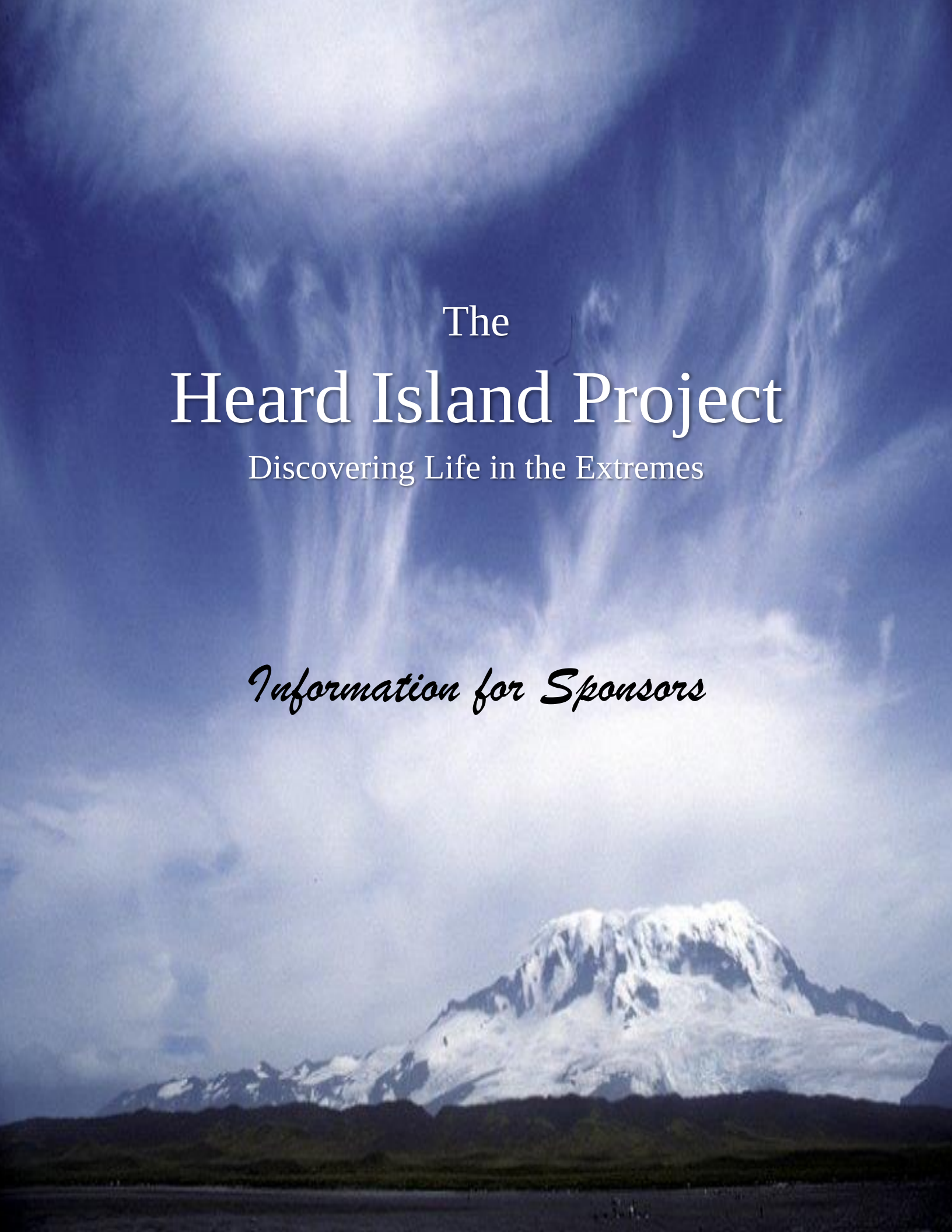
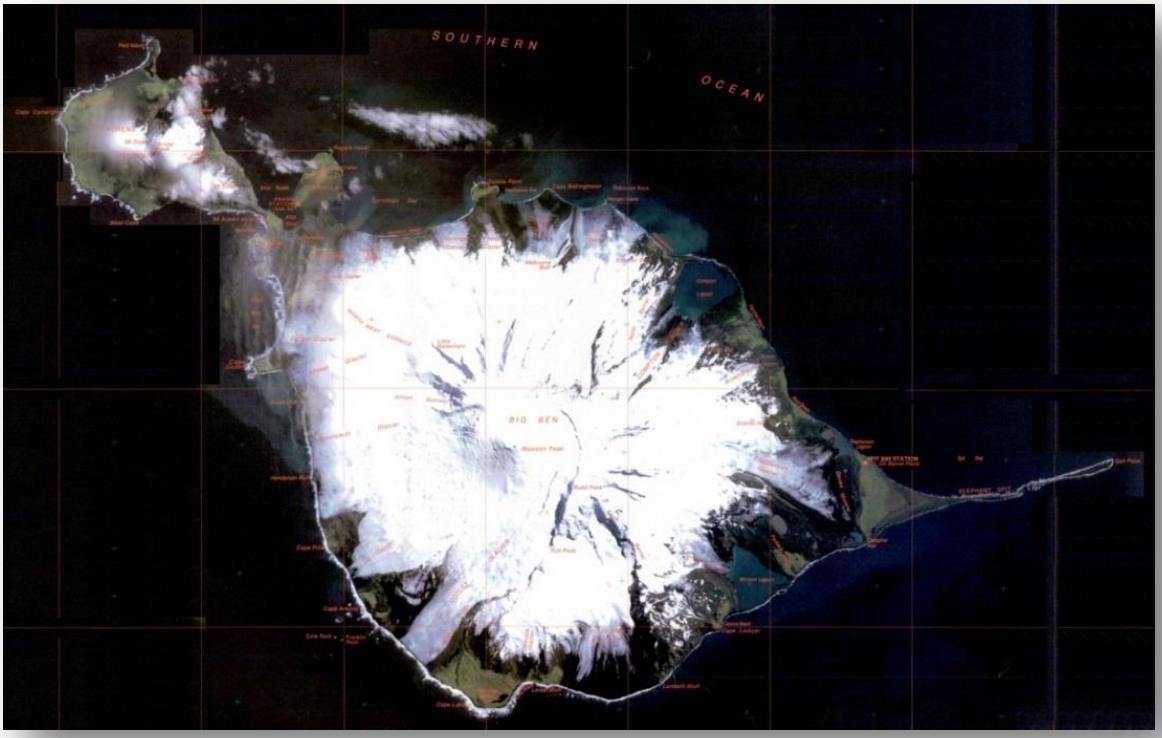


