VERMONT BOTANICAL & BIRD CLUB NEWSLETTER

APRIL 2008

2008 ANNUAL MEETING ANNOUNCEMENT

The 113th Annual Meeting of the Vermont Botanical and Bird Club will be held from Thursday, June 19 – Sunday, June 22, 2008 at Bolton Valley Resort in Bolton, Vermont. We look forward to this north-central Vermont location to put us in new territory for searching for plants and birds. We will be within range of Mount Mansfield State Forest which includes Lake Mansfield and Nebraska Notch. Camel's Hump State Forest is to the south. Green Mountain Audubon Center and Birds of Vermont Museum are in the nearby town of Huntington.

2007 MEETING HIGHLIGHTS

Troy Big Falls photo: Deborah Benjamin

The 112th Annual Meeting of the Vermont Botanical and Bird Club convened on Thursday, June 14, 2007 at Jay Peak Resort in Jay, Vermont and ended Sunday, June 17, 2007. The Club last visited this far northern location in 1992.

On Thursday evening, President Deborah Benjamin introduced this year's two scholarship students: Shannon Bonney from Green Mountain College in Poultney, Vermont and Hollis Smith of the University of Southern Maine in Portland, Maine.

Charlotte Bill informed the group that Jay Peak Resort is located in the Vermont Breeding Bird Atlas priority block of the Jay Peak quadrangle. The Club's observations will add to the study.

Later on Thursday evening, we enjoyed "The Natural (and Unnatural) History of Common Loon: from territorial takeovers and sibling rivalry to mercury laziness and satellite tracking" by Eric Hanson of VINS.

On Friday morning, the early bird walk explored the open spaces and shrubby woods region of the golf course. Then the whole group rode the aerial tram to the top of the mountain to look and listen for plants and birds.

Friday's Field Trips were led by Peter Hope to: Hazen's Notch, Lowell Dunite Quarry, and Troy Big Falls; and Jeff Parsons to several stops in the South Bay Wildlife Management Area, including Barton River Coventry Station Access Area and Barton River Marsh and Fen. Friday evening, we enjoyed "Following Nellie and Frances: on the Trail of the Green Mountain Maidenhair Fern" by Cathy Paris, Lecturer in Botany at UVM, who was dressed in the period of the time 1922.

On Saturday morning, the early bird walk explored the snow making pond area and the nearby woods. Again, the whole group rode the aerial tram to the top of Jay Peak and enjoyed another equally beautiful sunny start to the day.

Saturday's Field Trips were led by Annie Reed and Jeff Parsons respectively.

Saturday evening, the Annual Business Meeting was held at the International Room. Of course, the evening wouldn't have been complete without the Slides by Members Show.

EVENING PROGRAMS

THURSDAY, JUNE 14:

THE NATURAL (AND UNNATURAL) HISTORY OF THE COMMON LOON: FROM TERRITORIAL TAKEOVERS AND SIBLING RIVALRY TO MERCURY LAZINESS AND SATELLITE TRACKING

Since 1998, Eric Hanson has been the biologist for the Vermont Loon Recovery Project (VLRP), a joint program of the Vermont Institute of Natural Science and the Vermont Fish and Wildlife Department. He has conducted research on the Common Loon since 1992.

Twenty-five years ago, Vermont's Common Loon population consisted of 7 – 8 nesting pairs on 12 – 13 territories. By the mid-1990's there were 15 – 16 pairs. In 2006, there were 58 nesting pairs on 70 territories statewide. Each year on the third Saturday of July, volunteers monitor lakes and ponds in Vermont and report their data to the VLRP.

This evening's program was the first public presentation of the accumulation of many years of biological study with some of the newly detected challenges that loons face each year. The slides are the work of many volunteers and biologists.

Loons return in April as the ice leaves the lakes and ponds: May in the far north. If a lake is from

200 – 300 acres, several birds may be present. If the lake is less than 150 acres, it is less likely that there would be more than a pair at a time. The male loons arrive within hours of the lake opening up; the females may arrive later the same day or one to several days later. At this time, they engage in feeding and foraging 54 % of the time, cruising 18 % of the time, resting 16 % of the time, and preening 7 % of the time just before the onset of breeding activity.

Loons are 7 years old when they first set about to find a mate and breed. It is thought that loons are very site faithful and do not mate for life. 83 % of the time the same birds will return to a lake and form pairs; 17 % of the time a new mate is selected due to the death of a former partner or to a phenomenon called takeover where a younger bird challenges and drives off an established member of a pair usually early in the breeding season in May.

