

# The Explorers Club Northern California Chapter

October 2017

In color at our web site: <http://www.explorersnorca.org>

## LOCATION

Note venues and dates with care

Friday, 27 October 2017

Grace Lutheran Church  
3201 Ulloa Street at 33rd Ave  
San Francisco, CA 94116

## THE RACE TO FIND, DOCUMENT AND SAVE DEEP SEA CORALS

by Dirk Rosen, Founder and Executive Director of MARE

71% of earth is covered by water yet less than 5% of the ocean has been explored. Until recently most exploration of the oceans has been confined to the shallow coastal edges; however, in the past 20 or so years, deep water vehicles have opened up vast areas of the oceans for study. One of the many discoveries has been the array of corals that grow in cold water and in the absence of sunlight.



Like their shallow-water cousins, deep-sea corals and sponges create large structures that support rich and abundant communities of fish and other invertebrates, many of

commercial importance.

Deep-sea corals and sponges grow slowly and live a long time – a specimen of black coral was determined to be about 4,200 years old, and thousand year-old individuals are common.

These “old-growth forests of the deep ocean” are very vulnerable to bottom-contact fishing, especially trawling, which can destroy an ecosystem that has been in place for millennia. To help protect the remaining coral and sponge habitats in the Pacific, Dirk Rosen and the staff of MARE (Marine Applied Research & Exploration) are documenting the location and health of these habitats, through more than 2,700 km of visual surveys of California’s deep water using remote controlled robotic technologies. Dirk will take us on a tour of the Pacific Ocean that few have seen – even those who travel past or visit the coast every day.

Dirk has over 25 years of experience with deep-sea equipment design, build, and operations for both remotely operated vehicles (ROVs) and manned submersibles. He’s led or co-led 37 deep-sea expeditions to assess Marine Protected Areas (MPAs), characterize National Marine Sanctuaries, perform

fish stock assessments and evaluate impacts of wave power and fishing gear. Dirk and MARE have surveyed California’s network of MPAs from Mexico to the Oregon border since 2003. Previously, Dirk was president of Deep Ocean Engineering, test pilot for all three Deep Rover 1,000 meter-rated manned submersibles, and a co-designer of hundreds of ROVs. Later at Hawkes Ocean Technologies he managed construction of Challenger, an 11,000 meter rated manned submersible designed to explore the Marianas Trench. He also helped implement robotic standards now used on the International Space Station. Dirk has a B.S. in Mechanical Engineering from U. C. Santa Barbara. He has authored or co-authored 16 papers on use of robotic vehicles for ocean assessments, build and operation of manned submersibles, robotic undersea vehicles and robotic maintenance standards for space.



From Lesley’s Namibia report: Kudu



Eland



Rhino mother with baby



**EDITOR’S NOTE:** In this issue, on page 3, the final half of Lesley Ewing’s report on her visit to Laurie Marker’s cheetah project in Namibia. Also included is a report from past Chair Rick Saber on the search for the end of Amelia Earhart’s flight around the world..

# EXPLORING FOR LANDMINES WITH DRONE GEOPHYSICS

Dr. Anders Jepsen FN'03

At the first meeting of the Northern California Chapter this season on September 22, Anders Jepsen discussed his concern for the issue of landmines around the world and how he became aware of it. He projected a video showing a drone with magnetometer performing a geophysical survey over a field in Germany.

