic Channel broadcast worldwide.

Peter Szyszka – Director of Diving

Peter Szyszka is among the elite of diving professionals worldwide having achieved Instructor Trainer status with 6 training agencies - PADI Course Director, TDI Instructor Trainer for all courses including Trimix, DSAT Trimix Instructor Trainer, DAN Instructor Trainer in Oxygen Provision, Emergency First Response Instructor Trainer and Instructor Trainer for IAHD (International Association of Handicapped Divers). Hailing originally from Poland, Peter is now resident in Australia, having emigrated 17 years ago. He is one of the most sought after instructors in Asia Pacific but this demand is not solely due to his impressive qualifications. He has a gift for training, an extensive knowledge in all areas of diving and a passion for this sport that inspires all who come in contact with him. His resume stands at more than 1000 diving certifications, with more than 150 of these at instructor level. Peter is certified to service over 13 brands of scuba equipment and has an extensive knowledge of, and experience in equipment configuration including rebreathers, oxygen cleaning and gas blending. Not only are Peter's teaching and other qualifications impressive, but so too is his diving experience. He is a passionate wreck diver, particularly deep wrecks. Peter has dived on all 7 Continents and 32 countries in all conditions and water temperatures.

Jamie Watts – Assistant Expedition Leader

Jamie is a biologist, and has worked in a variety of marine fields. He is currently working part of the year as a fisheries consultant and researcher, working on offshore fisheries management, research cruises, observer programmes and illegal fishing issues, and the rest of the year as an assistant expedition leader, marine biology and climate change lecturer, logistics coordinator and zodiac driver on expedition vessels working in the Antarctic and Arctic regions. Jamie recently completed a two year posting as a fisheries scientist for the British Antarctic Survey on the remote subantarctic island of South Georgia. His job on the island was widely varied, including writing scientific papers (two papers published), to aging, diet analysis and plankton work, to creating the identification guides used by fisheries observers, to giving presentations on marine life and fisheries work to visitors. The job allowed and required total immersion in all aspects of Southern Ocean ecology. The two year posting on an isolated island (year round population 13 people and several million seals and penguins), included everything involved in keeping the base running and being part of a small base community. His passion is marine life, and his work has been published in BBC Wildlife magazine, and as well as a variety of media



ranging from the new Ocean Geographic magazine to scientific papers and of two chapters, on marine organisms and ecology zones, in a textbook for 16 year olds. Jamie is also a keen wildlife and underwater photographer, and illustrator. He has had photographs, (including the BAS Calendar), illustrations, scientific papers, identification guides and species lists published. Additionally, Jamie has a broad range of inshore and offshore boat-based experience, with hundreds of days logged at sea and an experienced SCUBA Instructor, with PADI MSDT rating and over 1200 dives logged all over the world.

Jonathan Shackleton – Historian

Jonathan is a cousin of the Irish Kildare born Antarctic explorer Sir Ernest Shackleton. He is the family historian for the Irish Shackletons, whose ancestor founded a Quaker school in Ballitore, County Kildare in 1726. He is a graduate of Trinity College, Dublin in Natural Sciences and was awarded his Masters Degree from Ohio State University for work in Arctic Alaska. As a lecturer and guide, Jonathan has accompanied 21 groups to the Antarctic in the past 10 years as historian, guide, photographer and occasional Zodiac driver. Highlights of his visits have been landing on the godforsaken Elephant Island at Point Wild, visiting Ernest Shackleton's grave on South Georgia, travelling to the Ross Sea, landing at Cape Adare and visiting two of the largest Emperor penguin colonies in the world. He continues to visit Antarctica regularly. He has been involved in many Shackleton activities including films, TV documentaries, television and radio interviews, exhibitions and has given many talks in Antarctica, Canada, England, Ireland (including schools), Tasmania and the United States. He acted as Consultant to Sir Ranulph Fiennes for his recent biography "Captain Scott". He is also very proud to have led a group of Irish students to the Antarctic in 2001 with the Canadian based Students On Ice group. This was the first group of students from Ireland or Europe to visit Antarctica. Jonathan owns one of the sledges that Ernest Shackleton took on his "Nimrod" expedition in 1907-1909. Jonathan has written a book with John MacKenna "Shackleton - An Irishman in Antarctica" about Ernest Shackleton with emphasis on the Shackleton family and the explorer's Irish background. It was published in 2002 (reprinted 2002, revised edition 2003) by Lilliput Press, Dublin, Ireland and University of Wisconsin Press in the USA. He was recently elected a Fellow of the Royal Geographical Society, London.