The Heard Island Project

Discovering Life in the Extremes

Information for Sponsors

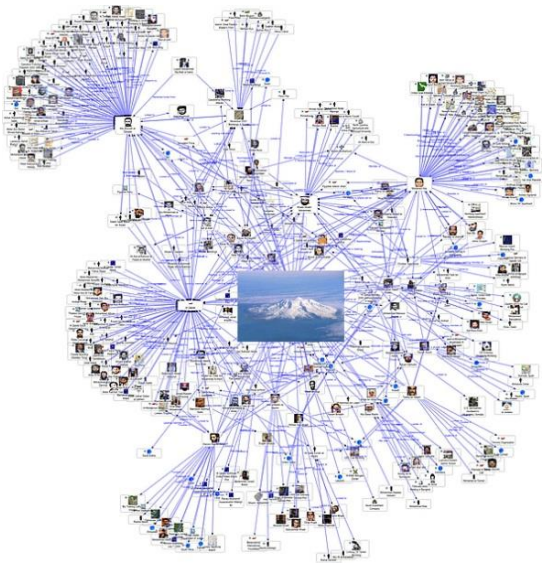


Images of Heard Island

CONTENTS

OVERVIEW

Expeditions have changed, and we are part of the reason. No longer is it enough to go to some remote, forlorn site, discover a new species of an obscure flower or insect, and sail back to describe the adventure to a rapt audience at The Royal Geographical Society. Now, the world wants to know about it, as it happens. More than that, people everywhere want to participate, both in the thrill of the discovery and in the satisfaction of helping make it happen.



Internet-based social networking is almost solely responsible for this new paradigm of exploration. It is the engine that both enables and constrains projects on Earth's remaining frontiers. Recognizing this, the organizers of the Heard Island Project have created a vision that is both traditional and cutting edge. The Project essays to carry out a classic multidisciplinary scientific expedition to one of the most remote and interesting islands on Earth, and to bring it to the world in real time. The science will be first-rate. The adventure will be riveting. The participation from all areas of the globe, varied lifestyles and interests, and all manner of expression, will be spectacular.

The operational goal of the Project is to put a team of more than 25 expedition-savvy scientists and communicators on Heard Island, lying in the deep Southern Ocean, almost to Antarctica. There the team will carry out activities that would inspire anyone who loves the Earth and wants to explore, appreciate, and save it: Documenting plastic debris on the beach. Recording an extensive boneyard in a seal graveyard. Studying microscopic animals that have the ability to dry up for a hundred years and spring back to life when moisture returns. Collecting ooze from lagoons that contain one-celled animals that record global temperature over geologic time. Flying unmanned helicopters to take aerial images of the glaciers and floodplains. Climbing a glacier-draped live 9000-ft. volcano to observe hot gases spewing from its vents, and searching under the snow for the hidden crater. Detecting horizontal whirlwinds shed from the rocky tip of a distant mountain, and the alternating shedding of vortices by the opposite tips of the island. Making contact with tens of thousands of radio operators worldwide, and confirming the contact by internet in less than 60 seconds. And more…

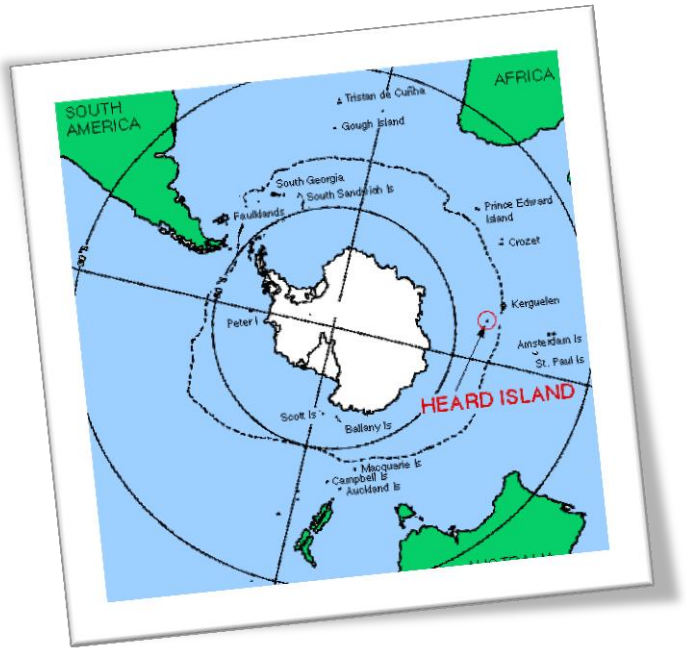
All these activities will be carried out during the 40-day expedition, scheduled to visit Heard Island in Nov./Dec. 2015. All these activities will be seen on prominent internet sites, in real-time. And in some cases, individuals worldwide will be able to interact directly with the expedition team, sending and receiving information, comments, and suggestions, and experiencing the thrill of being virtual onsite participants.