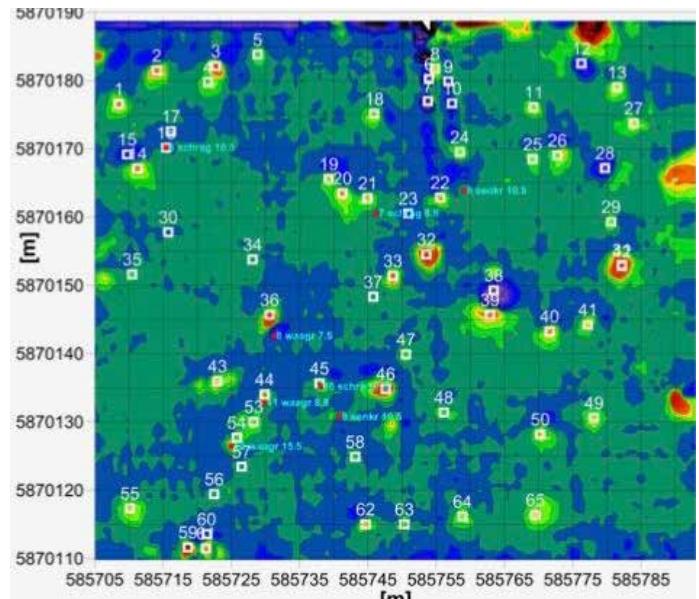


He also presented a map showing countries currently affected by landmines.

The results of the magnetic survey were presented as a contour map from which one could identify the location of actual landmines. He discussed the current limitations, the potential costs and benefits, and the practical aspects of deployment of small geophysical search drones. This approach may not be able to find non-metallic landmines or tiny versions, but surely it can locate cluster bombs that remain from the heavy rolling thunder of Vietnam or many of the older metal landmines. He is seeking support to make this happen.



Anders Jepsen has been searching for things ever since his school days. A Canadian native, he studied geology at McGill University and worked for mining companies during field seasons in the north looking for wealth underground, using geophysical methods. By understanding the relationship between natural forces, or those that can be imposed on the subsurface, an expert may deduce what exists below the surface, non-invasively. He was drawn to these methods and after graduating from McGill, he moved to the University of California for his Ph.D. in geophysics.



It was the time of student uprising against the war in Vietnam and rising concerns about the quality of the air we breathe, especially in California. He reflected on how his skills might serve, and realized his new abilities might be used to improve the environment. At a scientific meeting, a chance friendship grew to the establishment of an entrepreneurial effort to define air pollution in a new and effective way. They would follow pollution rather than just measure its presence. This approach led to his leadership of a program to study the effluent plumes from all the power plants in the state of Maryland.

After this success he was drawn back to measuring below the surface; he formed his own contract geophysical survey company conducting projects around the world. When in Southeast Asia, he came upon citizens mutilated by the residual landmines left after that war, now over; attuned from his UC experiences this was another reminder of a real-world need: exploring for buried landmines and munitions scattered around the world.

Resisting retirement, and always aware of the most recent technologies, he reflected on the ways to find those landmines. Anders has now founded Mobile Geophysical Technologies, Inc. The mission: use miniaturized sensors mounted on small drones to measure useful signals that will show where landmines are without exposing persons to direct explosive impact and to do so rapidly and reliably.

The use of small sensors combined with GPS and hand-carried drones opens a new world for geophysical investigations. The approach offers a rapid solution to clearing critical areas where need and speed are key. (LL)

Chapter Chair Steve Smith (left) with speaker Anders Jepsen and the evening gift. Photo by Lee Langan





## TIA . . . LIONS, CHEETAHS, AND AARDWOLVES. OH MY! PART 2. Photos and text by Dr. Lesley Ewing FN'93

Continued from the September Newsletter.

The Cheetah Conservation Foundation (CCF)'s new guest lodge accommodated our group of 15 in comfort and provided us with three full days of cheetah immersion – cheetah runs, cheetah feedings, cheetah genetics, cheetah scat and predator identification, along with tours of the programs set up for other aspects of cheetah conservation. A big part of the CCF program is working with rural farmers and commercial ranchers to prevent livestock losses that could cause the farmer to arbitrarily shoot the first predator they see – often a cheetah since they hunt



San family dancing

to chew. He would likely have died if he were returned to the wild in that condition. Laurie had arranged for a local dentist to come to CCF on his day off to do root canals on an anesthetized Wildboy and we got to watch. WOW – you've not lived till you've seen a full grown cheetah on an operating table. TIA! Once his teeth are back to normal, Wildboy will be able to go back into the country and live, hunt, eat and take care of himself. One worry about releasing cheetahs into the wild after being at a place like CCF is that they will view humans as their friends; but if Wildboy views his experiences with the dentist like most humans do, he is likely to steer clear of people for quite a while.