Heather Angel

Heather is a biologist and award-winning wildlife photographer based in the UK. For more than a quarter of a century, she has been at the forefront of wildlife photography in Britain and her work has been recognised by many awards both in Britain and overseas – including an honorary doctorate from Bath University, a special professorship from Nottingham University and a top award from the USA BioCommunications Association. She communicates her enthusiasm for photographing the natural world via her prodigious writing, her workshops and lectures. Her exhibition Natural Visions toured the UK from 2000 - 2004 and was also on show in Kuala Lumpur, Cairo and Beijing. She manages the specialist image library, Natural Visions, which markets her own work as well as over 50 other wildlife photographers. Heather was President of the Royal Photographic Society from 1984-86 – only the second lady in over 150 years. A veteran traveler to China, in 2007 Heather made six month-long trips to remote parts of this vast country for a new book – Green China – due out prior to the Beijing Olympics.



Primer: Climate Change in the Antarctic Peninsula

Ice Shelves

The break-up of the Larsen B ice shelf occurred in early 2002. This event has been attributed to the effects of global warming. That it occurred is beyond dispute and that it is a result of the warming of the Antarctic Peninsula where it is situated is also beyond dispute. What remains unclear is whether or not this is a taste of things to come and an indicator of an Antarctic-wide phenomena or simply a localized result of the localized warming of the Antarctic Peninsula region alone.

An ice shelf is a thick layer of ice that is floating on the sea. They are fed from the land by glaciers. Where the ice leaves the land and starts to float on the sea is a region known as the "hinge zone" where the ice is particularly chaotic, broken-up and a nightmare to try and travel over. Ice shelves surround much of Antarctica.

The Larsen B ice shelf was about 220m thick (720 feet) and during a 35 day period in early 2002 lost about 3,250 km² of ice into the ocean. It is thought to have been in existence for at least 400 years prior to this and probably as long as 12,000 years since the end of the last ice age.

Such disintegration in such a short time period is therefore an extremely significant event. What now remains of the Larsen B is about 40% of what was there in 1995. It had been breaking up at what was considered to be a rapid rate anyway before this major event. The break-up is thought to be a consequence of higher temperatures and large amounts of summer melt-water running down crevasses in the ice shelf so speeding the disintegration process.

Overall in the Antarctic Peninsula, seven ice shelves have between them declined in area by about 13,500 km² since 1974.

A more recently seen phenomenon that follows this ice shelf collapse is that the glaciers that fed the ice shelf seem to now be speeding up their flow down to the sea. This will certainly deposit more water in the oceans, and as this was previously on the land it will add to an increase in sea-level. The Antarctic peninsula doesn't have enough ice to make much of a difference to sea level in itself even if it were all to melt, but it is best seen as an indicator region that can be observed to enhance understandings of the mechanisms in other parts of the world.