70 – 80 % of Vermont nesting loons use islands, either natural or man-made, and make very simple nests of whatever material is within grasping distance. 1 – 2 eggs are laid and both partners incubate in 4 – 5 hour shifts. During the nesting period any time off the nest is spent on feeding and on territory defense from other loons.

On a moonless night, biologists search for loon families from a boat in order to capture the birds, place leg bands on them and take blood samples. The adults will not leave their young during this practice thus ensuring a successful capture. The blood sample is very important in the study of the presence of mercury.

New England loons have 2 to 3 times more elevated levels of mercury than loons in the northwest or in Alaska. Mercury poisoning is manifested in loons by affecting their behavior. Adults will incubate eggs for shorter periods of time which can lead to nest failure. They "appear lazy" in the execution of their duties of feeding and protecting the young. Males, being larger, have higher blood levels of mercury.

Summer is a time when loons and people share lakes. Through the VLRP signs are placed in the vicinity of nests early to inform boaters about the importance of giving loons the space they need. Additional information is posted at boat launch areas to educate boaters about keeping a distance to allow loon families to raise their young.

As young reach near adult size and learn to fly at about 10 – 12 weeks old, adults molt their body feathers and become grayish. Adults leave the lakes for their winter season on the ocean in October; the young birds leave in November or December. Young loons attain adult plumage when they are 3 years old; they return to fresh water for the first time when they are 4 years old.

Thanks to dedicated biologists like Eric and others, the knowledge about this species has grown and through this knowledge better management practices will ensure that this species thrives into the future.

[Note: As of the time of printing this Newsletter, the Conservation Biology Department of VINS (Vermont Institute of Natural Science) under the direction of Chris Rimmer, has formed a new conservation organization called the Vermont Center for Ecostudies which is located in Norwich, Vermont. www.vtecostudies.org]

FRIDAY, JUNE 15:

FOLLOWING NELLIE AND FRANCES: ON THE TRAIL OF THE GREEN MOUNTAIN MAIDENHAIR FERN

Cathy Paris, Lecturer in Botany at UVM, shared with us the journey that she took in the course of her graduate work in the middle and late 1980's that ultimately led her to the discovery of a previously unknown species of maidenhair fern.

The journey began in 1922, the year that the Vermont Botanical and Bird Club celebrated its 27th annual meeting at Montgomery, Vermont. One of their field trips, at the suggestion of member L. Frances Jolley, was to Belvidere Mountain to look for a species of maidenhair fern that grows on serpentine rock and that she had collected two years earlier at the foot of Orford Mountain in Quebec. [See: Vermont Botanical and Bird Clubs, Joint Bulletin No. 8, October, 1922, pp. 11-12; and pp. 40 – 41.]

Nellie Flynn was then Secretary/Treasurer of the young Club and had been an original charter member and its first vice-president since 1895, when the Vermont Botanical Club originated.

Merrit Lyndon Fernald, Botanist at Gray Herbarium in the early twentieth century, first discovered the serpentine maidenhair fern in eastern North America and wrote about his findings in the 1905 issue of Rhodora. "To a botanist who is familiar with the maidenhair fern, *Adiantum pedatum*, of rich deciduous woods of New England and the Alleghenies, one looks upon it as the northernmost representative of a large tropical and sub-tropical genus. It is a great surprise to find on the Shickshock Mountains of the Gaspe Peninsula a beautiful Adiantum covering hundreds of acres of alpine tableland. There on the naked tableland of Mt. Albert and along the ice-cold streams of the alpine district is an Adiantum forming broad bands of blue-green wherever the water from the cold fog or the melting snowfields trickles through crevices of the greenish-brown serpentine."

Fernald recognized the serpentine maidenhair fern as *Adiantum pedatum var. aleuticum*, western maidenhair fern; and explained its occurence in the east as a disjunct population from a pre-glacial time when the western maidenhair fern was more widespread.

Serpentine rock is a ferrous-magnesium silicate that formed deep in the Earth's mantle and comes to the surface sporadically along a 10-mile wide belt in the Appalachians of eastern North America from Newfloundland to Georgia. The rock poses harsh conditions for most plants because: it has a high magnesium to calcium ratio; it has a low calcium availability; it contains low levels of the plant nutrients nitrogen, phosphorus and potassium; it carries high levels of heavy metals, such as nickel and chromium; and it creates conditions that include thin soils and exposure to full sunlight. Plant biogeographers through the twentieth century have thought that serpentine areas in the eastern United States form ecological islands or refugia for post-Pleistocene populations of plants to grow sometimes far from their current distributional ranges.

