

THE BRODIE CLUB



ROYAL ONTARIO
MUSEUM OF ZOOLOGY

THE 2011 FIELD TRIP

Torrance Barrens and Environs, Muskoka

Saturday/Sunday 10 and 11 September 2011

George Bryant Leader

For the first time, the Brodie Club decided to have its Field day in September rather than the usual June and for two days rather than one. George Bryant kindly offered to lead the hikes; Saturday to the Torrance Barrens and Sunday to Hardy Lake. Ed Addison, Sandra Eadie, Ann and Bruce Falls, Jean Iron, Ron Pittaway and Trudy Rising prepared different parts of this report and George Bryant checked it for accuracy. Photos by Rose Addison and Steven Rowe.

George Bryant and his son-in-law Domenic Stones met Brodie Club members and guests at Torrance Barrens Conservation Reserve at 10:30 am on Saturday. A few people were late because of a truck fire on the 400 that caused a delay of more than an hour. Members and guests attending were George Bryant (leader), Domenic Stones, Ed and Rose Addison, Oliver Bertin and Peggy Haist, Mary Boswell, Sandra Eadie, Bruce and Ann Falls, Jean Iron, Enid Machin, Ron Pittaway, Trudy Rising, Steven Rowe and Wendy Dey, guests of the Risings, for a total of sixteen participants. Club members stayed at both the Risings' cottage and the Bryants' cottage.

The **Torrance Barrens** is located just below the southwest corner of Lake Muskoka. It is a Conservation Reserve consisting of 1,990 hectares of crown land administered by the Province of Ontario and characterized by low ridges of Precambrian bedrock separated by wetland and peat-filled hollows. It is very open with evidence of glaciation. In 1999, the Torrance Barrens was designated by the Ontario government as a Dark Sky Reserve—the first such designation in the world.

September was an ideal time to visit this area, not least because biting insects were no longer present. We were blessed with perfect weather. The walking was easy. In fact the trails were good enough that they were being used as the biking route for many, many, many riders in a triathlon as we were walking and stopping to study the flora and fauna. Electronic invasion is also a fact



there—some of us chatted with a couple who were taking an Internet course to learn Spanish as they sat on their lawn chairs in the sun, connected to some satellite. We enjoyed our lunches sitting on rocks below trees which provided shade from the hot sun.

The Barrens was beautiful with a variety of asters, goldenrods, shrubs and Atlantic Coastal plants, the later being a focus of the trip. An Atlantic Coastal species is any plant that occurs most abundantly along the eastern seaboard from Cape Cod to Florida and the upper Texas coast. Muskoka is the best place in the world to observe inland Atlantic Coastal plants, remnants of the most recent glaciation which ended 12,000 years ago. When the ancient Lake Algonquin receded, it left a remnant community of Atlantic Ocean shoreline plants behind.



Also observed was a large Dark Fishing Spider (*Dolomedes tenebrosa*) enjoying the warmth of the rocks, Northern Coral-winged grasshoppers (*Pardalophora apiculata*) and various dragonflies.



After our fantastic afternoon, most of us gathered at George and Stephanie's summer home on Pine Lake for drinks and dinner. Some of us had a swim in the still warm lake. Stephanie, the Bryant's daughter Margaret, and Domenic prepared a magnificent dinner for us. We enjoyed many prize-winning breads and desserts that Margaret and Stephanie had prepared for that day's Severn Bridge Country Fair. Talk about excellent timing!

After dinner, several of us saw by flashlight the two Southern Flying Squirrels that come regularly to the Bryant feeder (this species is smaller than the Northern species and has a very pale breast).

Another treat was in store at the Bryant's that night—an Iridium satellite flare. Using an Internet site, Stephanie keeps track of when and where they will appear and we were in luck. At about 9:20 pm we saw what looked as if some growing and bright celestial object was coming straight for us. Then it disappeared after a few seconds, though still visible through binoculars, a tiny dot of light continued its race across the sky for about 30 seconds more.

The Iridium communication satellites have three polished door-sized antennas. Occasionally, an antenna reflects sunlight directly down at Earth, creating a predictable and quickly moving illuminated spot on the surface below. To an observer this looks like a bright flash, or flare in the sky. George suggests the website <http://www.heavens-above.com/> for times and coordinates for flares and International Space Station and notes that one or the other or both are visible most evenings.

Later a Barred Owl was heard in the distance.

Sunday morning at 10 am, most of us gathered at **Hardy Lake Provincial Park** for the second field trip. Hardy Lake Provincial Park is a 1,900-acre area on the west side of Lake Muskoka, between Bala and Walkers Point. The province acquired the property from the

estate of Nelson Davis in 1980. Built around a 1870s homestead and a 20-acre lake, the day-use park is currently classified as a “natural environment” park with hiking and canoeing but no overnight camping. Quite different from the Barrens, though so close, it was impressive to see many more kinds of ferns and mushrooms and see more Atlantic Coastal plain plant species.

