

GEOLOGY ROCKS IN ONTARIO'S HIGHLANDS!

Ottawa Valley is renowned for stories and treasures in stone

By Katharine Fletcher

"Geology rocks!" says Chris Hinsperger, owner of Eganville's Bonnechere Caves. "The Ottawa Valley is home to fascinating geological features."

He's right. The Bonnechere site is just one of many destinations to discover.

Another thing he's right about is his firm conviction that geology isn't boring. It may seem complex, but National Capital Region residents have many places close by to handle fossils, visit museums which demonstrate how the Earth was formed, or go rockhounding to collect mineral specimens.

Indeed, Ontario's Highlands Region, an official tourism area that covers a thick slab of the province south and east of Algonquin Park along the Ottawa River right down to Arnprior, has developed a recreational geology program for people wanting to understand the story of the rocks. Here are some basics.

GEOLOGY DEFINED

The University of British Columbia website (geoeng.ubc.ca) puts it this way: "Geology is the study of the Earth, its composition,



Apatite crystal like this can be found at Bear Lake dig.



Cephalopod fossil in a boulder at trailhead of Bonnechere Geoheritage Trail.

its history, and its constantly changing character."

HIGHLAND HIGHLIGHTS

It is home to some of the most ancient, exposed rock on Earth – the "Precambrian" Canadian Shield, formed some 2.5 billion years ago. The Precambrian Era is the earliest of the geologic ages.

As well, 15,000 years ago (just last week in geological time), the Laurentian Ice Cap covered our region to a depth of 3.2 kilometres. As it receded, its meltwater collected in a pre-historic body of water known as the Champlain Sea. In what is now the Ottawa Valley, marine life such as whales, seals, trilobites (crab-like creatures), gastropods (snails), pelycypods (clams) flourished.

Today, with a bit of luck, we can find fossils of these creatures in the limestone that formed from the sediments at the bottom of that sea.

The land rose as the weight of those kilometres of melting ice dwindled, and the Bonnechere, Madawaska, Mississippi and other river watersheds were defined, draining into the Ottawa River.

The resulting topography is a region of lakes, rivers, beaches from earlier, vastly wider rivers, fossils, minerals and metals. Here are some of its destinations.

BONNECHERE TREASURES

Perhaps the best introduction to regional geology is at Eganville's Bonnechere Museum, open by appointment after Labour Day. It offers geological maps, local fossils, minerals, and rocks. Walk the nearby geomorphology hike (get brochure at museum) which snakes along the Bonnechere River. At the trailhead, 15 numbered boulders explained in the brochure help you recognize garnets, stromatolites, orthocones and the minerals and fossils in them.

This easy walk follows an old railbed to

an abandoned limestone quarry mined during the 1800s. The trail descends to follow the river with a water level that has usually dropped by late summer, exposing minerals and fossils. Here's where you can go rockhounding to heart's content.

The nearby Bonnechere Caves offer guided tours on weekends from Labour Day until Thanksgiving. These caverns were formed more than 510 million years ago. Inside, bats sleep amid stalactites (stone "icicles"), surrounded by fossilized cephalopods and crinoids (ancestors of sea urchins).

BEAR LAKE DIG

Phone ahead (613-332-1513) and reserve picks and shovels to literally "get down and dirty" in fissures of exposed bedrock called "dykes." Then buy a \$10 permit for the dig site at the Bancroft Mineral Museum in the Bancroft and District Chamber of Commerce. Rockhounds revere this site, and have removed sometimes massive crystals of green apatite, pink feldspar or the layered glasslike mineral called mica. The dykes are expanded every year, so repeat visits pay off with new crystals that have been exposed. Wear old clothes, sturdy shoes and work gloves. A headlamp could be handy too.

EAGLE'S NEST TRAIL

The trailhead to this five-kilometre easy walk is two kilometres west of Calabogie Peaks Ski resort on the south side of Highway 508 West. Hike along an old logging road that gradually rises until you reach a sign on your right explaining the history of Eagle's Nest. Ascend the short trail for a simply spectacular views of the Madawaska Valley from the 120-metre cliff face. It's an easy trail but a scary cliff, so rein in any rambunctious youngsters. Take binoculars to enhance the view, and maybe spy raptors overhead.



Photo by Eric Fletcher

GEOMORPHOLOGY HIKE

This is a 3.5-kilometre gentle walk near Dorset, Ont. followed by a paddle to an overnight campsite. Load your canoe or kayak and camping gear onto your car and

drive to Haliburton. Take Highway 35 to the Frost Centre, a former logging school. The geology hike follows the shore of Sherborne Lake, part of the Haliburton Highlands' Water Trail. Allow an hour and a half so you can stop at all 15 interpreted signposts to

Descending to the river on Bonnechere Geoheritage Trail alongside Ordovician limestone cliff.

learn some geological features like "erratics," which are boulders left behind by retreating glaciers. Contact algonquinhighlands.ca to reserve campsites. ■

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