Cathy's work took her to Belvidere Mountain and to many sites throughout the eastern Canada and eastern and western United States as she pondered the origins of this interesting fern and its relationship to the woodland maidenhair fern. She collected specimens of the same fern as Mrs. Jolley had done in 1922. By applying her knowledge of modern genetics in a process called isozyme electrophoresis that allows one to closely examine plant proteins, she made some ground-breaking discoveries about the Adiantum complex.

First, the woodland and serpentine maidenhair ferns appeared to be much more distinct from each other than subspecies or varieties as was previously presumed. And, the Belvidere Mountain plants showed characters that were intermediate between the two, suggesting a possible hybrid origin. And second, when she examined meiotic material from the specimens she found that the woodland and serpentine ferns had 29 pairs of chromosomes and that the ferns from Belvidere Mountain had 58 pairs of chromosomes. So, "they were tetraploids that came about through hybridation between the serpentine and woodland maidenhairs and were now fully competent to reproduce their own kind

yet were reproductively isolated from either of their progenitors". She named the new species of maidenhair fern *Adiantum viridimontanum*, Green Mountain maidenhair fern and published this in Rhodora, vol. 93, No. 874, April 1991. And, she suggested that the serpentine maidenhair fern be given species status and be named *Adiantum aleuticum*.

"By luck, by good fortune and by using the right tools, I had the opportunity to learn from Mt. Belvidere that this was a new entity that had gone unnoticed as the unique thing that it was." "So, on that note, I close with a nod to the ladies of the Club."

Adiantum aleuticum, serpentine Midenhair fern
Lowell Dunite Outcrop photo: Deborah Benjamin

[The Vermont Botanical and Bird Club was not able to visit Belvidere Mountain this year due to a pending mitigation with an adjacent landowner. We did, however, enjoy seeing the serpentine maidenhair fern at the Lowell Dunite Outcrop.]

SATURDAY, JUNE 16:

ANNUAL BUSINESS MEETING MINUTES

1. Secretary's Report

Debbie Benjamin said that our current Secretary elected at last year's meeting, Lynn Ocone, regrets that she cannot be here this meeting and that work considerations will prevent her from serving as Secretary in the future.

Debbie and Peter then distributed copies of Club Bulletins from 1995, 2000, and 2002 for recent members to help themselves to a copy. Dorothy Allard said that Dr. Dave Barrington of the Pringle Herbarium said that he believes that the complete set of Bulletins from the Herbarium are out on loan but that he can't remember who may have them and perhaps it is a Club member. [Note: In July, 2007 the Herbarium's complete set of Bulletins was relocated and is safely on hand at the Herbarium]

Next, Debbie placed out copies of the Club Brochure and the most recent Newsletter.

2. Treasurer's Report

Acting Interim Treasurer, Charlotte Bill, reviewed a two-page handout that reported the following information about the Club's three financial accounts:

- $6,265.37 in the Certificate of Deposit at the Merchant's Bank. This account earns an interest rate of 4.00% (APY 4.08%) and has no penalty for deposits or withdrawals. The CD matures on 6/09/08.
- $14,918.26 net asset value in the Green Century Equity Fund.
- $13,507.27 in the Checking Account at the Chittenden Bank. Charlotte reported that the bill for this meeting at Jay Peak Resort would be paid out of this balance after the meeting's conclusion.

Charlotte then gave a summary of the Club's two Scholarship Funds:

- $2,333.29 in the Current Year/Rollover Fund. The 2007 appeal brought in $710.00.

- $6132.50 total contributions to the Scholarship Endowment Fund. The 2007 appeal brought in $560.00.

Concluding by noting a correction to her handout, Charlotte reported that the total expense for the 2006 meeting at Vermont Technical College in Randolph was $5,625.35.

3. Scholarship Report

Dorothy Allard said that she looks for qualified scholarship referrals in three ways: through emails to professors and other academics; through a poster placed at UVM at the Pringle Herbarium, the Aiken Center, the Marsh/Life Science Department, and the Library; and through notifying the Department of Education Communications Coordinator to place a notice in a weekly newsletter that goes to all teachers. See more about this year's students under Henry Potter Scholarship Students below.

4. Bulletin Report

Material is being collected by Editor Peter Hope for the next Bulletin. In a communication with Chris Rimmer of VINS [now Vermont Center for Ecostudies] and who recommended Eric Hanson as a speaker, he told Debbie that he will submit an article when the duties of organizing a new conservation science entity have abated.

5. Club Website www.vtbb.org.

Peter said that Fritz Garrison regrets that he cannot be here this evening but that he wished to relay the message that the website is functioning well and that people are finding it and making an initial contact with the Club that way.

