

Getting to the Bottom of Shaw's Bog

Colin Grier

What's in the Shaw's Bog ecological reserve off Cook Road?

Lots of water. Dense hardhack and Labrador tea. Several rare species of plants and animals. A small boat hidden in the brush that's likely been there for decades.

There's also roughly seven meters of muck lying at the bottom of the open water area at the center of the bog. I know this because, in early September 2013, I was part of a team of research scientists who made their way to the bog, assembled an inflatable catamaran boat system and paddled out into the middle of that water. Our objective was to send a metal tube down to the lake bottom in hopes of collecting a 3-inch wide column of Lake Floor muck. And we got seven meters of it.

The event was orchestrated by me, Colin Grier, an archaeologist at Washington State University. The team also included Kelly Derr and Phil Higuera, researchers from the University of Idaho who both study fire and its behavior. Phil's student Patrick Flanigan also helped out. We were joined by members of the Galiano Conservancy: Ken Millard, Lia Chalifour and Jenna Falk.

So why are we interested in this muck? Because it provides a record of what the environment of Shaw's Bog, Galiano Island, and the southern Gulf Islands looked like over the last 14,000 years. The muck has accumulated slowly over that time and contains preserved pollen from plants that grew in the area, charcoal from both local and distant forest fires, and many other fossil remnants that allow us to reconstruct climate, precipitation, plant communities, and forest fire frequency in the past.

We will slice the column of muck into 1/2 centimeter "patties" and analyze the contents. Each thin slice gives us roughly a 10-year window of time. That's a pretty amazing thing to think about—1400 little time capsules that allow us to reconstruct what environments were like on Galiano back to the last ice age.

It will take a great deal of time and trained labour to analyze all the material. Most important, we need to get carbon dates at

various depths in the sediment column to confirm the age of the materials. We already have a bit of information about how old things are. At about 5 meters down the column, we came across a thin layer of ash derived from the Mount Mazama volcano (now Crater Lake) in Oregon, an eruption known to have happened almost 7700 years ago. At the bottom of the core are blue-gray clays that formed from the melting of glaciers that covered this area until around 14,000 years ago.

What can we do with the data we get from the sediment column? We can understand how forests and climate have changed together in the past, allowing us to better predict the impacts of climate change occurring today. We can reconstruct the environment that First Peoples lived in for millennia and document the ways in which they used the Galiano landscape sustainably. We can also measure the impact of more recent land use and development on the island's plant communities.

By charting out these human-land relationships, we hope to contribute to the knowledge we all need to make sound decisions about how to shape and protect our environment into the future.

More info: <http://libarts.wsu.edu/anthro/faculty/grier.html>
or
<http://www.uidaho.edu/cnr/paleoecologylab>.

News Views

David New

January 2014 Happy New Year!

I was going to start this column by saying that YOU got your Library but now WE will be paying for it.

But I won't say that. Enough has been said already!

What I will say is that it is wonderful to finally have a full-time island doctor. It is to be hoped we only have to meet her socially as a friend and not a patient. Let's continue with a bit of humour. Question:

How much is twice the half of two and three quarters?

Or how about this:

I saw Esau sitting on a seesaw
I saw Esau with my girl
I saw Esau sitting on a seesaw
Giving her a merry whirl.
When I saw Esau, he saw me
And I saw red and he got so sore
That I got a saw and I sawed Esau
Off that old seesaw!

Lastly, remember. Don't put off until tomorrow what you can put off until next week! That is procrastination! Happy New Year

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HAPPY NEW YEAR!

