

921th meeting of the Brodie Club

15 April 1997

Meeting Called to Order: 8:10 p.m.

Chair -- J. Bruce Falls

Membership Secretary -- Bill Carrick

Secretary -- J. D. Rising

Nineteen members present.

Guests: Ken Abraham, Mary Boswell, Joe Desloges, Enid Machin. Jean Nicolas Haas, and Trudy Rising

Minutes accepted.

The guest speaker, Dr. Joe Desloges of the Department of Geography, University of Toronto, was introduced by Dr. Jock McAndrews. Dr. Desloges received his B.Sc. from the University of Waterloo, his M.Sc. from the University of Wisconsin, and his Ph.D. from the University of British Columbia. Since coming to the University of Toronto, he has received a Faculty of Arts & Sciences award for excellence in undergraduate teaching. He has done extensive field research in both Canada and Iceland.

Guest Presentation:

Canada's land formations are young. Virtually the entire country was covered by glaciers until about 10,000 years ago. Since deglaciation, and during deglaciation, many of the present land features may have been fashioned by catastrophic events, such as the large May 18, 1974 flood of the Grand River in Ontario. Such rare, but high magnitude events may have long-term effects on the local land features and environment.

15,000 BP (before present) nearly all of Canada was covered by ice. 14,000 BP this ice started to decay; 13,000 proto-Lake Erie was formed, and there was the beginning of Lake Michigan and Lake Chicago; 12,000 BP, Lake Algonquin (Lake Michigan + Lake Huron) was formed as well as Lake Iroquois (=Lake Ontario); 11,000, Lake Algonquin (early Lake Erie and early Lake Ontario) existed, as did the Champlain Sea (in the St. Lawrence Valley). Habitat zones that occurred south of the ice were much like those south of the north polar glaciers today, only very much compressed. Drumlins were probably formed in water under glaciers, and many features etched and carved into bedrock may have been carved by water under a great deal of pressure.

To facilitate the study of the effects of water under glaciers and of rare, high impact events, it is important to study modern analogous systems. The Antarctic is not a good system for this purpose--too cold and dry. Greenland is better, and work is underway. Western Canada is acceptable, but of course much smaller. Dr. Desloges has worked on Ape Lake, in British Columbia. As the glacier

that feeds Ape Lake melts, the Lake becomes progressively filled with water. At some point, the glacier starts to float just a bit, allowing water to rush under the glacier, and to carve a drainage passage. When this happened a few year ago, Ape Lake drained in 72 hours. This single, large flood had major effects on the valley downstream from the glacier, and these effects were manifest all the way to the Pacific Ocean. Ultimately, the Lake refilled, and then drained again two years later--again with catastrophic effects. This appears to be a good analogue to the waterways in southern Ontario, when covered with glaciers.

There is evidence elsewhere of catastrophic floods. Lakes sediments can provide a record of past events, and permit us to determine the frequency of periodicity of catastrophic events. This can also help us differentiate between "natural" events and human caused disturbances.

Fred Bodsworth thanked the speaker.

Announcements:

Bill Carrick announced that the forthcoming field trip will be on Saturday, 31 May. There may be Komodo Dragons on display there by that time. At the next meeting, Bill Rapley will show some pictures taken in Indonesia of these "dragons."

The annual spring meeting of the LPBO will take place this coming Saturday at Long Point.

There will be an FON open house 10 May. Phone & register.

Members Notes and Observations:

George led a trip to the spit three weeks ago and saw garter snakes, leopard frogs, as well as a displaying Common Snipe and Woodcock.

Dave Hussell noted 200 Bohemian Waxwings in Kanata two weeks ago. Jim Bendell saw 300 in that general area.

Ken Abraham saw a Merlin on the U. of Toronto campus this evening.

Jim and Trudy Rising noted several ducks had returned to Lake Ontario, including numbers of Red-breasted Mergansers and a few Blue-winged Teal. They also saw a Short-eared Owl flying over Lake Ontario on 6 April.

Bill Carrick heard wood frogs recently. The 30-40 Trumpeter Swans that wintered at the zoo are now flying around.

Meeting Adjourned at 9:50

NEXT MEETING: The 922 meeting of the Brodie Club will be held on May 20, 1997,
Room 430, Ramsay Wright Bldg., U.of T. - 8:00 PM

SPEAKER: Dr. William Rapley

SUBJECT: Komodo Dragons - Modern Dinosaurs