Sundowners are the southern African version of cocktail hour. Sundowners might consist of a walk to the patio, a hike to an overlook, or a back country drive to a meadow, but whatever the transport, they



Cheetah on the move

awash in puppies. We saw a two-week old litter and a six- to seven-week old litter. At 2 weeks, the puppies' eyes were still closed and their only activities seemed to be sleeping and nursing. But, by 6 to 7 weeks of age, they are alert, mobile and squirming bundles of soft fur. It's hard to believe they grow up to be 100 or 120 pounds of solid canine.

The CCF mission is to keep cheetahs in their wild, natural habitat. The cheetahs' preferred prey base are the various hoofed animals that graze in grasslands, so protection of grasslands is important in preventing cheetahs from preying on livestock animals. Also, cheetahs are speed hunters – sprinters rather than marathoners, and they need open space to chase down dinner. Native thorn bush (a variety of woody, spiky plant) has taken over much of the land that previously was open grass land. Laurie's partner, Bruce, is working on a habitat restoration initiative that converts sustainably harvested, excess thorn bush into a clean-burning biomass fuel log. "Bushblok", as the product is known, helps reduce the thorn bush invasion (or bush encroachment), opening up more grass land while providing a clean fuel for cooking and heating and good-paying jobs for rural Namibians.

The final part of the CCF program for keeping cheetahs in the wild is the veterinary effort to keep them healthy, since sick predators do not last long in the wild. Just before our visit, a farmer had trapped a cheetah and brought him to CCF. "Wildboy" as he was called had broken two canine teeth trying to get out of the farmer's substandard cage. The cheetah was in pain and it seemed that it hurt for him



Animals on parade

during the day. Different predators kill and eat their prey differently, so step one for CCF is to help farmers learn to distinguish the handy work of a lion or jackal from a leopard or cheetah. CCF even has model corpses we used to do our own forensic analysis and determine the predator based on claw marks, placement of the corpse or eating patterns.

One of the most popular CCF programs is the Livestock Guarding Dog initiative. CCF breeds, trains and places Anatolian shepherds and Kangals, two rare breeds native to Turkey, to guard small stock. These dogs do not herd; they protect. The dogs head out to pasture with the herd, check out the area for threats, stay at the perimeter of the herd and bark loudly if they sense a nearby lion, leopard, cheetah or other predator. Direct confrontation is rare since predators must stay healthy to stay alive and they will often look for a safer or easier meal, rather than to tangle with a boisterous CCF Livestock Guardian Dog.

Winter is puppy season and CCF was

are a social moment for watching the sunset, having a beverage, and pondering the day – or pondering the aardwolf we saw earlier in the evening. Aardwolves are burrowing (aard means earthen in German), nocturnal animals that look a little like hyenas. They are typically shy but we had the rare experience of seeing one from a distance on our way to a sundowner. So, spotting an aardwolf was very much a TIA moment.

P.S. This write-up hardly does justice to either Namibia or CCF. If your interest is piqued, head to the Internet to learn more ([www.cheetah.org](http://www.cheetah.org)), or head to your library for reading material. You can also arrange your own visit or go to one of Laurie's US tour events. You can also make donations to the CCF's programs through their website.