6. Nominating Committee

Chairman of the Nominating Committee, John Sullivan, presented the slate of Officers:

President – Deborah Benjamin
Vice-President Plants – Dorothy Allard
Vice-President Birds – Connie Youngstrom
Treasurer – Charlotte Bill
Secretary – no candidate

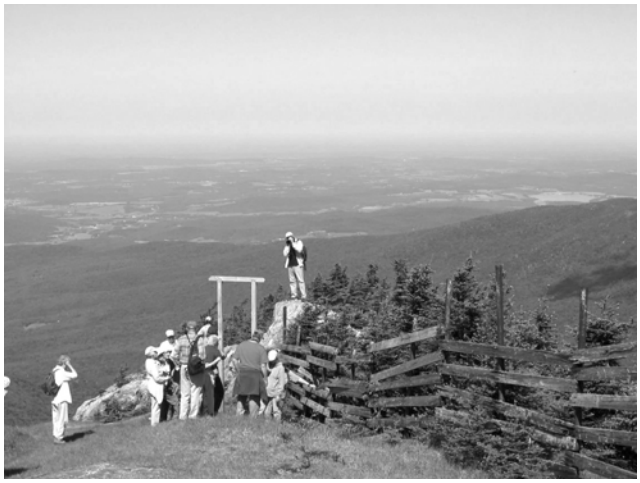
Ann Burcroff moved and Marty Hanson seconded that the Board cast one vote for the slate. The vote passed with all in favor.

7. Vermont Wildlife Partnership

Dorothy Allard reported that she received an email from George Gay, Executive Director of the Northern Forest Alliance, about the Vermont Wildlife Partnership that is looking for groups to sign a letter of support for its Fish and Wildlife Department Funding Initiative. The Initiative is intended to show the legislature that many types of people and organizations support the implementation of methods to support programs to protect and study natural communities and the wildlife. And this during a time when revenues from hunting and fishing licenses are dwindling and pressures on tax form write-off contributions are increasing. Some of the 49 groups to date that support the idea include: The Nature Conservancy, Vermont Land Trust, Vermont Natural Resources Council and Audubon Vermont. Currently the legislature is considering 1/8 of 1 % of the state's sales tax to the support programs of the Fish and Wildlife Department. The organization is not looking for monetary donations. Gale Lawrence and Charlotte Hanna said that they were familiar with the Initiative and though it was a good idea. Marty Hanson moved and Dorothy Allard seconded that the Club direct the President to draft a letter of support to the Vermont Wildlife Partnership. The motion passed unanimously.

8. Field Trip Reports

Birds:



High Elevation Birds and Birders, Jay Peak Summit
Photo by Bill Arnold

Vice-President Connie Youngstrom asked for members to relay what they enjoyed about birds this year. Charlotte summarized the contributions to the Vermont Breeding Bird Atlas for the Jay Peak quadrangle. See more details later near in this Newsletter under Bird Notes 2007 and Vermont Breeding Bird Atlas.

Plants:

Vice-President Dorothy Allard summarized some of the special and rare plants seen during this year's meeting. Although a couple of the rare species known from the top of Jay Peak were not seen this year, several others rounded out the numbers nicely.

Trillium cernuum, nodding trillium, seen at the Coventry Station Access Area is a S2 ranked rare plant in Vermont. *Orobanche uniflorum*, one-flowered cankerroot, was also seen in the floodplain forest at Coventry Station. Dorothy said that this year's meeting had a lot of fern action.

Orobanche uniflorum, Coventry Station
Photo by Bill Arnold

Potter's Holly Fern, *Polystichum x potteri*, was rediscovered in the woods at Hazen's Notch near where the Club saw it in 1992. Peter relayed the story about how he and Dr. Dave Barrington decided not to wait until the publication date to tell Henry Potter of the upcoming naming of the hybrid between Christmas and Braun's holly fern after Henry in an article to appear in Rhodora in July, 1986. In November, they showed him the proofs and he was very pleased to learn that hybrid would be named after him. He died in May, 1986 at age 94. Henry Potter attended the Club meeting in 1922.

Those who scrambled up into the Lowell Dunite Quarry after wading across the Missisquoi River enjoyed a close look at western or serpentine maidenhair fern, *Adiantum aleuticum*.

Peter also relayed how he stumbled into several neat ferns at the Coventry Station floodplain forest. "A small group of us went in a little further because there were some cedar trees, and botanists like to go into cedar areas. We got to this first hummock and I saw Clinton's wood fern, *Dryopteris clintoniana*. And then right next to that I said "Oh there's Boott's wood fern", *Dryopteris cristata x intermedia* (*Dryopteris x boottii)*. "And then right there was a crested wood fern, *Dryopteris cristata*. And then right near that was the hybrid between crested and spinulose, *Dryopteris cristata x carthusiana*

(Dryopteris x uliginosa) – all within a 4 – 5 meter square area".