We broke up after another outdoor lunch and headed home, very happy to have experienced such a fascinating area.

Written by Sandra Eadie, compiled from an essay by George Bryant, official Internet sources, and personal observations.

Some, but definitely not all, species of plants observed in the Barrens were: *List compiled by Ed Addison*

1. Wool Grass (*Scirpus cyperinus* L.)
2. Intermediate Pinweed (*Lechea intermedia*)
3. Black Huckleberry (*Gaylussacia baccata*)
4. *Vaccinium* sp., mainly Low Sweet Blueberry (*Vaccinium angustifolium*) but also the occasional Velvetleaf Blueberry (*Vaccinium myrtilloides*) -only producing fruit about once every 20 years in this site.
5. Winterberry Holly (*Ilex verticillata* L.) and



Nemopanthus mucronatus



Ilex verticillata

6. Mountain Holly (*Nemopanthus mucronatus* L.), the only two holly species in Ontario, seen in one damp location side by side. *Ilex* and *Nemopanthus* are both deciduous whereas most members of the Holly Family are evergreen.
7. Crinkled Hair Grass (*Deschampsia flexuosa* L.)
8. Swamp Dewberry (*Rubus hispidus* L.)
9. Virginia Chain Fern (*Woodwardia virginica* L.)
10. Canada Hawkweed (*Hieracium canadense*) – most of our hawkweeds are non-native and spring flowering, this species is native and fall-flowering
11. Case's Ladies'-Tresses (*Spiranthes casei*), only split taxonomically from Nodding Ladies'-Tresses (*Spiranthes cernua* L.) in the past few decades.
12. Slender Ladies'-Tresses (*Spiranthes lacera*)
13. Arrow-leaved Violet (*Viola fimbriatula [sagittata]*) with “cleistogamous” (hidden flowers)
14. ‘Pod Grass’ – (*Scheuchzeria palustris*) – not a grass but a circumboreal monotypic family seldom seen because of



Spiranthes casei

its inconspicuous habit and affinity to cold sphagnum bogs

15. Bog-rosemary (*Andromeda polifolia* L.)
16. Three-way Sedge (*Dulichium arundinaceum* L.)
17. Common St. John's-wort (*Hypericum perforatum* L.)
18. Long Sedge (*Carex folliculata*) – Atlantic Coastal plant
19. Devil's Beggarticks (*Bidens frondosa* L.)
20. Bladderwort (*Utricularia* sp.) – 8 bladderwort species in Ontario
21. Rattlesnake Manna Grass (*Glyceria canadensis*)
22. Beaver Meadow Grass/ Canada Blue-joint (*Calamagrostis Canadensis*)
23. Bog Aster (*Aster nemoralis*)
24. Twig Rush (*Cladium mariscoides*) – Atlantic coastal species
25. Bristly Sarsaparilla (*Aralia hispida*)
26. An uncommon Cinquefoil (*Potentilla tridentata*) – This rare boreal species was only seen in cracks in the rocks at our lunch spot- the only location in Muskoka
27. Large-leaved Aster (*Aster macrophyllus* L.)
28. Hairy Goldenrod (*Solidago hispida*)
29. Brown-fruited Rush (*Juncus pelocarpus*) - Atlantic coastal species
30. Swamp Candles (*Lysimachia terrestris* L.)
31. Swamp St. John's-Wort (*Triadenum virginicum*) - Atlantic coastal species

Also seen at the Barrens were a number of species of frogs [Leopard, Green and Bull] and a very small water snake.

Sand Pit

We also looked at the vegetation in a second site, an old gravel/ sand pit. Plants observed were:

1. Arrow-leaved Aster (*Aster urophyllus*)
2. Tall Goldenrod (*Solidago altissima* L.) – more common than Canada Goldenrod (*Solidago canadensis* L.)
3. Blue Devil (*Echium vulgare*)
4. Spotted Knapweed (*Centaurea biebersteinii*)
5. Swamp Aster (*Symphyotrichum firmum*)
6. Calico Aster (*Aster lateriflorus* L. =lateral flowers)
7. Boneset (*Eupatorium perfoliatum* L.)
8. Carolina Yellow-eyed Grass (*Xyris difformis*) - Atlantic coastal species
9. Nodding Ladies'-Tresses (*Spiranthes cernua* L.) -more common species than Case's
10. Pipewort (*Eriocaulon aquaticum*) - Atlantic coastal species

