

The Explorers Club Northern California Chapter

September 2017

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

LOCATION

Note venues and dates with care

Friday, 22 September, 2017

[Grace Lutheran Church](#)
[3201 Ulloa Street at 33rd Ave](#)
[San Francisco, CA 94116](#)

EXPLORING FOR LANDMINES WITH DRONE GEOPHYSICS

Dr. Anders Jepsen FN'03



On each day of 2015 an average of 18 people around the world lost their lives or limbs to some landmine or other explosives - constant remnants and reminders of war. Over 6,460 people were hurt or killed in 2015. At least 60 countries around the world are contaminated by landmines; thousands of people continue to live with the daily threat of losing their limbs and lives as a consequence. Emplaced landmines deprive families and communities of land that could be used to produce food or be employed in other useful ways. They perpetuate a sense of insecurity long after conflicts end, impeding a country's recovery and development for years.

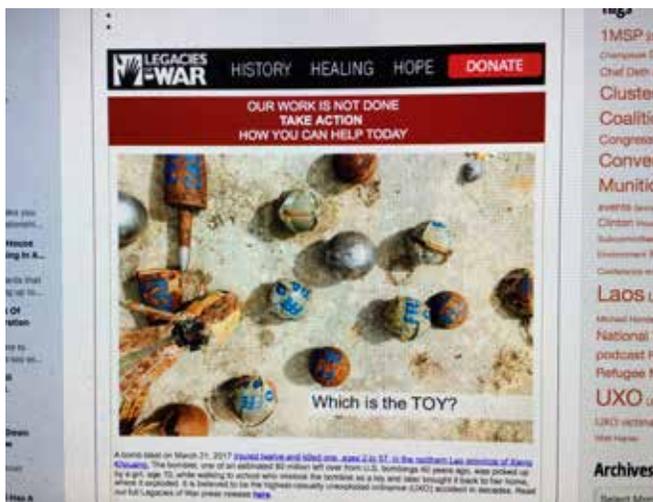
There are several different kinds of issues facing land recovery: UXOs (unexploded ordnance), magnetic landmines, and non-magnetic landmines (besides the modern IEDs that are plaguing the Middle East today). The UXO targets include whole bombs, pieces

of bombs and the metallic bomblets that are dispersed from cluster bombs; (shown below left, called bommbies in Laos). Landmines used to be made of metal that a magnetometer could detect; about 25 years ago plastic landmines that did not have a magnetic signature were introduced. Detecting them is a whole other research project.

The development of commercial UAVs (drones) has been shown to be an important advance in basic technology. Coupling a geophysical sensor with a modern programmable drone has been successfully shown as a mapping solution for magnetic landmines. (Non-magnetic landmines need a different approach. Research for the non-magnetic solution continues.)

A major challenge for detecting landmines with drone-based sensors is to define the high resolution survey techniques that will most effectively see and describe geophysical responses from tiny shallow targets using equipment and procedures originally designed to find and characterize deep large scale mineral deposits and oil reservoirs.

As a geologist and geophysicist Dr Jepsen has spent most of his career as a mineral, energy, and environmental explorer. His current interest in applying established exploration technology to humanitarian issues developed from his long-time concern for the crisis of landmines left over from war. How can the techniques of geophysical exploration be applied more efficiently to detect and map such targets? The answer is to couple them with modern UAVs which is not a trivial task. However, with success, using this approach can make finding the proverbial needle in a haystack a lot easier and help to make better use of demining dollars.



EDITOR'S NOTE: Dear Reader: At the end of the summer, there are always adventures and explorations that might interest the Chapter. If you have a tale to tell from the summer, please drop me a note with some words and a picture. In this issue, there's a brief eclipse report and the first half of an article by Vice Chair Lesley Ewing on her visit to Laurie Marker's Save the Cheetah project in Namibia. And note the announcement of the up-coming Lowell Thomas Explorers meeting in Toronto, Canada on page 5.

SIPPING IN THE SUN ON ANGEL ISLAND

Almost all photos by Von Hurson

When last we visited Angel Island two years ago for our annual picnic, the combination of winds and fog made for a challenging setting for the gathering of intrepid NORCA explorers. This year our annual summer picnic expedition had golden weather: mostly clear skies, a balmy 72 degree temperature, and an overall feeling of relaxation as we sipped the noteworthy tastings of Von and Jim Hurson's latest



adventure - Valiance Wines. Complimented by a presentation of salads, sausages and sides to balance the wine, the day became a perfect opportunity to relax and get to know each other better as we talked and talked. Especially noteworthy were Lesley Ewing's pistachios and Peggy Day's elongated zucchini salad. Not a single explorer left the comfort of the campsite to test themselves against the 5-mile round-the-island hike. Quite a wonderful way to spend a day. AJ



TIA...LIONS, CHEETAHS, AND AARDWOLVES. OH MY!