Dorothy said that also noteworthy was the Labrador tea, *Ledum groenlandicum*, growing way up on top of the Lowell dunite outcrop. Last and small, but not least, was the hyssop-leaved fleabane, *Erigeron hyssopifolius*, growing out of the cracks in the rocks at Troy Big Falls.

9. 113th Annual Meeting Plans

Possible locations for next year's meeting included Basin Harbor Club where the Club went in 1996 and Middlebury College's Breadloaf Campus.

10. Meeting Adjourns

Club members thanked John Sullivan for his generous donation of natural history books on plants and birds from his personal library that were placed on a table tonight and are for anyone who would like to take one. Fritz especially enjoyed picking up a copy of Birds of Alaska. Peter Hope moved and Lynne Arnold seconded that the meeting adjourn. All agreed. Following the Annual Business Meeting was the Slides by Members Show.

HENRY POTTER SCHOLARSHIP STUDENTS

Dorothy Allard said that three excellent candidates were accepted to attend this year's meeting. Of those, one student from Green Mountain College was not able to come due to work obligations. The two students who attended are:

1) Shannon Bonney, a Senior from Green Mountain College in Poultney, Vermont with a degree in ecology and sustainable community design. "I am employed as the invasive species manager in the natural areas on campus. This position entails removal of invasive plant species, writing management plans for each invasive species, coordinating volunteer work days, and long term weed management strategic planning."

"I am co-president of a competitive group called the DEEP Scholars, which stands for demonstrated excellence in environmental practice. Projects that the DEEP Scholars have completed over the years since I've been at Green Mountain College include: obtaining and maintaining Earth tubs used to compost the food scraps of the dining hall, educating the campus about energy conservation, and obtaining a campus sustainability coordinator position."

2) Hollis Smith, of the University of Southern Maine in Portland, Maine is in the biology graduate program and her thesis topic is the ecology of vernal pools. "In 2001 I took a field botany class as part of my undergraduate degree requirements, and I have been totally hooked on natural history ever since. I read recently that linguists explain that when we have words for things, we become more observant. And indeed, I reminded myself of Helen Keller when the world of wild plants was opened up to me."

"I work part-time at the L.C. Bates Museum of Natural History here in Hinckley, Maine, as a museum educator, where I not only lead established programs at the museum and do outreach at local schools, but also initiate and develop such programs. And I love it. The opportunity to spend quality time with naturalists who can teach me about Vermont would be very exciting. I understand that Vermont has a wonderful variety of botanical species because of some calcareous soils there, and of course your winters are slightly less harsh than ours."

SLIDES BY MEMBERS SATURDAY EVENING

We traveled near and far as three members shared slides of places that they have either visited recently or have known for a long time.

1)Bill and Lynne Arnold showed slides of a trip to Africa where they saw the people, places, birds, plants and animals at a game preserve in Kenya. First bird, the common Superb Starling was not shy about finding food anywhere. Acacia trees are thorny and shrubby when young to protect them against being grazed and grow into interesting shapes with spreading tops once they are tall enough to evade the giraffes. The dikdik antelope is the smallest and reaches a height of only 1 – 1 ½'. Common birds included many interesting colors – white-throated bee eater, red-eyed bustard, red-billed hornbill, flamingos, and ostrich. A herd of elephants moved towards water but in no hurry – if the little one needed a nap, the others would patiently wait. Some of the large land mammals were giraffes, a trio of cheetah brothers, and outside the preserve a group of lions.

Bill then showed many treats from this year's meeting. Ah, the beauty of digital photography. Pictures of the top of the mountain, Troy Big Falls and every flower that they saw in bloom including ragged robin, bird's-foot trefoil, yellow flag, one-flowered cankerroot and ended with an ostrich fern almost completely unfurled.

2) Roger Bradley took us on a tour of his yard as he pondered "What to show?" It didn't take long before we were enjoying a long list of flowering shrubs: witch hazel, spicebush, redbud, flowering dogwood, several sports of mountain laurel. A wisteria vine that he planted near a tree had grown large in 6 years; a 'Double File' Viburnum cleverly disguised a drain spout. We enjoyed golden chaintree, pinxter (or as his mother called it 'swamp appleblossom'), and a magnificent 'Yellow Bird' magnolia.