The central theme of the Heard Island Project is to search for extreme life under extreme conditions in extreme isolation. The expedition combines a strong scientific program of worldwide interest with the powerful capabilities of social networking and communications, to make a significant contribution to the preservation and rational management of Earth's natural resources and to the education of the next generation of her custodians. The Project is a foretoken of our future…

WHY HEARD ISLAND?

Heard Island could well have been invented by Jules Verne. It's so remote that only a few hundred people have actually seen it. Far fewer have set foot there. Yet it is a storybook island. To get there, you have to sail across some of the wildest and most dangerous seas on Earth, including the infamous Roaring Forties (Lat. 40°-50°S) and the Furious Fifties (Lat. 50°-60°S). Seas up to 50 ft. are part of the experience; it's not for the faint-hearted. The best bet is allocate the better part of two months for the journey. You might take a helicopter—landing on Heard Island through the surf will be rough and wet. Take a camera.

The island is 20 miles tip-to-tip, about 1½ times the size of Liechtenstein, with a titanic live volcano smack in the middle, smothered in glaciers that slip down it flanks at the dizzying pace of 0.00002 miles per hour. If you drop your watch in a crevasse near the top, the glacier would drop it in the ocean perhaps ten or twenty years later. The weather is even worse than you can imagine. It's a mixture of Seattle, Chicago, London, and the South Pole. On an average day in the middle of summer, the sun shines perhaps 2 hours per day. It's so windy the flies don't have wings. With conditions as they are on Heard Island, it's a wonder anything lives there. But live there they do. You'll find the world's largest colony of King penguins, and heaps and piles of elephant seals. And a beautiful bird called (what else?) the Heard Island Cormorant, coming back from near extinction. For amateur radio operators, Heard Island is the most attractive target because… almost always, there is nobody there. For them, rarity equals desirability.



In a newly familiar irony, the features that make Heard Island so unattractive for tourists make it irresistible to scientists, explorers, and adventurers. But except for Australian scientific expeditions in 1947-53 and 2003, there have been precious few expeditions and even fewer attempts to carry out comprehensive scientific studies. The mountain, aptly called Big Ben, has been climbed only three times, and never traversed. Smoke and vapors issue from vents on its flanks, but no one has ever seen them up close. Winds whip around the mountains, shedding giant vortices, modifying weather patterns for hundreds of miles. We are familiar with the worldwide explosion of oceanic plastic debris that is so devastating to wildlife, but we have only early hints of such threats on the subAntarctic islands. If that weren't enough, there are rare opportunities to witness the Centaurid meteors and the Aurora Australis.

In a world obsessed with networking and interactivity, the romantic notion of isolation is rapidly fading, to reveal the growing passion for *engagement*: to share the experience, to be a virtual explorer, to experience the world through media. Purely scientific projects to unknown remote places, without public appeal and support, are disappearing. Heard Island is one of a dwindling number of places that can match both the appeal of a wild and mysterious "lost world" and still be accessible in real time by a satellite link that enables people everywhere to see, experience, and enjoy the grandeur. And more than that: to *help make the expedition happen*.

WHY AN EXPEDITION TO HEARD ISLAND?

Why should we field an expedition to Heard Island? Why not another location that is easier to reach?

Here is the simple answer: Heard Island is unique. It is extremely sensitive to changes in the global climate and therefore it is a sensitive indicator of such changes. This suggests that monitoring the biodiversity on Heard Island could not only indicate the changing conditions on the island, but also give early warnings of global biological shifts. We will explain and support this assertion now.

More than a decade ago, Walther, et al., described the global shift of populations. Quite generally, populations are moving poleward, both toward the Arctic and the Antarctic. This movement is driven by both rising global temperatures and by human transport. On sub-Antarctic islands, it is estimated that more than 50% of the higher-plant diversity and a considerable portion of the insect and mite faunas are due to human introduction, but it is not obvious how to separate this portion from that due to natural causes.

This fact is arresting: Unlike the other sub-Antarctic islands, the biodiversity on Heard Island is almost entirely determined by natural causes, including the effects of global warming but excluding human transport. Normally, the complexities of interacting populations, especially those in competition, make it nearly impossible to separate the natural and anthropogenic effects on populations. But Heard Island presents us with an extraordinary opportunity to separate these two major causes of global migration. Thus, simply monitoring the biodiversity at Heard Island may be a powerful tool to help unravel some of the complexities of global climate change.

The Australian Antarctic Division (AAD), which manages Heard Island, provides this statement:

> The research undertaken on Heard Island … [involves] compelling science that cannot be undertaken elsewhere and takes advantage of Heard Island's location, its relatively undisturbed condition and its unique, unusual and dynamic natural features.