## THE 2017 AMELIA EARHART EXPEDITION

Photos and Text by Rick Saber MN'01

Myths, theories and conspiracies surround the loss of America's sweetheart, early pioneering aviatrix Amelia Earhart. Facts substantiate her disappearance 2 July 1937 on the third to last leg of her round the world flight. Her epic 2,556 mile flight from New Guinea to Howland Island created a mystery that is still very much alive today, eighty years later. She and her navigator, Fred Noonan, planned well for this heroic attempt, yet failed to insure safeguards for their final flight - substantial confusion in expected radio frequencies and transceiver capabilities both on her Lockheed Electra 10E and the rescue ships positioned to assist her in locating tiny Howland. Despite a massive search effort comprised of 3,000 people, ten ships and roughly 65 planes, they vanished into history.

In June I signed on to an expedition comprised of 52 participants and 4 border collies specially trained in locating human remains. We sailed on a small charter ship with 50 crew out of Fiji for a



voyage 900 miles north where we hovered for 2 weeks off the tiny uninhabited island of Nikumaroro. Here we launched an intensive search for more clues both in the jungle and off the reef. Due to 2,000-6,000' water depths immediately off the island, our floating base camp could not anchor, so was in constant slow movement.



*National Geographic*s sponsored a camera crew, writer and financial support for the four search dogs and their handlers.



Hopes were to investigate located graves, gather DNA samples and try to match these with Amelia's known DNA. I was part of a four man scuba dive team assigned to comb the reef and locate one of her landing gear struts reported seen on the reef in a photo taken shortly after her loss. Nikumororo is the presumed site where she made an emergency landing after failing to locate Howland.

TIGHAR (The Int'l. Group for Historical Aircraft Recovery) has made numerous expeditions to Nikumaroro since 1987. A number of clues have suggested her presence on this island. Those, coupled with radio bearings from emergency calls from her plane over a few days that fateful July, triangulate near or over Niku. This island could have been overflowed while en route to Howland, followed by doubling back and landing on the reef at low tide. The reef where we believe she may have landed is unusually flat and obstacle free; even I could land a large plane on it!

My belief, after both visiting Nikumaroro, reading many books on Amelia and listening to many TIGHAR lectures on her disappearance, strongly suggests that this tiny dot of an island just barely south of the equator and 175 degrees W longitude, was her final resting place. The suspected DNA sample, along with two artifacts discovered on this expedition are currently in a refrigerator at Washington DC's Nat'l Geographic Headquarters awaiting analysis.

Nikumaroro was hot, humid and possessed a near impenetrable jungle of scaviola, tangled roots, dangling vines, impressive spiders and formidable looking coconut crabs. Our jungle crew was beaten down by mud, torrential rains and unforgiving coral while we explorers of the deep cruised off the reef which was infested with more sharks than I'd ever dived with; it was good to return home. The mysteries and myths of an American idol lives on and continues to be a draw for explorers.

Photo Captions:

Upper left: Possible grave site search. Upper Right: Rick at work.  
Lower left: Possible relic of Amelia's shoe

**HONOR ROLL  
PAID UP DUES  
FOR 2017**

**Members**

Jim Alexander  
Linda Alexander  
James Allan  
Julia Amaral  
Robert Anderson  
Susan Anderson  
Guitty Azarpay  
Joan Bekins  
Richard Blake  
Joan Boothe  
Sheldon Breiner  
Keith Chase  
Doug Cheeseman  
Ted Cheeseman  
Sandra Cook  
Alan Cooper  
Thomas Cromwell  
Richard Dehmel  
Mike Diggles  
Tom Dolan  
Don Dvorak  
Elaine Dvorak  
Palmer Dyal  
Scott Ellis  
Sue Estey  
Robert Eustace  
Lesley Ewing  
Susan Fox  
Paul Freitas  
Peter Hemming  
Tom Hall  
Mike Herz  
Bill Heydorn  
Don Heyneman  
Robert Higgins  
Jordan Hollarsmith  
Jim Hurson  
Von Hurson  
Alan Hutchinson  
Dana Isherwood  
Krist Jake  
Anders Jepsen  
Steven King  
Ronald Klein  
Jonathan Knowles  
William Kruse  
Keith Kvenvolden  
Alison LaBonte  
Lee Langan  
Ellen Lapham  
James Prigoff  
Sandra Ross  
Becky Rygh  
Rick Saber  
Schmieder, Bob  
Steve Smith  
James Weil  
Ed Von der Porten  
Mordechai Winter