Roger discovered a redstone quarry in Longmeadow, MA that was going out of business and asked "How much a ton?" "Six dollars." That sounded pretty good, so several tons later and after a full summer of lifting and moving, he built an attractive wall for less than $100. A nearby nature center had become home to an albino deer.

3) Peter Hope showed showy ladyslippers in bloom just after the 2006 meeting that he found at Esqua Bog.

He had the opportunity to go to Costa Rica two times during the winter – once with students and once with hiking buddies. They spent time at the Monteverde Preserve. Beautiful color and form are carried by all creatures such as the 5" long caterpillar on the prayer leaf and the black and green poison dart frog. The canopy walk puts you in the trees. A troop of howler monkeys passed overhead and one big male helped another pass by making a bridge out of his own body.

On the Spring trip, the group of five posed under a poor man's umbrella tree leaf. Hummingbirds came to the feeders at the lodging. We saw a nice view of a strangler fig from the inside up. The seed germinates in the canopy of another tree and sends roots downward that fuse together. After the host tree dies from being shaded out, it rots sway and the strangler fig remains with a hollow center space. Rio Celeste has volcanic minerals that color the hot spring water; the crew chose to dip into one of the cooler ones.

We thank the three presenters for sharing their special places with us.

MEMBERS' MEMORABLE COMMENTS

You all know who you are!

"Wow! I hear a Bicknell's Thrush and it's right over there!"

"What can I make with a ton of redstone?"

"Chimney Swifts twitter. That's what they do."

"There was a lot of fern action on this trip."

"The eyelashes on this giraffe were like Tammy Faye Baker times ten."

"One of the hermit thrushes (hummingbirds ?) I had on my shirt."

"You're at a cocktail party and someone says – So, you've discovered a new species of fern."

"They engage in extreme preening. It looks like they're having a seizure."

"I'm considered a female that doesn't get old guys mad."

"Are these Railroad tracks still active? Yes. When does the train come through? I don't know but you'll know when it does. … She almost dived into the swamp."

"They travel at the speed of the little one."

"What are those odd-looking trees over there in the field?"

FIELD TRIPS

FIELD TRIP 1.

1. Jay Peak Summit (3968'), Jay

At 9:00 AM, everyone signed up for this trip will ride up to the summit of Jay Peak on the Aerial Tram (which is being opened before the summer season especially for our group). The Tram departure building is to the right of the Hotel and a short way uphill from the driveway. We will spend about one hour on top of the mountain. We will be able to listen for Bicknell's Thrush and other high elevation birds. Also, we can walk on the open rocky summit and look for *Potentilla tridentata*, three-toothed cinquefoil, *Vaccinium uliginosum*, alpine bilberry and *Lycopodium lagopus*, one-cone clubmoss.

2. Hazen's Notch, Westfield

On the way to Hazen's Notch, we will visit an old roadside spring with excellent ice-cold water. In Hazen's Notch, the Terminus of the Bailey Hazen Military Road from Revolutionary War Days, we will look and listen for Peregrine Falcon (a pair was observed there on June 2 during scouting) on the high cliffs of Sugar Loaf Mountain from a good vantage point where the Long Trail passes through. We may poke around in the rich woods on either side of the Hazen's Notch Road and look for *Polystichum potteri*, Potter's Fern, named after Club member Henry Potter and is a hybrid of Christmas fern and Braun's holly fern. The Club found this fern here on its visit in 1992. The Club also visited here in 1922.

On the Trail photo:Mike MacCaskey

3. Lowell Dunite Outcrop, Tetreault Farm, Lowell

We will then travel to the east side of Hazen's Notch on the Hazen's Notch Road, RT 58 to a crossing of the Missisquoi River in Lowell. This will be our lunch stop. We will wade across the

river to a hayfield and shrubby shoreline. (Rubber boots or Teva sandals will come in handy here.) The river is about 30 feet wide and 10-12 inches deep with a gravel and sand bottom. After crossing the river, we will walk around a hayfield and into the woods, leading to a rocky dunite outcrop. Here, we will enjoy the interesting flora that survive the chemical composition dunite bedrock produces and thrive in the sunny and exposed climate. Plants include: *Adiantum viridimontanum,* Green Mountain maidenhair fern, and one of its parents, *Adiantum aleuticum,* serpentine maidenhair fern. Ravens recently fledged their young on the outcrop cliffs and may still be present and vocal. Curiously, *Ledum groenlandicum,* Labrador tea grows here on the cliffs and should be in bloom.