To emphasize the point: Heard Island provides a unique opportunity to separate the effects of natural climate changes from human-caused changed. It is a large island with multiple extreme environments, including a sporadically active volcano, glaciers, tundra, and barren sedimentary plains, and large populations of megafauna, but no known human-introduced species. This combination presents a unique opportunity to learn about the limits of life in the extremes: extreme conditions, extreme isolation, and suggests in turn that its biodiversity can serve as an indicator of the effects of global climate change. The task is conceptually simple: get to Heard Island and search for plants and animals until we can't find any new ones. Considering the species list to be essentially complete, we could then go about understanding it, and its dependence on the world climate.

Heard Island is on the UNESCO List of World Heritage Sites. They provide the following statement:

> It is the only subantarctic island group to contain no known species introduced directly by man, which makes it invaluable for having, within one site, an intact set of interrelated ecosystems; terrestrial, freshwater, coastal and marine, in which the ongoing evolution of plants and animals occur in a natural state.

These reasons should be convincing evidence that Heard Island is a unique site presenting an extraordinary opportunity for studying biodiversity, which is an important tool for understanding global climate change. Thus, the real motivation for the Expedition is to provide new and unique input to understand global climate change.

WHO IS DOING THE PROJECT?

THE ORGANIZATION

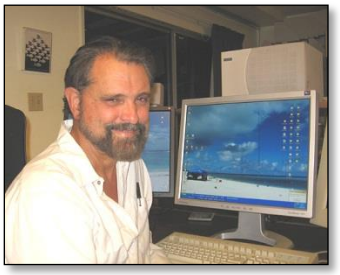
Cordell Expeditions (CE) is a nonprofit scientific educational association, formed in 1977 by Dr. Robert W. Schmieder. Its main activities are to carry out expeditions to remote oceanic sites to acquire scientific information that can contribute to rational management and protection of such sites. In addition, the group owns and operates a research vessel, the Cordell Explorer, and maintains an ongoing schedule of educational cruises for students and other groups interested in oceanography and marine biology. The website is www.cordell.org.

Under the leadership of Dr. Schmieder, Cordell Expeditions organized and carried out the following expeditions: Cordell Bank (California), Schmieder Bank (California), Farallon Islands (California), Rocas Alijos (Baja California), Guadalupe Island (Baja California), Roqueta Island (Mexico), Castle Rock (California), Ventura Rocks (California), Farallon Islands (California), Peter I Island (Antarctic) 1994, Easter Island/Salas y Gómez (Chile), Heard Island (Antarctic), San Felix Island (Chile), Kure Atoll (Hawaii), and Clipperton Island (Pacific).

Cordell Expeditions maintains collaborative relations with many organizations and institutions, including: University of California, Berkeley; Los Angeles Museum of Natural History; U. S. National Museum of Natural History, Washington, D.C.; California Academy of Sciences; City of Berkeley; Mt. Diablo College; St. Mary's College; Texas A&M University; Humboldt State University; Ocean Futures (J-M Cousteau); San Diego Museum of Natural History; and others.

Cordell Expeditions has received numerous awards. Over 30 years the group has produced more than 1000 new species, new depth and range extensions, and first observations on site, numerous journal publications, and seven books. A full bibliography is available on the website.

THE ORGANIZER/EXPEDITION LEADER



Robert W. Schmieder, A.B., B.S., M.A., Ph.D.

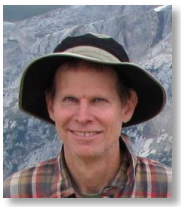
Founder, Director, and Expedition Leader of Cordell Expeditions, a nonprofit research group begun in 1977. The group is responsible for the creation of the Cordell Bank National Marine Sanctuary and for numerous research expeditions to remote oceanic sites. Fellow of the Explorers Club and former Chairman of its Northern California Chapter. In over 30 years he has been listed in almost every Who's Who in the world. He is the owner and operator of a research vessel, the *Cordell Explorer*. Since 1977 he has created and led very large and complicated scientific expeditions and developed new technology for remote sites, especially internet-based real-time websites.

BOOKS: *Ecology of an Underwater Island <> 3YØPI Peter I Island 1994 DXpedition <> Rocas Alijos <> DX-Aku: Messages from the 1995 Easter Island DXpedition <> VKØIR Heard Island Expedition <> XRØX San Felix Island, Chile <> Great Adventures <> DXA: The Real-time Online Radio Log Server <> Edward Cordell and the Discovery of Cordell Bank <> Element: The Amazing Life and Work of Albert Ghiorso.*

HONORS: *Schmieder Bank, Codium schmiederi, Erylus schmiederi, Pharia pyramidata schmiederi, Megalomphalus schmiederi*; Fellow Emeritus, Explorers Club; Expedition of the Year (3 times); Honorary Life member, Central Arizona DX Association; Environmental Enrichment Award, International Underwater Foundation; Certificate of Merit, Chiltern DX Club; Best Communications Award, DXCoffee; Amateur Radio Hall of Fame.