**Sirdars**

Barry Boothe  
Marion Blumberg  
Karoli Clever  
Wendy Crowder  
Joy Durighello  
Sandra Fish  
Anna Freitas  
Louise Geraci  
Gerald Griffin  
Louise Heyneman  
David Hirzel  
Ann Hutchinson  
Nancy Isaac  
Kathy Jepsen  
Fred Johnson  
Kathy Judd  
Margot Komarmy  
Christopher LaFranchi  
Karine Langan  
Liz McLoughlin  
Bonny O'Keefe  
Tom Patterson  
Laura Phelps  
Aldeana Saber  
Kay Schmieder  
R Stewart  
Z Stewart  
Judy Van Austen  
Robert Van Austen

**From the Chair**

It's always great fun to start a new season of our Chapter's gatherings. Good food, good company, and an insightful presentation by former Chair Anders Jepsen made our return most enjoyable and informative. I must say that one of the most interesting and pleasurable duties of the Chair is assisting with the recruiting and coordination of speakers.

I'm pleased to report that this season will include some very dynamic individuals representing a wide range of exploration endeavors. Here is a preview of coming events: October brings us an ROV expert focused on the mysteries of the really deep sea. November's speaker is a best selling author who will share his experiences concerning the social and sometimes physical conflicts that arise from the management of our public wilderness. In January we will have a highly respected Everest mountaineer and high altitude research scientist reporting

on the impacts of climate change. February takes us to Africa for insights to the challenges of performing surgery on Ebola victims. Our March speaker will share her personal challenges as a multiple-award winning extreme marathon swimmer. In April we hear from the computer scientist who just happens to hold the world record for the highest altitude free fall jump. And if that's not enough, we are working on a special meeting in May but we will keep you in suspense on that one.

On a more personal note, it's with no little regret that I will be unable to attend our October meeting. Once every 35 years or so some of us decide to attend a class reunion. So I will be in the deserts of Tucson trying to figure out who is who by stealing glances at photos pinned to shirts. I hopefully will have recovered from shock by November. Our eminently capable Vice Chair Lesley Ewing will take the reins, and reign, in October in my stead.

**Dr. Stephen E. Smith FN'96**

**A LENDING LIBRARY EXPERIMENT**

Looking for Good Reads? Our Chapter has decided to do an experiment. We are going to create a 'Lending Library' with strings attached. We will be acquiring copies of books written by NorCa Chapter members and speakers who have presented to our chapter. We will make these volumes available to any interested chapter member. The catch is you will need to pick them up and return them at a dinner meeting. You will have one month to read the book. On its return we will ask for a brief 'book report' of your impressions. We may also consider including your written report in the newsletter. So, to help us get started, we are asking for donations from authors and members of books by EC members and former Chapter speakers. Let one of the officers know if you have one you are willing to donate to the library or bring it to a meeting. No library card required.



Von Hursoon

**Joan Bekins FN'86 and Don Bekins with Speaker Dr. Anders Jepsen**



Von Hursoon

**Joan Boothe MN'07**

**MEMBER NOTES**

**Dr. Robert Schmieder FN'86** and his Heard Island expedition have received several recognitions from the Ham Radio communities over the past 6 months since they returned to civilization. This includes Japanese and German governmental organizations as well as several ham radio clubs around the world. The Heard Island 2016 expedition was the **first ever** to have real time communications immediately displayed on an expedition's website.

**Harry Hicks MN'87** turned 97 on September 27th. **Congratulations, Harry!**



*October 2017 Issue*  
**Northern California Chapter**  
*Established 1973*



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 Newsletter: Anders Jepsen FN'03  
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**Chapter Calendar of Events**  
 (Venues are identified as soon as known.)