4. Troy Big Falls, Troy

Here the Missisquoi River is much larger and the force of its flow has carved a beautiful falls with rock ledges that support the growth of *Erigeron hyssopifolius,* hyssop-leaved fleabane and *Vaccinium caespitosum,* dwarf bilberry. The Club also visited here in 1992.

Erigeron hyssopifolius, Troy Big Falls
Photo: Deborah Benjamin

FIELD TRIP 2. SOUTH BAY WILDLIFE MANAGEMENT AREA

South Bay Wildlife Management Area is comprised of publicly and privately owned lands totally 1,660 acres. It is divided into two blocks: one encompassing part of the Black River and one the lower reaches of the Barton River.

1. Coventry Road South Bay Access Area, Newport

This is primarily a birding stop on the shore of South Bay.

2. Black River Bridge, Coventry

Located within the Black River block of the South Bay Wildlife Management Area, this area has shrub-lined banks and borders a wetland.

3. Newport Airport, Coventry

This New England style airport is home to Upland Sandpiper. We are trying to find out if the bird is present this summer. [Note: We did not visit the Airport; we were not able to learn if any sandpipers were present.]

Note: Sites 1.,2., and 3. are birding sites listed in Birdwatching in Vermont by Bryan Pfeiffer and Ted Murin. These represent relatively short stops.

Also Note: On the way south on Airport Road to the next stop, you will see to your left a grove of very curious looking trees out in a farm field. Look closer and you may see their origins; apparently these are an inspiration from the Final Curtain Phish Concert.

4. Barton River Coventry Station Access Area, Coventry

This will be our lunch stop. The Barton River meanders through a patch of floodplain forest with a backwater pond nearby. We will explore both for ferns, shrubs and aquatics. The Barton River block of the South Bay Wildlife Management Area was designated a National Natural Landmark by the National Park Service in 1973. A plaque to that effect reads: “This site possesses exceptional value as an illustration of

the nation's natural heritage and contributes to a better understanding of man's environment." There is poison ivy along the roadside and extends into the woods where it is sunny.

5. Barton River Marsh and Barton River Fen, Coventry

We will walk along the Connecticut River Line railroad tracks that cross the Barton River Marsh at Miller Creek, a deadwater that makes its way to South Bay. These tracks are active, although no one we asked on scouting knew when the trains come through. There is a sweet gale shrub swamp to the west before the bridge and Barton River Fen, a treeless and largely shrubless *Carex lasiocarpa* dominated peatland, to the east beyond the railroad bridge. It is about half a mile from where we park to the fen. Many species of marsh birds are here including American bittern, Virginia rail and common moorhen. Black terns breed in this area and all five Vermont species of swallows feed on the abundance of insect life.

PLANT LIST 2007

Key: 1. Jay Peak Summit, Jay
2. Hazen's Notch, Westfield: rich northern hardwood forest with small wetlands
3. Lowell Dunite Outcrop, Lowell
4. Troy Big Falls, Troy
5. Barton River Coventry Station Access Area, Coventry: floodplain forest and marshes
6. Barton River Marsh and Fen, South Bay WMA, Coventry

Please note: no plant lists were made for the three birding stops (see Field Trips)
Plant List for Jay Peak Summit is limited to bryophytes! List by VP Dorothy Allard

Species	Common Name	
Abies balsamea	Balsam Fir	2,3
Acer negundo	Box Elder	5
Acer pensylvanicum	Striped Maple	2
Acer saccharinum	Silver Maple	5
Acer saccharum	Sugar Maple	2,3
Acer spicatum	Mountain Maple	2,3
Actaea alba	White Baneberry	5
Actaea rubra	Red Baneberry	2
Adiantum aleuticum	Serpentine Maidenhair Fern	3
Adiantum pedatum	Maidenhair Fern	3
Alnus incana ssp. rugosa	Speckled Alder	5,6
Amphicarpa bracteata	Hog Peanut	5
Andreaea rupestris	Black Rock Moss	1
Anomodon attenuatus	Common Tree-apron Moss	3
Apocynum androsaemifolium	Spreading Dogbane	6
Aralia nudicaulis	Wild Sarsaparilla	2,3,5
Arctium sp.	Burdock	5
Arisaema triphyllum	Jack-in-the-pulpit	2,5
Asclepias syriaca	Common Milkweed	5
Athyrium filix-femina	Lady Fern	5