THE ONSITE TEAM (PARTIAL)

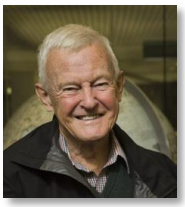
Hans-Peter Blattler
Radio operator



Fred Belton
Explorer

Joan Boothe
Documentarian

Adam Brown
Communications



Grahame Budd
Explorer

Martin Budd
Explorer

Jacky Calvo
Radio operator

Alan Cheshire
Radio operator

Rohan Clarke
Ornithologist

Christian Eichenauer
Filmmaker

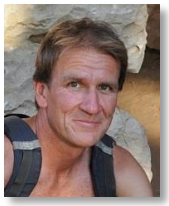
Dave Farnsworth
Radio operator

Eleanor Forbes
Health and Welfare

Jodi Fox
Geologist

Mui-Kim Hoon
Camp management

Vadym Ivliev
Radio operator



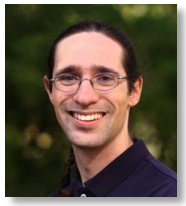
Paul Klemes
Medical Doctor

Dave Lloyd
Radio team leader

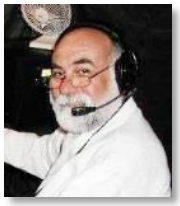
LouPhi Loncke
Explorer

Gavin Marshall
Explorer

Wolfgang Meschede
Filmmaker



Bill Mitchell
Radio operator



Carlos Nascimento
Radio operator

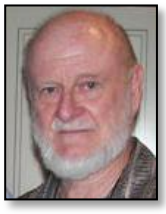
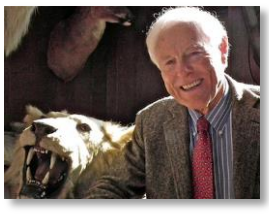
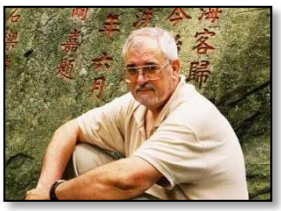
Glen Pacey
Conservationist

Martin Rietze
Photographer

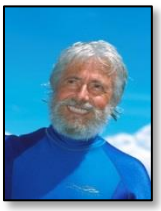
Robert Schmieder
Expedition Leader

John Weigel
Naturalist

THE OFFSITE TEAM (PARTIAL)

	**Harold Heatwole, B.A., M.S., Ph.D., Ph.D., D.Sc.** Professor, North Carolina State University. 3 doctoral degrees in Biology. Wide range of publications, editorial boards, university administration.		**Alan Nichols** President, Explorers Club. Many publications, including3 books. Many expeditions to sacred mountains, extreme cycling, including first person to bicycle Silk Web (China).
	**Mary McGann, B.A., B.A., M.A., PhD.** Staff Member, U.S. Geological Survey. Expert in meiofauna (esp. foraminifera). Participant in Cordell Expeditions since 1990.		**William Miller, B.A., M.A., Ph.D.** Professor, Baker University, Biology. Expert on tardigrades.
	**Viola Krebs, B. A., M.A.** Communication specialist and sociolinguist. Founder, Director ICVolunteers, Geneva. Specialist in cybervolunteerism.		**Rich Holoch, KY6R** **Co-organizer** Technical Product Manager (software). Expert in distributed data systems, social networking and media systems.
	**Eric Woehler** Prof. Univ. Tasmania, conservationist, authority on birds, 3 expeditions to Heard Island, co-author of *Heard Island: Southern Ocean Sentinel.*		**John Miller** Leader in amaterur radio

HONORS

	DXpedition Dedication **Jim Smith VK9NS and Kirsti Smith VK9NL** Legendary radio pioneers and organizers of the 1983 Heard Island expedition		Expedition Dedication **The Fourteen Men** The first expedition to Heard Island, in 1947
	Honorary Expedition Leader **Jean-Michel Cousteau** Son of Jacques Cousteau, and famous in his own right for a lifetime of dedication to the exploration and preservation of the ocean and its resources		Honorary DXpedition Leader **Joseph Taylor K1JT** Nobel Prize Physics Professor Princeton University Creator of software tools for weak-signal detection

DETAILS OF THE PROJECT

VISUALIZING THE EXPEDITION

The team will comprise 25+ men and women, including principally natural scientists and communications specialists. In early November, 2015, they will depart from Fremantle, Australia, aboard the Russian research vessel Akademik Shokalskiy. The 7-day journey will culminate in the spectacular appearance of the volcano Big Ben, (unless of course it's a typical foggy day with zero visibility!). Then a full day of landing tons of gear moved to the island in two locations separated by 20 miles. Within two days, two small cities of shelters, electrical power systems, galleys, fresh water supplies, computer networks, radios, a forest of antennas and maze of cables, and—behold!—an outhouse, will be erected and ready for action.

As soon as the facilities are operational, the biological sciences team is preparing to explore the island, searching for unknown species of plants and animals. From the moist moss among the Azorella plants, they will collect tardigrades, the microscopic 8-legged "water bears" that can apparently die and then come to life again. They will set up traps to collect insects, collect soil and begin the process of extraction and identification of small invertebrates. Others will examine deposits of guano and large mammal carcasses, hoping to find commensal animals living in the energy-rich material. On the beach they will carefully document plastic debris, noting particularly any skeletons that may show evidence of mortality caused by plastic ingestion.

As the scientific activities get underway, other team members are setting up the campsite infrastructure. One person sets up the WiFi network for the campsite, so everyone can talk to everyone else, and personal locator devices are turned on to keep track of everyone. One person sets up the Inmarsat satellite link and tests it by downloading news from the offsite team and uploading a status report. Another person sets up an array of weather stations, mainly to record the winds and to analyze the time records to detect vortices and other coherent structures. Still another person sets up cameras to be ready to capture the aurora and the meteor shower, should they be visible. The aerial imaging person assembles his camera-carrying multi-copter and begins to capture images and video from above the camp. All of this activity is carried on without interacting with the residents (the penguins, seabirds, and elephant seals), and without entering the ruins from the 1947 occupation.