Biological

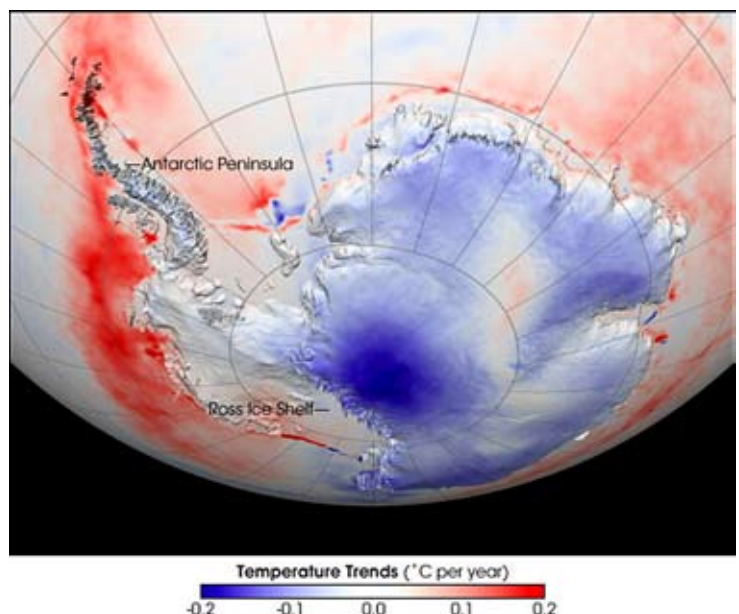
Antarctica's only two flowering plant species that grow only on the Peninsula have spread considerably in the last few decades in both geographic distribution and also abundance in the areas where they are found. In some areas they are becoming the dominant species. Adelie penguins (*Pygoscelis adeliae*) have also been suffering a steady decline in parts of the Antarctic Peninsula region for the last 20 years. Adelie are reducing in number and abandoning certain nesting sites while Chinstrap penguins (*Pygoscelis antarctica*) are taking their place. Adelie require pack ice for most of the year and feed almost exclusively on Krill, Chinstrap penguins will eat a wider variety of foods and prefer open water. The sea ice has declined over the last 20 years with the rise in temperature in the Peninsula region. Gentoo penguins (*Pygoscelis papua*) have also started to nest on the Peninsula in recent years, for the first time in living memory (and it needs to be noted that any memory of Antarctica doesn't stretch much beyond only a hundred years). Studies of the bones and remains found in abandoned colonies indicate that prior to 1950, no Gentoo penguins nested in these sites at all.

Krill shortages

Studies (November 2004) have shown that stocks of krill in Antarctica have declined dramatically in recent years. The reason for this is likely to be a fall in the amount of sea ice in the winter months particularly in the Antarctic Peninsula region. Krill numbers may have dropped by as much as 80% since the 1970's - so today's stocks are a mere 1/5th of what they were only 30 years ago. The decline in krill may in turn account for the decline in the numbers of some penguin species. Dr Angus Atkinson from British Antarctic Survey, says: "This is the first time that we have understood the full scale of this decline. Krill feed on the algae found under the surface of the sea-ice, which acts as a kind of 'nursery'. The Antarctic Peninsula, a key breeding ground for the krill, is one of the places in the world where there has been the greatest rise in temperatures due to global warming. This region has warmed by 2.5C in the last 50 years (much more than the mean global rate), with a striking consequential decrease in winter sea ice cover. "We don't fully understand how the loss of sea-ice here is connected to the warming, but we believe that it could be behind the decline in krill."

There are commercial implications as well as scientific ones. The Southern Ocean is a valuable fisheries resource, many of the species caught feed on krill. Thousands of tourists are also attracted to Antarctica to enjoy the spectacular wildlife, most of which feed on krill. There has been previous speculation that krill stocks might have decreased, based on smaller more localized surveys over shorter time periods. This new finding comes from data from nine countries working in Antarctica who pooled their separate data covering 40 Antarctic summers, in the period between 1926 and 2003. This is the first time such a large-scale view of change across the Southern Ocean has been seen. Another animal that feeds on the same phytoplankton food as krill, jelly-like colonial animals called salps that drift in the ocean currents have increased in the same time the krill have decreased. This decline in krill will also make it more difficult for the great baleen whales to return to pre-exploitation levels following their decimation in numbers during the years from approximately 1925-1975.

Ref: Cool Antarctica.com



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