

THE  
BRODIE  
CLUB



ROYAL ONTARIO  
MUSEUM OF ZOOLOGY

### THE 1,039th MEETING OF THE BRODIE CLUB

The 1,039th meeting of the Brodie Club was held at 7:30 pm on May 11, 2010 in Room 432 of the Ramsay Wright Laboratories of the University of Toronto.

Chair: Oliver Bertin

Secretary: Enid Machin

The meeting was attended by 15 members and 7 guests.

**Roll Call, Present:** E. Addison, R. Addison, Bertin, Bodsworth, Bousfield, Eadie, A. Falls, B. Falls, A. Juhola, H. Juhola, Machin, McAndrews, Rapley, J. Rising, T. Rising.

**Regrets:** Abraham, Aird, J. Bendell, Y. Bendell, Boswell, Bryant, Crins, Dunn, D. Hussell, J. Hussell, Larsen, N. Martin, N. Martin, Young.

**Guests:** Guests were introduced by members; Paul Gray by Ed Addison, Susan Smith and Louise Hertzberg by Rose Addison, Sharon Hick by Jock McAndrews, Paula Rapley by Bill Rapley, Terry Marescaux by Oliver Bertin, Kathryn Falls by Bruce Falls.

The minutes were approved as written.

#### **Announcements and New Business:**

- The field trip for June was discussed. Suggestion included Torrens Barrens, Parry Sound and the Toronto Zoo. A vote favoured the Zoo and Bill Rapley proposed June 12<sup>th</sup> as the date. Members should enter off Finch at the north end of the Zoo and meet at the Administration buildings at 10 am. There will be a tour behind the scenes and a visit to the new Tundra exhibit. Lunch will be at the Caribou Café (available for purchase or pack one from home) and then we are free to take hikes or visit other areas. Guests of members are welcome.
- Bruce Falls informed the club that the September meeting will be members' night. The October speaker will be an archeologist and the November speaker will be a botanist.
- Oliver Bertin acknowledged the work of the secretary, Rosemary Addison. She thanked the "secretarial team" of Ed Addison, Erica Dunn, Ann Falls, Enid Machin

and Kevin Seymour for their work in each recording and writing up minutes at one or two meetings this year.

**SPEAKER:**

The speaker, Dan Paleczny, Senior Policy and Planning Coordinator for Ontario Parks, was introduced by Paul Gray. Dan grew up in a family of nine in Waterloo. After graduating from the University of Guelph, he worked in park planning in Quetico National Park. In the early 90s Dan, accompanied by his family, spent three years in Zimbabwe working on an MNR project. His presentation to the BRODIE club was based on three years working in the Valley of the Whales in Egypt. Dan has recently completed his PhD on Conservation Action Planning techniques. In June, Dan is moving to Whitehorse in the Yukon to start a position with the Yukon Government Parks. Dan's wife Suzanne is a very talented artist who paints mainly in acrylics.



Planning, Development and Eco-tourism Considerations  
for the Valley of the Whales or Wadi el Hitan, a World Heritage Site

Wadi el Hitan, the Valley of the Whales, in Egypt was made a world Heritage Site in 2005. The concept was to address the issue of eco-tourism while respecting the need for continuing research in this fossil-rich area. Planning, development and use of the site had to be considered. Responsible travel to natural areas, conservation, improvement of the well-being of the local population and inclusion of their cultural heritage needed to be considered. For eco-tourism to be successful it must be ecologically sustainable and aspire to include biodiversity. It is a development tool and it focuses on individual travelers and small groups rather than visits by large tours or groups. Among the stakeholders are governments, local communities, tour operators, marketing groups, and universities. Communities must be given a voice and the expertise of the locals in crafts and knowledge incorporated. With an opportunity to participate, communities will take pride in the project and help to protect it. Training will create new jobs. Dan showed a few of Suzanne's paintings of the local people which gave us a sense of them; a painting of a matriarch obviously dominating the two men one on each side of her, another of two girls fishing.



