

Minutes of the 876th Meeting of the Brodie Club

Chairman: Martin McNicholl

Secretary: R. Tasker

17 members and 2 guests were present, the guests being Margaret Bodsworth guest of Bodsworth and Mary Tasker guest of Tasker.

April 21, 1992

The minutes of the previous meeting had been precirculated and corrections made by Norma Martin on the club copy.

Announcements

Carrick had received no objections to ensconcing Frank de Matheis and Bill Rapley as members and both being present they were greeted by the membership at large. Martin reported on FON affairs.

1. There will be a conference October 17-21, 1992 entitled World Congress for Education and Communication on the Environment.

2. A Congress August 6-9, 1992 at Windsor entitled A North American Prairie Conference.

3. He had a copy of a publication by the Royal Bank of Canada entitled Handbook on Concerns for Managers re Environmental Matters.

4. He announced the activities of "Partners in Flight" re migratory neotropical monitors.

5. FON camps.

6. FON catalogues.

Anyone interested can contact Norm Martin directly.

Boisoneau announced that a book entitled "Vignettes of People in Parkdale During the Depression" is available at bookstores.

Falls drew attention to the upcoming annual general meeting of the Long Point Bird Observatory in Port Rowan April 25 and invited individual participation in the LPBO Birdathon and raised the issue of club birdathons.

Savage read an announcement concerning the upcoming LPBO Baillie Birdathon.

Rapley announced that he had data on the OMNR budget to be referred to later in the meeting.

McNicholl had available the list of 1992 Baillie Fund grants and the Baillie Fund Scholarship.

The speaker of the evening of was Desmond Collins speaking on the Burgess Shales. He was introduced by Savage. Born and raised in Australia he did his Bachelor's degree at Western Australia, his Ph.D. at Iowa, spent three years as a Senior Research Fellow at the British Museum working on Palaeozoic cephalopod molluscs. He worked for 2 years with the Geologic Survey of Canada with George Jeletzky who introduced him to belemnite cephalopods. He has been curator of Invertebrate Palaeontology at the Royal Ontario Museum since 1968 with cross appointments to the Zoology Department of the University of Toronto. He has spent 9 seasons working on the Burgess Shales and related deposits.

The Burgess Shales are now protected and lie in Yoho National Park. The public can see them only by guided tours but in the past they were more accessible. They are located near the Alberta/British Columbia border at 7500 feet. There followed a superb dual slide show illustrating the history of the growth of knowledge of the deposits ending up with Dr. Collins' own work. The site can be reached from the main highway in Burgess Pass. The fossils are important because of their superb presentation and date from around half a billion years ago at the onset of a general species explosion in the world. Only two other sites with similar material are known in the world. The site was discovered from Stephen House on the CPR opened by the latter to encourage tourism. Stephen House was built in 1886 at a cost of \$30,000.00. It happened to be close to a mine and one of the prospectors located with the latter fell on the fossils by accident, showed the material to McConnell, a geologist in 1988. A species new to science which was shrimp-like, was the first new discovery in this fossil bed. Wolcott from Michigan, at the time director of the US Geological Survey and later of the Smithsonian, went to the site early and collected trilobites for which the site has become famous. On one of his early trips Wolcott came on a slab of shale that had fallen from above and which was blocking his trail. This proved to be the first sample of the Burgess Shales, found in 1909. They didn't discover its source until the following year when 5 to 10,000 specimens were collected. Many publications followed quickly soon revealing the remarkable quality of preservation of soft tissue detail making the site world famous. Apparently Wolcott retouched and then rephotographed his material, sometimes taking some liberties in the process. Our speaker showed a stupendous

collection of his beautiful illustrations including one specimen named after Tuzo Wilson's mother. Wolcott made many subsequent trips including 1913 and 1917, the latter yielding the largest collection and he returned to pick over the remains left behind by earlier dynamiting activities working into his 70's.

In 1924 a second group from Harvard arrived including Clark, a young Ph.D. student who to this day is still on the staff of McGill University. Much of Wolcott's work was completed and published after his death and served as the main source for Cambrian fossil reconstructions. At the time he died Wolcott felt that he had exhausted the site.