Photos and text by Dr. Lesley Ewing FN'93

EDITOR'S NOTE: Current Vice Chair Dr. Lesley Ewing is just back from a visit to Dr. Laurie Marker's Cheetah sanctuary in Namibia and wrote this report at my request. The second half of her paper will be published in October's newsletter

PART 1. TIA, or "This Is Africa". It's used to say, essentially, don't expect things to go as smoothly as back home. To embellish on the lions, cheetahs and aardwolves idea, it can mean "You're not in Kansas anymore". But, TIA can also mean, WOW, this is Africa, a land of expanse & desert, exotic animals and swarms of birds; where farmers mostly raise goats, sheep and cattle, and a small farm is about 12,000 acres; and where that next hill could be a two-hour drive away.

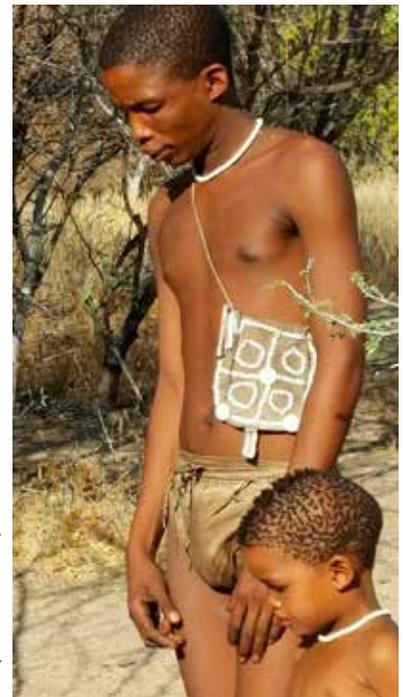
Lesley and Laurie



I went not to the whole of Africa, but to Namibia, a small gem in the south western part of the continent. I was part of a tour, by and for the Cheetah Conservation Fund (CCF), a program established 20 some years ago by Dr. Laurie Marker, FI '06 and winner of the Lowell Thomas Medal, with a vision to see a world in which cheetahs live and flourish in co-existence with people and the environment. The tour was divided about 50 – 50 between some of the highlights of Namibia and an up-close look at the CCF program – including dental surgery on a cheetah!

Namibia is about 320,000 square miles – twice the size of California or about 1/12 the size of the US, but with only 2,500,000 people and just over 4,000 miles of paved, asphalt roads. Much of the economy is centered on mining, with De Beers now starting one of the first

off-shore diamond mines in the world. With over 180 known minerals (uranium, diamonds, emeralds, tourmaline, salt etc.), mining is Namibia's #1 revenue source, followed by fishing and tourism. (Continued on page 3).



During World War I, Germany took over what was then South West Africa and, after a 20-year struggle, Namibia got its independence in 1990. Like its neighbor to the south, it suffered under apartheid and huge disparities based on race. Those are not gone, but somehow the post-independence transition was less volatile. There are slums and shanty areas, but the government is rapidly building lower income housing to provide another option. The houses are built close together so that shanties cannot pop up as extensions to the main house and the housing is one or possibly two stories; we did not see the 20- or 30-story complexes that are common in other countries.

Many of the indigenous tribes have remained on their land, or the land where they resettled as the country was being colonized by the Dutch and Germans. Some are finding ways to be part of the booming tourist economy. We visited a San (Bushman) village and were fortunate that folks were around to give us a tour. If the men are off hunting, the village is 'closed' to visitors; if people are there, they give demonstrations of the typical things that go on in the village, like making beads from ostrich eggshells, building a fire, making rope from



vines, snaring game and dancing. The families get income from the tours and from selling jewelry and carvings, and every six to eight weeks they go back to the Kalahari and another family occupies the village. It's not culturally pure, and I am sure that social anthropologists would cringe and consider the system to be exploitive, but the people to whom we spoke seemed genuinely happy to meet us, and the ecological impact of this type of encounter is far less

than if dozens of tourists were to travel routinely into the Kalahari. We met the San at their village near Omaruru, and in several of the conservation areas and Himba at Etosha National Park. We met Herrero throughout our tour, including at a Gala for CCF where a female Herrero rancher was awarded a prize for her work in helping conserve cheetahs by using an Anatolian guard dog provided by CCF.

We went to Namibia in July – the middle of winter and about two months into the dry season. Just like parts of California, Namibia has two seasons – wet and dry; but unlike California, the wet season is in the heat of summer and the dry season is during the cooler winter. Temperatures at night dipped to the 30s and 40s (Fahrenheit). Climate change might be altering the seasonal weather. When we visited, CCF had still not had the type of freeze that is so important for keeping parasites in check. But, enough of Namibia in general; the photos show some of the people, wildlife and diversity – on to CCF.

CCF's new guest lodge has four guest units and a larger "family house" including a kitchen and large dining area. Until the guest lodge, CCF only had Babson Guest House – a lovely building with a view of the cheetahs, two upstairs bedrooms and a smaller living area underneath. Until the guest lodge, a small group of visitors could stay at Babson House, but larger groups had to drive in from Otjiwaronga for a day-trip. It's only about 25-mile drive, but over dirt roads it can take 45-minutes to an hour. During the rainy season, the dirt road turns into a clay-soup that becomes a sort of concrete mess once it dries on a car.