Hardy Lake Area

On Sunday on our walk into Hardy Lake the following species were observed and discussed:

Ferns: compiled by Bruce and Ann Falls:

1. Leathery grape fern (*Botrychium multifidum*)
2. Royal fern (*Osmunda regalis*)
3. Interrupted fern (*Osmunda claytoniana*)
4. Cinnamon fern (*Osmunda cinnamomea*)
5. Bracken fern (*Pteridium aquilinum*)

6. Sensitive fern (*Onoclea sensibilis*)
7. Christmas fern (*Polystichum acrostichoides*)
8. Evergreen wood fern (*Dryopteris intermedia*)
9. Spinulose wood fern (*Dryopteris carthusiana*)
10. Marginal shield fern (*Dryopteris marginalis*)
11. Crested wood fern (*Dryopteris cristata*)
12. New York fern (*Thelypteris noveboracensis*)
13. Lady fern (*Athyrium filix-femina*)
14. Rock polypody (*Polypodium virginianum*)
15. Virginian chain fern (*Woodwardia virginica*)** Atlantic Coastal Plain species - seen at Torrance Barrens



Woodwardia virginica

Vascular Plants: compiled by Ed Addison

1. Downy Rattlesnake-plantain (*Goodyera pubescens*) - colonial
2. Checkered Rattlesnake-plantain (*G. tessellata*) – single with white stripe down centre of leaf
3. Beech (*Fagus grandifolia*)- many suffering from disease (*see appended note)
4. Indian Pipe (*Monotropa uniflora* L.)
5. Beech-drops (*Epifagus virginiana* L.)
6. Hobblebush (*Viburnum lantanoides*) – Hobblebush having opposite leaves raised a discussion of how to remember the few groups of plants that do have opposite leaves. The ‘ditty’ “mad dog cap horse” story was described where m=maple, a=ash, d and dog =dogwood, cap = Caprifoliaceae (honeysuckles) and horse=chestnut to remember those Ontario shrub and tree species with opposite leaves.
7. Indian Cucumber Root (*Medeola virginiana* L.)
8. Shining Firmoss (*Huperzia lucidula*)
9. *Sphagnum* sp.
10. Ground Cedar (*Diphasiastrum*)
11. Southern Ground Cedar (*Diphasiastrum digitatum*)
12. Indian Tobacco (*Lobelia inflata* L.)
13. Indian Squaw Root (*Conopholis americana*)
14. Maple-leaved Viburnum (*Viburnum acerifolium* L.)
15. Buttonbush (*Cephalanthus occidentalis* L.)
16. Pickerelweed (*Pontederia cordata* L.) - Atlantic coastal species
17. Bayonet Rush (*Juncus militaris*) - Atlantic coastal species
18. Virginia Meadow Beauty (*Rhexia virginica* L.) - Atlantic coastal species – one specimen still in bloom, most flowers past.
19. Floating-Heart (*Nymphoides cordata*) - Atlantic coastal species
20. Twig Rush (*Cladium mariscoides*) - Atlantic coastal species
21. Swamp St. John's-wort (*Triadenum virginicum*) - Atlantic coastal species
22. Black Huckleberry (*Gaylussacia baccata*)
23. Black Chokeberry (*Photinia*[*Aronia*] *melanocarpa*)
24. Trailing Arbutus (*Epigaea repens* L.)



Mushroom Species: compiled by Trudy Rising

1. Hedgehog mushroom (*Hydnum repandum*)
2. Chanterelle (*Cantharellus* sp.)
3. *Suillus pictus*
4. *Lactarius* sp.

Birds: compiled by Jean Iron and Ron Pittaway.

Bird numbers were low because many breeding birds had migrated south and others were not singing so the field trip concentrated on botany, herps and insects. Some bird observations included Blue Jays busily gathering Red Oak acorns, Eastern Towhees calling “che-wink” on the Barrens, Hairy Woodpecker, Northern Flicker, Hermit Thrush, Yellow-rumped Warbler, Broad-winged Hawk, Red-tailed Hawk and Turkey Vulture. A Whip-poor-will was singing at the Risings’ cottage on Friday evening. Whip-poor-wills sometimes stay into early October in the province.

A very big thank you to George for organizing, preparing and leading the field trips. Thank you also to George and his family and to Trudy and Jim Rising for providing accommodation for trip participants. It was a lovely opportunity to spend time together.

There was discussion about the health of the Beech trees along the trail to Hardy Lake. The following information is copied from the Toronto Parks, Forestry and Recreation website.

