

The HEARD ISLAND Project

Discovering Life in the Extremes

Cordell Expeditions

EXPEDITION SCHEDULED FOR MAR– APR 2016



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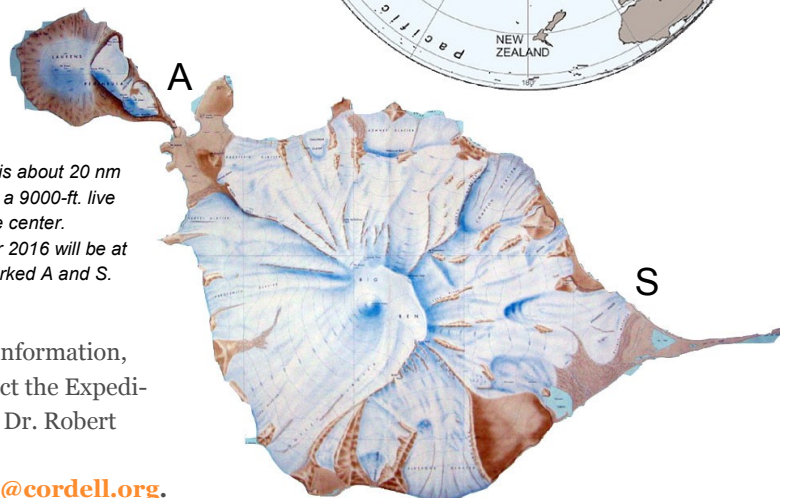
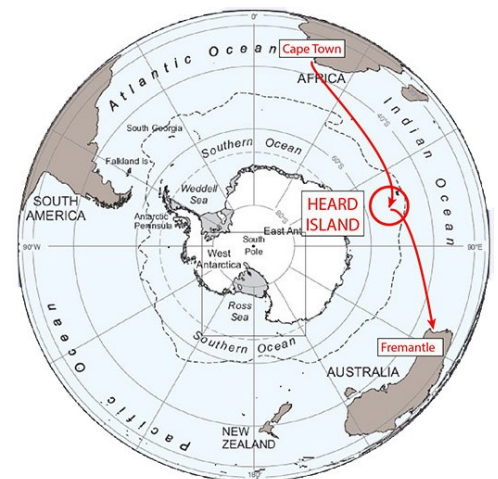
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Wednesday, 13 May 2015.
Today Cordell Expeditions signed a contract with Nigel Jolly, owner and operator of the Braveheart (above), for the expedition to Heard Island, and moved the project schedule to March-April, 2016. The ship will depart March 8 from Cape Town, South Africa, proceed directly to Heard Island, and finally to Fremantle, Australia on April 22. The stay at Heard Island will be nominally March 18-April 10..

The nominal 21-day stay at Heard Island will enable amateur radio operations, using the callsign VKØEK. While the radio operation is the primary goal, the team will also carry out a limited scientific program, including a search for new species that can enhance our understanding of biodiversity and the effects of climate change.

This will be the first private visit to the island since 1997 and the first scientific project there since the Australian

government expedition of 2003. The island is very near the top of the worldwide most-wanted list for radio operations. Scientists have predicted that perhaps 200 species remain to be discovered there. In addition, the team will document plastic debris on the beach, and the penguin, seabirds, and marine mammals. The team will also look for microscopic forms of life, especially those never seen before.



Heard Island is about 20 nm tip-to-tip, with a 9000-ft. live volcano at the center. Campsites for 2016 will be at the points marked A and S.

For further information, please contact the Expedition Leader, Dr. Robert Schmieder, schmieder@cordell.org.



GOAL FOR RADIO OPERATION: 100,000+ CONTACTS

“Thank you! VKØEK up 10. QRZ...”

“W1AW”

“W1AW. Five and nine”

“Also five and nine.”

“Thank you! VKØEK up 10. QRZ...”

So it goes, hour after hour, day after day. Hundreds, thousands of times. Ten-thousand. Fifty thousand. Passing One-hundred thousand.

This is the routine for logging calls from amateur radio stations worldwide, seeking the goal of confirming a contact with perhaps 30,000 different stations. For most, this is their very



first contact with Heard Island. And it might be the last. The island is so rarely activated that the next time may be far

in the future, and perhaps never. The last radio operation from Heard Island was in 1997, when a record 83,000 contacts were made. This time the team plans to exceed that record.

To do this, the team will use at least four stations operating around the clock.

Contact the radio Team Leader Dave K3EL at k3el@earthlink.net

“The goal is to maximize the number of all-time new contacts with Heard Island for the radio operators. There will be tens of thousands of them.”