Photos: upper left: Local giraffe



Upper right: Indigenous San (Bushman)
Lower right: 6000-year-old San cave art

**HONOR ROLL
PAID UP DUES
FOR 2017**

Members

Jim Alexander
Linda Alexander
James Allan
Julia Amaral
Robert Anderson
Susan Anderson
Guitty Azarpay
Richard Blake
Sheldon Breiner
Joan Boothe
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
Mike Herz
Bill Heydom
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
Lee Langan
Ellen Lapham
James Prigoff
Sandra Ross
Becky Rygh
Rick Saber
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

From the Chair

Welcome Back! I certainly trust that all of our Chapter members enjoyed the summer break! Hopefully you have also had successful and rewarding exploratory adventures and are looking forward to gathering together in the coming months for camaraderie, edification, and sharing! To that end we are putting together a schedule of speakers and events that we hope will keep you engaged and mentally stimulated. So far it's looking like an exciting lineup of presenters beginning with our own Dr. Anders Jepsen. We always attempt to create a broad range of topics and we may have some surprises in store for 2018.

I've just returned from my own summer exploration in Bermuda, providing dive safety supervision for a group of young underwater archaeologists. I've been doing this since 1999 and it remains both challenging and rewarding. Uncovering submerged historical artifacts is of course fascinating, but watching the skills and responsibility of new scientific divers develop during our field schools is just as gratifying. Super sharp eyes may recognize another of our members in our class photo, Dr. James Allan, FN'06, who is one of the Professors on the project. It's hard work, but someone has to do it! I am looking forward to hearing other's reports of what they did on their 'summer vacation' at our first meeting this month.

Steve Smith FN'96



The Eclipse. Totality was a most remarkable experience for all who were able to be within that band across the nation on August 21. The day before, Karine and I traveled north to be welcomed by my daughter in Eugene, Oregon. Monday morn we drove another 25 miles to an open field; there was no traffic. My thoughtful son-in-law arranged for comfort and certified eye protection.

Had we traveled enough? By 10:07 doubt crept in, as even a sliver of sun appeared brilliant. Then, a cosmic switch; it was dark. Without the sun shields a brilliant ring surrounded the moon, comfortably viewed by the naked eye. Astonishing. Stars appeared. A chill was evident. Awe!

Twenty-two seconds later, another switch allowed the bright sun to reappear. Over an hour the sun became full again. Photographer daughter Kathryn captured the experience while camping in the wilds of the Wind River Mountains.

Lee Langan FN'99, with Karine.



Photo by daughter Kathryn Robertson



Photo by daughter Mary Langan

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Northern California Chapter
Established 1973



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Chapter Calendar of Events
(Venues are identified as soon as known.)

2017
September 22Dr. Anders Jepsen
Drones to map landmines .Grace Lutheran Ch
October 27John All
TBAGrace Lutheran Ch
November 17Jordan Fisher Smith
Engineering EdenGrace Lutheran Ch
December ??Holiday Party
2018
January 25Grace Lutheran Ch
Deep ROV DesignDirk Rosen

Earlier Chapter Events
2016

March 11-13. ECAD New York
March 25 Daniel Lin
Navigation on Polynesian Voyages Grace Luth Ch
April 21 (Thursday).Autodesk
Technology in exploration. Gallery, 1 Market, SF
May 27Anne Sanquini
Surviving the 2015 Earthquake in Nepal GLChurch
JuneCrisie Field
SeptemberDrakes Bay Field Trip
November 18, 2016Dr. Bob Schmieder
2016 Heard Island Expedition . .Grace Luth Ch
December 11Holiday Party
Home of Chapter Chair Joan Boothe

2017

January 27David Helvarg
The Blue OceanGrace Luth Ch
February 23David Rumsey
Rumsey Map CenterStanford University
March 31.Eric Weiss
Expedition MedicineGrace Luth Ch
April 28.Sandy Ross
Afghanistan pre-TalibanGrace Luth Ch
May 26J.R. Skok
Seeking Life Signs on Mars Spengers, Berkeley
Send address changes and
corrections by email to
ecna@oceaneearth.org

OTHER EVENTS, EXPEDITIONS, etc.

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

BOOK NOOK

(RECENT PUBLICATIONS BY CHAPTER MEMBERS)

Operation Ebola: Surgical Care During the West African Outbreak.
Ed. by Sherry Wren and Adam Kushner. 2017, Baltimore: Johns Hopkins University Press.

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



CHAPTER MEETING Friday
September 22, 2017

Date: Friday, 22 September 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: Tri Tip or Chicken Marsala
Veggie option — Pasta Primavera
Cost: \$49 in advance, \$60 after 19 September; 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); easy to use!