2017  
 October 27 . . . . . Dirk Rosen  
 .Save Deep Sea Corals . . . . . Grace Lutheran Ch  
 November 17 . . . . . Jordan Fisher Smith  
 Engineering Eden . . . . . Grace Lutheran Ch  
 December 17 . . . . . .Holiday Party  
 . . . . . .Home of Joan and Barry Boothe  
 2018  
 January 26 . . . . . .Grace Lutheran Ch  
 Climate Change on Mt. Everest. . . . . Dr. John All  
 February 23 . . . . . Dr. Sherry Wren  
 Surgical Approaches in the Ebola Crisis . . . . . TBA  
 March 30 . . . . . .Ms. Kimberley Chambers  
 Swimming With Sharks Before Breakfast . . . . . TBA  
 April 27 . . . . . .Alan Eustace  
 The Stratospheric Jump . . . . . .TBA

**Earlier Chapter Events**  
 2016

June \_\_\_\_ . . . . . .Crissie Field  
 September . . . . . .Drakes Bay Field Trip  
 November 18, 2016 . . . . . Dr. Bob Schmieder  
 2016 Heard Island Expedition . . . . . Grace Luth Ch  
 December 11 . . . . . .Holiday Party  
 Home of Chapter Chair Joan Boothe  
 2017  
 January 27 . . . . . .David Helvarg  
 The Blue Ocean . . . . . . Grace Luth Ch  
 February 23 . . . . . .David Rumsey  
 Rumsey Map Center . . . . . Stanford University  
 March 31. . . . . .Eric Weiss  
 Expedition Medicine . . . . . Grace Luth Ch  
 April 28. . . . . .Sandy Ross  
 Afghanistan pre-Taliban . . . . . Grace Luth Ch  
 May 26 . . . . . .J.R. Skok  
 Seeking Life Signs on Mars Spengers, Berkeley  
 June 24 . . . . . .Chapter Picnic  
 . . . . . .Angel Island  
 September 22 . . . . . .Dr. Anders Jepsen

Send address changes and  
 corrections by email to  
 ecnca@oceaneearth.org

**OTHER EVENTS, EXPEDITIONS, etc.**

**Lowell Thomas Meeting. The Changing Arctic**  
 Toronto, October 28-30, 2017:

**BOOK NOOK**

**(RECENT PUBLICATIONS BY CHAPTER MEMBERS)**

When Your Life Depends On It. Extreme Decision Making Lessons From The Arctic.  
 Brad Borkan & David Hirzel, 2017, Terra Nova Press, PO Box 1808, Pacifica, CA 94044

Vivid Memories of an Interesting Life  
 Col. John H. Roush, Jr. Self Published, 2017, Marketing Services @xlibris.com

Muddy Boots -- essays of a field biologist.  
 Meg Lowman F '97 and Lowell Thomas Awardee '02. Peppertree Press, and on Amazon.com



**CHAPTER MEETING Friday**  
**October 27, 2017**

Date: Friday, 27 October 2017  
 Place: Grace Lutheran Church  
 3201 Ulloa Street at 33rd Avenue  
 San Francisco, CA 94116  
 Time: 6:30 - reception  
 7:15 - dinner; 8:00 - program  
 Meal Options: Grilled Salmon or Chicken Picata  
 Veggie option — Eggplant Parmesan  
 Cost: \$49 in advance, \$60 after 24 October; Students: \$35.  
 (2017 dues: Members \$25, Sirdars \$50)  
 Please mail reservations, checks & dues to Joan Boothe  
 email: Joan at hoodooskr@aol.com; or Call 415-233-1697 or  
 mail to 2435 Divisadero Street, San Francisco CA 94115

**We have an established PayPal account.**

With an account, you can sign up and remit your meal costs, dues, etc. to the NorCA Chapter  
There is a PAYPAL BUTTON on our website ([www.explorersnorca.org](http://www.explorersnorca.org)); easy to use!