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DXA REAL TIME

Radio operators seeking a confirmed contact with VKØEK will have a powerful tool available to them...

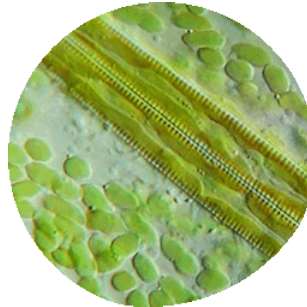
DXA is a single web page that displays the current activity of the DXpedition, automatically updating every minute. By watching this page, the DXer will get confirmation of his contact within 60 seconds, giving him a chance to correct errors if necessary.

See a live simulation of DXA at www.dxa2.org/dxa3dev



RESEARCHER SEEKS YELLOW-GREEN ALGAE

Dr. Robert Anderson is seeking specimens of the algal class Xanthophyceae, which has a number of genera that commonly occur in soils, especially cold soils like Antarctica and the Alps Mountains. He writes: “I was able to demonstrate critical molecular markers for distinguishing cryptic species. This is a significant point for studying soil algae because many of their morphological traits have been reduced and lost during their adaptation to the harsh soil environment. My goal would be to isolate the Xanthophyceae into pure culture; once in culture, I would ask my collaborators to carry out the molecular studies. Many green algae grow in soils, and in addition groups such as the Chrysophyceae, cyanobacteria, diatoms,



Eustigmatophyceae and unicellular red algae can be found growing on or in soils.

Anderson requests that soil samples be collected near the air-soil inter-

face (i.e. collected in the top 1-2 cm of soil). Samples may be placed in a Zip-Lock bag and forwarded to him. Any marine phytoplankton specimens also would be very valuable. He will establish cultures to grow the algae, and then begin the process of isolating the algae. The cultures will be deposited in public culture collections. It is possible – even likely – that new species will be discovered from the isolated Heard and McDonald Islands .

Contact Robert Anderson at raa48@uw.edu.

EXPEDITION PARTNERS WITH HDT GLOBAL

We are very pleased to announce that we have partnered with HDT Global as a major sponsor. The agreement was struck in a meeting on May 19, 2015, at the company office in Solon, Ohio, in a meeting of expedition leader Bob Schmieder and team member Ken Karr with the HDT Global CEO, Chairman, and President R. Andrew Hove. The company will custom-develop the main shelters to be used on the Heard Island expedition, and provide various associated facilities and equipment. In return, the expedition will provide HDT with product experience and evaluation in the extreme environment of Heard Island, as well as exposure on various media such as the websites, DXA, and printed materials.

HDT Global, Inc. designs and manufactures shelters, generators, heaters, air filtration devices, robotics, and other engineered technologies. It offers military tent shelter systems, command and control systems, expeditionary energy products, environmental control units, Nordic industrial products, military power generators, flight line equipment, specialty vehicles, and accesso-

ries, as well as military chemical, biological, radiological, and nuclear (CBRN) air filtration systems and protection systems. The company also offers robotic systems for commercial, healthcare, underwater, and military applications. Its products

are used to meet the specific needs of command posts, hospitals, military barracks, emergency medical treatment units, CBRN decontamination facilities for first responders, and command and control operation centers.

In addition, the company provides engineering design and product development, application engineering and systems integration, logistics support, product training, and after-sales support services.