In a day or so, divers will begin to examine the shallow waters in Atlas Cove and offshore Spit Bay. They are after a description of the shallow subtidal community—the fishes, invertebrates, and plants that live in the nearly freezing

water. They will also look for evidence of artifacts and debris that might pose a risk to the seals and diving birds. In shallow offshore waters and the lagoons near Spit Bay they will collect samples of sediments that probably contain living foraminifera, key indicators of climate change. They will use a core drill to obtain deeper sediments that likely will contain “fossils”, to be used to infer ancient climates.

Besides the shelters, the most obvious structures will be radio antennas, 15 or 20 of them, connected to the best radios in the world. On cue, a group of operators will begin the task of recording individual contacts with stations around the world. There will be a never-ending stream of them, calling aggressively, attempting to get their callsigns in the log to qualify for various awards and recognition. After all, Heard Island is practically the Most Wanted Contact in the World. It has been nearly 20 years since the previous radio operation. Ironically, some of the current team was there in 1997 when they set a new world record for the largest number of contacts by an expedition. The radio operation goes on 24/7. As each contact is logged, a networked program called DXA grabs the data and sends it up the satellite link to the central server. There the data is parsed and refiled, automatically updating the expedition website. Any browser anywhere showing the DXA page is automatically updated within 60 seconds after the contact is logged. In effectively real time, the callers are getting confirmation of their success, and they are very happy. So happy that they likely will press the “DONATE” button and thank the expedition with a few dollars.

Within a day or so, the climbers start the ascent and traverse of the volcano. They will hike from Atlas Cove to Spit Bay, stopping along the way to examine the glaciers, the steaming vents, and the crater at the top of Big Ben. Their trek will take them several days, sandwiched between the preparations and the demobilization. They will observe sights never before seen and record processes for the first time that will provide data for offsite scientists to ponder and interpret for years. Among the most interesting tasks will be to search for life supported by the several hot fumeroles. Finally, the climbers leave for the mountain, which looms above the camps. The rest of the team will watch their progress through telescopes, measuring their distance with a laser retro-reflector rangefinder. From the main tent at Atlas Cove, it’s more than 8 miles to the crater on Big Ben, and about the same distance down the other side.

Circulating among all this activity will be the documenter, the person responsible for capturing the data, images, information, and debriefings essential to preserve the observations and ensure their scientific validity. Now and then there are visits from the vessel to exchange personnel, data, and equipment. While not everyone will be on the island at the same time, every participant will have the opportunity to participate in the work at the campsites, and to obtain their personal pictures and record of Heard Island. It is almost certain that none of them will ever see this island again, and they will take away images and impressions that will be with them for the rest of their lives.

NETWORKING

Networking means reaching people worldwide who are otherwise not connected with the expedition. The principal means for this networking is through the open website and through social media to access special-interest groups: discussions, blogs, image/video uploads, etc. The basic idea is to use the social channels to drive people to the expedition website or equivalent derivative websites. Before the expedition the website present news, static documents, pre-recorded videos, commercial content, etc. As the expedition approaches, a larger fraction of the time will be devoted to live interviews, interactive content, simulations, notices of special events, etc. An attractive format for the home page is a satellite image/map of Heard Island, with icons that link to special interests (shown schematically at right).

As the expedition begins, the website becomes increasingly "live." As the team establishes the camp on Heard Island, the satellite link enables extensive real-time uploads, including:

- ✓ The radio log data
- ✓ Encoded messages
- ✓ Verbal reports of activities
- ✓ Live conversations between team members and selected callers
- ✓ Live aerial video
- ✓ Live video of the climbers on Big Ben
- ✓ Live location of each member of the team on the island
- ✓ Data from instruments for offline analysis and feedback to the team for changes
- ✓ Alarms and emergency notifications
- ✓ Medical requests.

Of particular interest will be live connections of school groups with the expedition. These would show a split screen with the school on one half and the expedition on the other, both seen on any browser anywhere in the world.

The website will be professionally developed during the year before the expedition. It will be open for viewing and interaction with real-time data and images during the stay at the island, and will be the archive of the operation after the expedition ends.

THE AUDIENCE AND THE MARKET

One key to the success for the Heard Island Project is reaching large numbers of people who share the enthusiasm for virtual participation in an activity that is both interesting and that will benefit Mankind. But more than that: not only do we have to reach them, we also have to enable them to understand the Project, identify with it, become involved, and ultimately contribute to it.