The Valley of the Whales is 2 1/2 hrs south from Cairo, an extremely vibrant, but hugely polluted, city of 18 million people. The valley is in the Western Desert and covers 1800 sq. km. In 1970 water was diverted from the Nile forming two shallow lakes making possible fish farms, land reclamation and some crops. Close by is a 2000 year old city. A sand track leads to the Valley of the Whales. Dan and his family lived in the small village of Fayoued. He was funded by the government of Italy, which considers Egypt as a potential trading partner.

Over 200 million years ago the Mediterranean extended down into the valley. As the climate changed and the poles froze, the water retreated. Polar caps would consume a lot of water as ice and snow formed thus draining water from shallow seas etc.

The heritage site of 20 hectares consists mostly of desert wilderness, reminiscent of the Canadian badlands with rocks of fantastic shapes and cliffs eroded by water and wind. The erosion has facilitated the recovery of many fossils dated to the Eocene, 39 to 40 million years ago, including five different species of whales and 18 other sea species such as crabs, manatee and sea turtles. The World Heritage designation was given because of the number of whale fossils and their importance in explaining the evolution of whales in their transition from a land animal with front and hind limbs to a water animal.

“There is no other place in the world yielding archaic whale fossils of such quality in such abundance and concentration -- over 400 cetacean skeletons have been discovered, the most important finds coming between 1985-1995. Many of the sirenians and cetaceans are preserved as virtually complete articulated skeletons which, uniquely, preserve reduced hind limbs, making them intermediate between earlier land mammals and later modern whales” Wikipedia.

*Dorudon*, a toothed whale of 5-6 m. and *Basilosaurus*, at up to 18 m. probably the largest animal living at the time, belong to the Cetacea. They had vestigial front and hind legs and a flattened tail, whereas the 10 million year old whale in Pakistan had longer usable limbs. With their vestigial hind limbs and flattened end vertebrae their movement would be by flukes rather than limbs so the progression from a land-based to oceanic forms are now known. They are an important link in our understanding of whale evolution.



Front limbs *Dorudon*

The University of Michigan has had expeditions going there since 1983. They have funded the excavation, transportation of the original fossils back to the lab in the US, training of Egyptian staff and transportation of the originals plus casts back to Egypt. Molds are kept and casts have been made for use in museums and Hollywood films to generate funds.

At first 4-wheel trucks came into the site from the North and the South. A barrier of boulders was set in place to stop this traffic. Transportation by modern vehicles proved difficult as they need maintenance not possible in Egypt and they were polluting and noisy. Camel-pulled carts or rides provided by locals who know camels were the answer.

As visitor traffic increased, infrastructure to host them became needed: ticket office, washrooms, restaurants, gift shop, camel stalls, and places to live or stay while on duty overnight. Eco-architecture resulted in buildings echoing the rounded shapes and colour of the rocks. Natural materials of local stone, straw and plaster-like adobe were used. These structures are easy to mend if eroded by infrequent rains. Environmental and visual impacts were kept to a minimum. Donkeys were used to move bricks in keeping with the concept of being “light on the land” and solar panels, rather than diesel generators, were chosen because they are quiet and pollution free.



Local potters made the lettering for the sign over the entrance and the cones used to mark the walking paths. The cones are joined by hand made palm rope- again made by locals of natural materials. Some Bedouin-style camping experiences have been provided. There is no source of water on site and it is trucked in. The Valley of Whales had only a few hundred visitors when it opened, but since a good road was constructed numbers have steadily increased: 4,797 in 2006, 7,711 in 2007, and 10,873 in 2008.



Visitors can explore the natural history of the Valley of the Whales on their own or with a guide. Trails were developed and demarcated using boulders along the edges. Along the way whale bones were set out or unexcavated whales pointed out etc. At regular intervals, unobtrusive shelters provide a shady spot to rest and look at the display panels which detail information about the evolution of whales, paleobotany, paleontology, and changes resulting from warming and cooling.