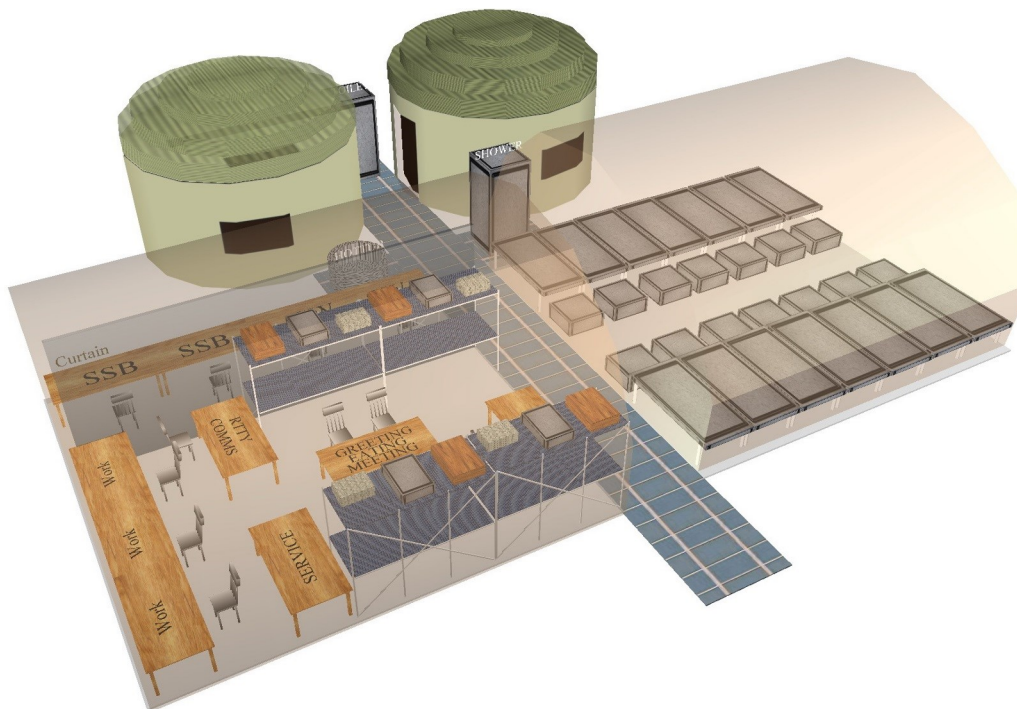


The shelter shown above is the 20 ft. x 21 ft. AirBeam shelter. It can be erected by two men in about 15 minutes using an air compressor. The walls and ceiling are insulated, and there are various feed-thrus for electrical connections and ventilation.

Its products are used by the U.S. and allied military units, homeland security, civilian government, contractors, and commercial customers in the United States, Sweden, Canada, Japan, the European Union, the United Kingdom, Chile, and Australia. The company is based in Solon, Ohio.

Contact HDT at www.hdtglobal.com.

PRELIMINARY CAMPSITE DESIGN USING AIRBEAM SHELTERS



Conceptual design for the main camp at Atlas Cove on Heard Island. The camp consists of two AirBeam shelters joined at their ends. One shelter is the dormitory and the other is the GEM (Greeting, Eating, Meeting) shelter. The walkway between the shelters provides access to the shower, toilet, and hot tub. Considerable table space in the GEM shelter is provided for food and prep, eating, computers, and science lab. Total floor space is about 820 sq. ft. The two circular shelters are tanks permanently installed by the Australian government. They are available only as refuges.

THE HEARD ISLAND PROJECT

The Heard Island Project is centered around an expedition to Heard Island, lying at 53°S 73°E in the Southern Ocean. The island is extremely isolated, and very seldom visited.

The project will include an ambitious amateur radio operation using the callsign VKØEK, and a variety of scientific investigations under the title "Discovering Life in the Extremes."

The expedition team of 14 will sail on or around March 8, 2016, from Cape Town, South Africa, spend up to 21 days on Heard Island, and end the voyage at Fremantle, Western Australia.

"I HELPED MAKE IT HAPPEN..."

From the Team:

"Our goal is not just to put on a great performance, but also to include you in the adventure of the expedition. We want you to feel that you were a member of the team, whether you traveled to Heard Island or not. We want you to get a taste of the excitement, adventure, and deep satisfaction from the accomplishment.



"An expedition to Heard Island is among the most difficult of any destination in the world. Its isolation, the violent weather and seas, the difficulty of finding safe and timely transportation, and arranging safety and emergency response, make a trip to Heard Island only for the determined, and experienced.

"Based on the experience from the 1997 expedition, our team is well-prepared to plan, and carry out, this most difficult project. Obviously, however, it cannot be done without major cooperative support from many people. We are completely dependent on the contributions from organizations like those shown below, and from individuals like yourself. The /SPONSORS/ page on our main website lists every contributor.

"Here are a few things you can do to be part of the project: [Subscribe to this newsletter](#). This newsletter will contain inside information not generally available. From the main page you can make a donation by clicking on the /DONATE!/ link. If you are a member of a group, consider recommending that the group make a contribution. You could also donate or lend equipment, spare tools, shipping cases, etc., or you could obtain services at reduced cost. If you are a programmer, we could use your help in developing our websites.

"Contributions are tax-deductible according to the code governing 501(c)(3) nonprofit organizations."

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Project Management
Cordell Expeditions
4295 Walnut Blvd.
Walnut Creek, CA 94596 USA
(925) 934-3735 (voice and fax)

info@heardisland.org
<http://www.heardisland.org>
<http://www.vkoek.org>

Organizer/Expedition Leader
Dr. Robert Schmieder
schmieder@cordell.org

Co-organizer
Rich Holoch KY6R
Diablo DXers
rhloch@gmail.com

Radio Team Leader
Dave Lloyd K3EL
K3EL@earthlink.net