THE AUDIENCE

The Heard Island Project will appeal to the following special interest groups ("audience"):

Adventure travel
Aerial photography
Aerobiology
Alien species
Amateur radio
Antarctic
Astronomy
Aurora
Australia
Biodiversity
Biogeography
Biostasis
Birding
Bones
Chionophiles
Classroom science
Climate change
Climbing
Computers
Cryptobiota
Cryptobiosis
Cybervolunteering
Diving
D-Star
DXing
Ecology
Elephant seals
Extreme biology
Foraminifera
Fumerole biota
Geology
Glaciology
GPS
Ham radio
Heard Island
Heard Island cormorant
History
Hydrochemistry
Invasive species
Islands
Killer whales
Kite aerial photography
Laser ranging
Leopard seals
Makers
Mapping
Marine biology
Marine invertebrates
Marine mammals
Meiofauna
Mesoscale weather
Meteor showers
Meteorology
Microbiology
Misoscale weather
Most-traveled
Mountaineering
Multicopters
Oceanic debris
Outdoor clothing
Particulates
Penguins
Photography
Plastic in the environment
Radio science
Real-time communications
Restoration ecology
ROVs
Satellite communications
Seabirds
Sedimentology
Social networking
Software defined radio
Southern Ocean
Subtidal biology
Suction dredging
Tardigrades
Trekking
Videography
Volcanoes
Volunteering
Vortex winds
Weather monitoring
Writing

A singular aspect of this project is that it is largely culture-independent. That is, for the interest groups just listed, the individuals will be found in virtually all cultures, and in all areas of the world, including non-technologically-advanced countries. Total number of internet users is well over 2 billion (more than 1 in 3 people).

THE TARGET MARKET

Individuals in the interest groups listed above are likely to be in the following behavioral and motivational groups:

BEHAVORIAL GROUPS

Well-educated
Socially aware
Active in supporting causes
Energetic
Traveler
Peaceful, nonmilitant
Joins groups

MOTIVATIONAL GROUPS

	%
Save the World advocates	40
Adventure-seekers	25
Social media foragers	15
Cool kids and tech nerds	10
Scientists	5
Program managers	5

The behavioral groups are not mutually independent; they describe multiple characteristics that might be possessed by a given individual. The motivational groups, however, are by definition mutually exclusive, so we estimate the percentage of people in each group, totaling 100%.

We do not believe there will be a significant dependence of the representation in these groups on age, sex, geographical region, political affiliation, employment status, health, or association with other groups. That is, we believe that given an individual with access to the internet and membership in one or more of the groups listed above, he or she will be a potential viewer for the Heard Island Project, and therefore a potential consumer of the information, products, and services.

PREVIOUS EXPERIENCE

To illustrate the effectiveness of real-time internet presentation of expedition activities, we cite the Cordell Expeditions to Kure Atoll (2005) and Clipperton Island (2013). For those projects, we developed a communications system called DXA, which made use of application-specific software and a satellite link. DXA worked like this: About 60 seconds after one of the radio operators on the island logged a contact with another station (anywhere in the world), a dynamic web page was automatically updated giving that station visual confirmation of the contact. This real-time feedback significantly increased the number of contacts that could be made, and prevented interference from unauthorized stations. This service was extraordinarily popular: for both expeditions, the website experienced more than 50,000 unique visitors and more than 40 million hits. It is not unlikely that the Heard Island Project, which has much greater intrinsic interest and exposure, would experience 1 million unique visitors.

SPONSORSHIP OPPORTUNITIES

Sponsorship of all types is justified mainly by one thing: Return on Investment (ROI). For corporations with products and services, this means access and exposure to targeted groups of consumers. For foundations and volunteer organizations, this means accomplishing a socially desirable goal. For philanthropists, this means achieving the goal of making a significant change in the World. All these have in common the requirement to see the expected ROI.

In the close-coupled internet-centric social world of 2015, ROI is roughly proportional to exposure. That is, if we have a good message, present it properly, and aim it at the correct target market, a relatively large fraction of the audience will respond positively, identifying with the event, and be converted to buyers/supporters. Numbers matter: The Heard Island Project has the potential to reach one million different visitors, of which perhaps a half-million will be in groups that are enthusiastic for concepts like Saving the World and Having Adventures.

EXPOSURE

The expedition will be a riveting event, affording the opportunity of wide exposure in real-time images, audio, and video. Real-time exposure from the island can be done using many devices:

- ✓ Logos at videocam sites
- ✓ Team members wearing signature clothing (jackets, tee-shirts, etc.)
- ✓ Banners (shelters, structures, posed photos, unfurling at summit, etc.)
- ✓ Brand identification with informal names
- ✓ Product placement (drinks, radios, equipment, etc.)

We are prepared to incorporate any reasonable amount of logos, banners, static images, audio clips, video clips, and other media in any place in the Project, on the island, on the websites, in personal appearances, news releases, written reports, acknowledgments, endorsements, and any other form of exposure that could be effective for generating the sponsors' desired ROI.

In addition to direct online social networking, we will take advantage of major opportunities through *volunteering*. Numerous organizations act as coordinators for large numbers of volunteers, providing connections, networking, opportunities, and guidance. For example, one very prominent organization is ICVolunteers, based in Geneva, which coordinates more than 13,000 persons. The emphasis of ICV is on *cyber-volunteering*, i.e., using digital communications to volunteer services for charitable causes. We have an agreement with ICV to use their resources and the Heard Island Project to develop human resources for implementing the various social networking connections, live web content, and to work toward the goal of 1 million visitors to the Project.

We believe that by exploiting the mechanics of social networking, cyber-volunteering, and news media, we can reach a prepared, targeted audience of more than 1 million.

INTEGRATED ADVERTISING

The Heard Island experience will be multi-media. It will present images, video, sounds, and information on many websites, roughly one for each interest group listed on page 14. Each of these groups constitutes a target audience. Here are some of the opportunities afforded by the multiplicity of websites…

- ✓ Live reports with endorsements
- ✓ Fixed logo on web pages
- ✓ Links to corporate websites
- ✓ Video ads on expedition pages
- ✓ Video endorsements.