Business plans need to be in place; eg sponsor-a-whale, partnerships with NGOs, retention of funds on site, revenue generation and baseline funding. Problems can be solved as time goes on. There must be the principle to promote community participation as they too would have a vested interest in protecting the area. Dan summed up the lessons learned in the planning and development of the Heritage Site:

- Think, plan, act; then adapt and solve problems
- Keep visions, objectives and principles in the forefront
- Optimize opportunities

### **QUESTIONS:**

*Q.: Jock McAndrew; National Geographic showed that whales sinking down to the deep depths are completely scavenged to nothing. Why not so here?*

A. It is thought the water here was very shallow with mangrove lined shoreline. If they died of disease, old age, or beaching, they could be covered over with sediment as opposed to being in a deep environment where they perhaps would be more bumped around.

*Q.: Fred Bodsworth; How long a period of time are we looking at here?*

A.: Between three to five million years in the Eocene Epoch (37- 40 million years ago). A drop in temperature was starting the establishment of the ice caps and “Hot House Earth” was moving towards “Cold House Earth”.

*Q.: Bruce Falls; What is the elevation of the Valley of the Whales?*

A.: The elevation of the valley is close to sea level. It could be flooded from the Nile side if the sea level rises. The tectonic plates were depressed when the sea was here.

*Q.: Ed Bousefield; The number of fossil sites here is very impressive. I'm wondering how it is possible that there are so many beautiful, undisturbed fossils. Is anoxic water with no scavengers a possibility?*

A.: Don't know. If the water had not been so shallow perhaps waves might have dismembered them.

*Q.: Trudy Rising. How many species of whales?*

A.: There were about five species-all toothed. The *Dorudon* gave rise to the modern baleen whales. The *Basilosaurus* are thought to have gone extinct.

*Q.: Sandra Eadie; Is the idea to have day trips to this World Heritage Site?*

A.: Yes, there are local hotels. There is no water in the site so it would not be sustainable to have large hotels there. Dry toilets have not caught on here in this Muslim country.

*Q.: Bill Rapley; What is the range of temperature and when is a good time to visit?*

A.: 40-50C is not uncommon in the summer. There are winds in April and May, so either before then in spring or in the fall.

*Can you get to the oasis to see the Dorcas Gazelle?*

Not without difficulty. They do concentrate in the dry season and it would be possible to walk in.

*Q.: Sandra Eadie: Why is it that tourism is made to be a bad thing here?*

A.: Dan cited a parallel example of ecotourism gone bad. Ten to 15 years ago the southern tip of the Sinai Peninsula had a natural shoreline. Cheap flights and accommodation gave led to mass tourism with Europeans visiting for \$500/weekend. The associated development of hotels and ramps out to the viewing spots is ruining the shoreline and the corals. There is the notion that god will provide; water tables are dropping and wells go ever deeper and yet development continues.

*Q.: Ed Addison; How are they avoiding negative human impact in the heritage site?*

A. Demarcation of trails, ropes of palm grass to mark off areas, closing the valley to vehicle traffic and having interpretive rangers have helped.

*Q. Bruce Falls; How is it not destroyed?- the local people must have known of these fossils.*

A. There have been 400-500 found and more sites continue to be found. There has been some damage and theft.

*Q. Ed Bousefield; What is the depth to which they are likely to continue to find material?*

A. There is a layer which is mainly on the surface now which has many exposed fossils. This layer has mangrove roots and the fossils are very prevalent in this layer.

*Q. Oliver Bertin; Are European tour companies showing any interest?*

A. Definitely. They are working with both small and big tour companies and University tour guides. There is a faculty of eco-tourism in Fayoued developing eco-guides and it is still early times but maybe soon guides will take groups round. Guides are not required.

*Q. Trudy Rising; Is it fairly safe for travel?*

A. Yes. You go through check stations. In Egypt foreigners often are given a police escort, which means they are treating you with the utmost care.

The speaker was thanked by Ed Addison.

### **NOTES & OBSERVATIONS**

*Bruce Falls* reported that he and Ann arrived back in Canada last night from a month long trip. They spent two weeks in Spain with a guide, Dave Milson, taking in culture and architecture. They were surprised by the many small mountain ranges with alpine flora and fauna not only found in the Pyrenees. They went to Seville and Toledo and walked the narrow streets. Fields in southern Spain seemed to contain many bulls reared for bull fights. They saw 180 species of birds and also Ibex and Chamois.