*“Beech bark disease is a devastating disease of beech trees. It is caused by a complex of a beech bark scale (*Cryptococcus fagisuga*) and species of *Nectria* fungi. Beech scale was introduced to Nova Scotia in 1890 from Europe. Beech bark disease started its spread through the Maritimes in the 1930’s. It has only recently been detected in Ontario.*

The beech bark scale is a tiny (0.5-1mm) sap-feeding insect. It has three stages in its life cycle: egg, crawler and adult. The adults are wingless, legless and covered with white woolly wax. The insect reproduces asexually and has only female individuals in the population. Eggs are laid in early July on the bark of beech trees. Crawlers hatch about 4 weeks later and start to look for a suitable place to feed on the bark. Feeding causes a wound in the bark. They spread from tree to tree by wind. The beech scale has one generation per year and it overwinters as an immobile crawler.

*The second agent responsible for causing beech bark disease is a *Nectria* fungus. Three different species from the *Nectria* genus have been found to infest beech trees through feeding wounds made by beech scales. The fungus colonizes the bark, cambium and sapwood, causing cankers to form beneath the bark.*

Host and Damage

American beech is susceptible to beech bark disease, however a small proportion of individual trees of the beech stand can resist infestation. European beech is resistant to the disease.

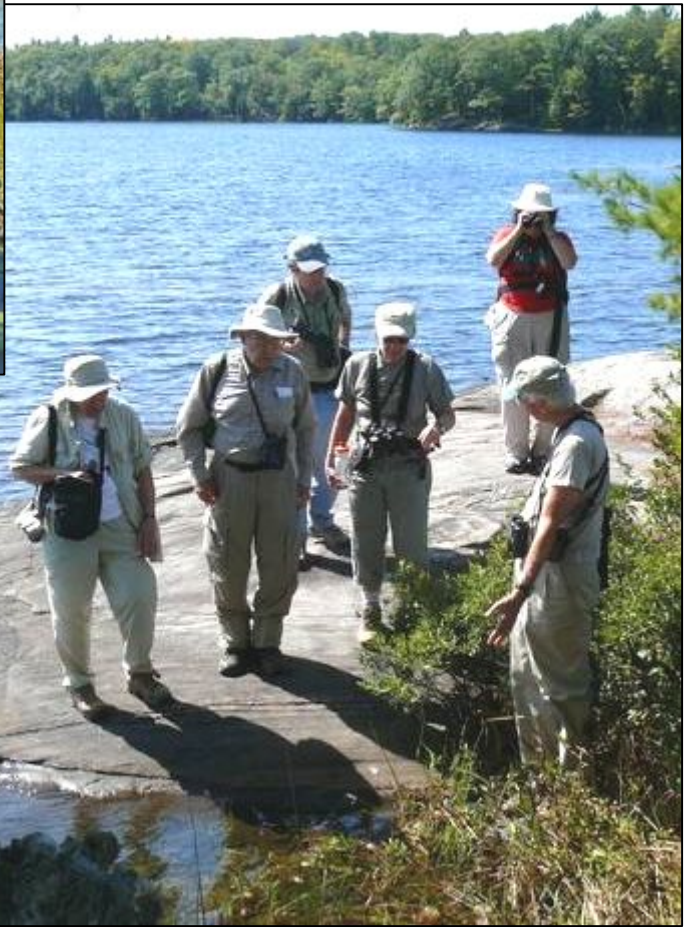
*A heavy infestation of beech scale can weaken the tree, but serious damage occurs only after *Nectria* fungi invade and kill bark that is already stressed by scale infestation. White woolly wax on the tree where the bark is rough is the first symptom of scale activity. Heavy infestation of beech scale can cover entire tree stems with white wax. The discoloration of scales, followed by their disappearance is the first symptom of disease. The scales fall off after the underlying fungus kills the bark. Brown slime flux often oozes from dead parts of the inner bark, causing tarry spots to appear on the bark. The fungi may affect large areas of the tree, completely girdling it. Leaves on dying trees do not reach their full size, turn yellow and later brown, remaining on the tree through autumn.*

Beech bark disease develops in three stages:

*-**advancing front**, where trees are infested with beech scale, but not yet infected by *Nectria* fungi.*

*-**killing front**, where trees infested with beech scale are infected by *Nectria* fungi. It usually happens several years after beech scales first appear. Many trees die.*

*-**aftermath zone** is characterized by some residual big trees”*





Sunday Field Trip to Hardy Lake

Ed Addison, George Bryant, Ron Pittaway
Enid Machin, Trudy Rising, Ann Falls, Sandra Eadie, Rose Addison
Bruce Falls, Jean Iron
Photo by S. Rowe

CONTACT INFORMATION

Rose Addison will be updating the members' contact list.

Please forward any changes in your address, phone number and/or email to roseaddison@gmail.com.

An updated members' list will be distributed by email.