The first item on this list is extremely important; it is the concept of **Integrated Advertising**. Perhaps the greatest practitioner of this art form was Paul Harvey, who delivered commercials as part of his regular News and Commentary. We envision emulating Mr. Harvey, providing live, real-time, news-like reports from Heard Island and powerful endorsements of products and services that are in use. We believe that the event will be sufficiently newsworthy that it will be featured on national and cable TV networks, providing a very large audience.

ENGAGEMENT IDENTIFICATION

The Heard Island Project will generate considerable "buzz." We will be doing exciting scientific work on a life-threatening island. We will be making many discoveries that are important to concepts such as climate change, alien invasive species, and extinction. We will be using a satellite link to provide considerable live content on the internet. Specific activities include:

- ✓ First major scientific expedition to Heard Island in 15 years
- ✓ Fourth ascent, first traverse of Big Ben, the live, active volcano
- ✓ Search for biota supported by the live volcano
- ✓ Search for unknown species of macro- and micro-biota
- ✓ Search for particulate biota in the atmosphere and glacial runoff
- ✓ Search for submerged artifacts from the 1947 expedition
- ✓ First documentation of plastic debris on Heard Island in 15 years
- ✓ First quantitative measurements of horizontal vortex winds
- ✓ World-record instrumented long kite train
- ✓ Detection of the von Karman vortex street on the lee of Heard Island
- ✓ Radio contacts with 50,000 different amateur stations worldwide
- ✓ Search for a reported new species of killer whale.

From these and numerous other projects, large numbers of people with special interests will engage the Project, contribute ideas and support, and follow the onsite activities closely. This group probably constitutes the most targeted audience, since it comes pre-disposed with interest, understanding, and desire for products and services in the areas of interest. From this engagement comes identification, and from that, customers.

MARKETING VIA SOUVENIRS

The title phrase above is meant literally: we do not mean market ***of*** souvenirs, but rather marketing ***via*** souvenirs. This distinction is crucial, which we now explain.

The Heard Island Project will be marketing souvenirs of many kinds. Examples are:

- ✓ Mugs, T-shirts, pens, caps, and other standard souvenir items
- ✓ Framed and autographed single-issue photos
- ✓ Personalized-content photos from the island
- ✓ Certificates of accomplishment in interactive operations
- ✓ Pieces of plastic debris from the beach on Heard Island
- ✓ Blow-up penguins, elephant seals, etc.
- ✓ Special-issue stamped envelope cancelled on Heard Island.

However, we believe that the actual sale of souvenirs is not their greatest potential. Of greater value is carrying the representation of commercial sponsors on the souvenir: logos, contact information, product embedding, and so on. For many, probably most, souvenirs, we can attach or include logos, images, messages, slogans, banners, media, and similar commercial and institutional content. The exposure through these objects will contribute to the ROI sought by commercial interests.

ADVERTISING

Because the Project will have high visibility, particularly on internet and social media, we expect to have many opportunities and methods for direct advertising, for instance as canned videos on websites, direct e-mail marketing, etc. Some creative ideas for rewarding viewers are:

- ✓ Online kudos
- ✓ Discount on products and services
- ✓ Prizes for best suggestion for an activity
- ✓ Live participation in interview with famous person
- ✓ Membership in a group, with newsletter
- ✓ Animated response to online donation
- ✓ Interactive dialog with the expedition group live from Heard Island
- ✓ Adopt-a-Penguin, Adopt-a -Cormorant (get photo)
- ✓ Opportunity to name an individual animal on Heard Island
- ✓ Opportunity to name a new species.

The interactive media offer opportunities for capturing contact information such as e-mail addresses, soliciting demographic data via surveys, and other information.

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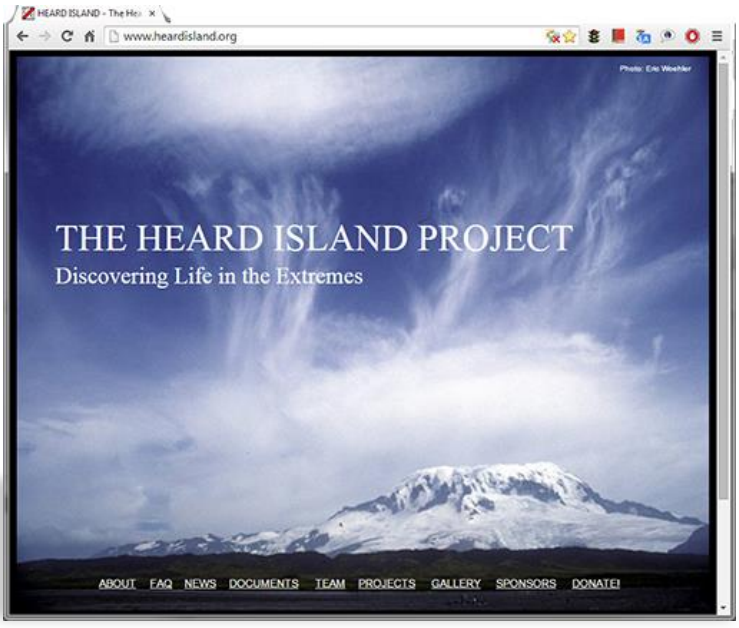

Website for the Heard Island Expedition:
www.heardisland.org