In 1966 the Geological Survey of Canada opened its Calgary office and decided to adopt the Burgess Shale as its Centennial project. Since Wolcott's descriptions had been brief Harry Whittington took on the job of redescribing Wolcott's material. He soon discovered species that Wolcott had not found that appeared to be related to no other known group of animals, including a possible oldest chordate as well as the largest Cambrian predator which measured a metre in length. A discussion arose in the literature over the apparent extinction of whole phyla which though present in the Burgess area were unknown in subsequent fossils anywhere in the world. It was popular to implicate the nuclear winter of a massive meteoric impact.

In 1972 our speaker made his first visit to the site finally being allowed permission to examine the dump left from the earlier work in 1975. New species and rare specimens were located. In 1981-2 he returned to locate new sites and it became apparent that there was a wide range of excellent fossil sites along the course of what had once been a submarine ridge but which now presented as a mountain ridge. Finally, in 1983 they were given permission to excavate at some of the new sites. Many beautiful photographs of the resulting specimens were shown, including some that looked quite fish-like even though they were not vertebrates. In 1988 a new site was excavated at a higher altitude yielding more specimens of known as well as previously unknown forms.

A series of spectacular slides reviewed the interesting physical conditions under which the expedition worked, including the animal trespassers. A park rat cleaned their dirty dishes while they were in the field, helping cope with the lack of water. Urine-salt licking goats dislodged rocks which catapulted into their camp.

Finally in 1990 and 1991 further expeditions were made yielding still more material and finally an intact Tuzoia.

With all this experience behind them Collins and his group began to re-examine the prospect of possible massive extinction of whole phyla. They brought forward the possibility that perhaps forms within a given phylum had changed so much in the last half billion years that modern taxonomy based on modern forms did not fit the ancient ones. By "making the shoe bigger so that it will fit" as Collins put it, they found it possible to accommodate some of the apparently extinct phyla into modern known phyla thus reducing the numbers; however, some remain and many mass extinctions appear to have occurred.

This lecture portrayed a more fantastic scene of past life on earth than any human imagination could create.

Questions followed indicating a great interest generated and Ann Falls thanked the speaker reinforced by a round of applause.

Members' Notes

Rapley commented on the cuts in the OMNR budget including a million dollars in enforcement, three quarters of a million in fish culture, halving of the zebra mussel project; the purple lossetrife project has been eliminated, etc. Rapley encouraged the members to write the MNR if they thought the cuts were out of line.

Bodsworth reported an adult bald eagle in the Beaches 4-5 weeks ago and one at Kew Beach in February. He saw a Carolina wren the day before the meeting near his home.

Rapley mentioned that he was in Temiskaming over the past weekened and saw a raccoon, a very northern record.

Bruce Falls has noted that buds of his Austrian pine are being chewed off by squirrels to make it into nest material. Others have seen the same thing and a discussion followed leading to the conclusion that individual squirrels learn certain tricks which they continue to perform but which other squirrels do not learn.

Boissoneau passed out migration dates noting that 1992 is 17 days on average late.

Savage drew attention to the possibility that a python might have killed its owner in Toronto recently.

Tasker commented on a heavy fall of migrants at Manitoulin Island in foggy weather and a southwest wind on Easter Monday.

Mary Tasker commented on a large beaver visiting her cabins on dry land well away from the water who seemed to be trying to fend for himself.

Hussell noted white-eyed and solitary vireos at Long Point over the Easter weekend and also invited Birdathon sponsors.

Bendell had noted a grey squirrel in Calgary which he thought was an unusual record.

McNicholl reported that they had been introduced there years before. He added that the day of the meeting he had noted migrant birds in his own garden.

Bendell also noted that the day of the meeting there had been migrant birds in his garden.

McNicholl had noted a Carolina wren at Shore Acres on Easter Sunday, a recent purple martin at Smithville and whitethroats at Cranberry Marsh.

Speakman reported that there was concern in Maryland that peregrines were molesting nesting rare species such as roseate terns commenting that if human greed had not so reduced the range of birds such as roseate terns these problems wouldn't exist.

Adjournment took place at 10:37 and members moved to the lab for informal conversation over coffee.