In England they went birding with Fred Cookham and saw 125 species in one week. Their plane was rerouted around Iceland flying over Greenland, to avoid the volcanic ash from the Eyjafjallajokull volcano which has disrupted much air travel in and out of Europe this past month.

*Bill Rapley* reported locating three raven nests on the Bruce Peninsula with Phil Wagett. One nest, which they get every year, on Dyer's Bay Road had young on May 1. The other two nests were in old barns – one at Sky Lake and one at Hope Bay. Bill found a Turkey Vulture nesting in a small abandoned house. He noted that there are "lots" of Turkey Vultures up there. There were few warblers moving through: Yellow-rumped warblers and Palm were seen.

The Zoo hosted a bird count on May 8, International Migratory Bird Day. The weather was awful with rain and hail but a total of 45 species was recorded, including a Mockingbird, Coopers hawk, a few species of warblers and a Warbling Vireo.

*Jim Rising* saw six Harlequin ducks in Prince Edward County. There were two male and four females. This is more than he's ever seen east of the Rockies.

*Paul Gray* was in Whitehorse in mid-April. One evening he went dog sledding on a lake, no hat, mitts and only summer galoshes. The temperature was 22 degrees!

The meeting was adjourned at 9:10 pm. and members and guests visited over refreshments.

### **NEXT MEETING**

The next meeting will be the field trip. If you need a ride or can provide a ride please let Rose know and she will try to match things up. If you are driving remember to enter off Old Finch which runs along the north side of the Zoo.

We are meeting at 10. Lunch will be available at the Caribou Café or you can pack a picnic lunch.

## CORRESPONDENCE

Robert Ritchie sent an email, some of which is included here:

“Please let Brodie Club members know that Bob Ritchie ... passed away ... (02.April.2010). He had been in declining health due to Alzh/dementia during the past few years....



..... Bruce (Falls) .... related the first time that he and Dad met, at Sunnyside (Beach) in Toronto. Somewhat later, on a birding outing Dad brought along "a girl", but Bruce says that after the outing the birding group "approved" ....Thanks, Bruce (and Ann) for being long-time family friends. [Thanks, also, to other long-time Brodie Club family friends over the many years.] ...  
Robert (the Younger)

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R.A.Ritchie, OFTS, NPD  
Naturalist, Photographer  
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Yorke Edwards sent in these observations by e-mail and wished club members “a good summer”.

### Unusual Birds Seen

When we got living in our Victoria home on a huge island, we could look south across the water to a large island. Beyond that island is a wide sea, the Juan de Fuca Strait, and then across the water to the USA. Looking east we could see many USA mountains, far away. When we moved onto our land and house in 1982, in many years we saw unusual birds. All were seen in nine years. All those birds were foreign, and all came to us in the late days of springs. All birds were just one alone, and each one was seen flying away, in times from 1982 to 1990. All were birds never seen before; probably they were unable to be sold. They were foreign species, and all flew away over the sea.

May 10, 1982: A green parrot with a red head and yellow bill was giving loud cries as it flew by.

September 15, 1982: A small bird, all yellow, eating with some American Quail on our lawn.

October 11, 1982. One day a yellow bird with pale bits of green was on our spruce tree. Then it got onto our lawn with some house sparrows.

May 29, 1983. A large dark bird, with starlings fed on our lawn. I got too close to the big one and it flew away, a big black flyer.

July 18, 1983. A blue-green budgie came flying through the garden with a small cry, then flew along the shore beside the nearby golf course.

June 23, 1985. A cockatoo, gray and with both yellow and red on its face, was crested on top of its head.

July 9, 1985. A bird, all yellow with a crowd of house sparrows eating seeds on our lawn. Then it flew far over the sea.

July 15, 1986. A parakeet, white beneath, grey above, and calling "Ree" in our garden, then went away over the sea toward the USA. .

May 3 1990. A big cockateel, all gray but yellow on its face, had a long crest, and a rosy patch at each ear. Calling loudly with a raucous 'Caaaaaa' it then went to some gulls on the water