Barbilophozia attenuata	Mountain Barbilophozia	1
Bazzania trilobata	Three-lobed Bazzania	3
Betula allegheniensis	Yellow Birch	2,3
Bryum caespiticium	Wall Bryum	3
Campylium chrysophyllum	Golden Feather Moss	3
Carex crinita	Long-hair Sedge	5
Carex eburnea	Ebony Sedge	3
Carex intumescens	Bladder Sedge	3
Carex torta	Twisted Sedge	3
Ceratodon purpureus	Purple Fork Moss	1
Chelone glabra	Turtlehead	5
Clematis virginiana	Virgin's Bower	5
Clintonia borealis	Bluebead Lily	2
Coptis trifolia	Goldthread	3
Cornus alternifolia	Alternate-leaved Dogwood	2,5
Cornus amomum	Silky Dogwood	6
Cornus foemina	Gray Dogwood	6
Cornus sericea	Red Osier Dogwood	3,5,6
Corylus cornuta	Beaked Hazelnut	3
Dennstaedtia punctilobula	Hay-scented Fern	2
Deparia acrostichoides	Silvery Glade Fern	
Dichelyma pallescens	Claw Moss	5
Dicentra cucullaria	Dutchman's Breeches	2
Dicranum scoparium	Common Broom Moss	3
Diervilla lonicera	Fly Honeysuckle	2
Dryopteris clintoniana	Clinton's Wood Fern	5
Dryopteris cristata	Crested Wood Fern	5
Dryopteris cristata x intermedia	Boott's Wood Fern	5
Dryopteris cristata x carthusiana	Braun's Wood Fern	5
Dryopteris intermedia	Intermediate Wood Fern	2,3
Dryopteris marginalis	Marginal Wood Fern	2
Encalypta procera	Fire Extinguisher Moss	3
Equisetum arvense	Common Horsetail	6
Equisetum hyemale	Common Scouring Rush	6
Erigeron hyssopifolius	Hyssop-leaved Fleabane	4
Erythronium americanum	Trout Lily	2
Fagus grandifolia	American Beech	2
Fragaria virginiana	Common Strawberry	2
Fraxinus americana	White Ash	2,5
Fraxinus nigra	Black Ash	5
Frullania eboracensis	Common Frullania	5
Glyceria melicaria	Slender Mannagrass	5
Gymnocarpium dryopteris	Common Oak Fern	3
Gymnostomum aeruginosum	Chalk Cushion Moss	3
Hedwigia ciliata	White-tipped Moss	3
Hylocomium splendens	Stair-step Moss	3

Hypnum lindbergii	Clay Pigtail Moss	5
Impatiens capensis	Orange Jewelweed	2,5
Iris pseudoacoris	Yellow Iris	5
Iris versicolor	Blue Flag	5,6
Jamesoniella autumnalis	Autumn Ear Moss	3
Juncus sp.	Rush	6
Juniperus communis	Common Juniper	3
Laportea canadensis	Wood Nettle	2
Ledum groenlandicum	New Jersey Tea	3
Lemna minor	Duckweed	5
Lilium canadensis	Canada Lily	5
Lonicera canadensis	Canada Honeysuckle	2
Lysimachia nummularia	Moneywort	5
Lythrum salicaria	Purple Loosestrife	5
Maianthemum canadense	Canada Mayflower	2,3
Matteucia struthiopteris	Ostrich Fern	5
Minum marginatum	Pointed Star Moss	3
Myosotis verna	Forget-me-not	5
Myrica gale	Sweet Gale	6
Onoclea sensibilis	Sensitive Fern	2,5
Orobanche uniflora	One-flowered Cancer-root	5
Osmunda cinnamomea	Cinnamon Fern	2
Osmunda claytoniana	Interrupted Fern	2
Oxalis acetosella	Wood Sorrel	2,3
Parthenocissus quinquefolia	Virginia Creeper	5,6
Phalaris arundinacea	Reed Canary Grass	5,6
Picea rubens	Red Spruce	3
Pinus strobus	White Pine	3
Pleurozium schreberi	Big Red Stem	1,3
Pogonatum dentatum	Northern Badger Moss	1
Polypodium virginianum	Common Polypody	2,3
Polystichum acrostichoides	Christmas Fern	2
Polystichum braunii	Braun's Holly Fern	2
Polystichum x potteri	Potter's Fern	2
Polytrichastrum alpinum var. alpinum	Alpine Pogonatum	1
Polytrichum juniperinum	Juniper Hair-cap Moss	1
Pontederia cordata	Pickerel-weed	5
Populus balsamifera	Balsam Poplar	5
Populus tremuloides	Trembling Aspen	5
Potentilla palustris	Marsh Cinquefoil	6
Potomogeton sp.	Pondweed	5
Prunus serotina	Black Cherry	2,5
Prunus virginiana	Chokecherry	5,6
Pteridium aquilinum	Bracken Fern	5
Ptilidium ciliare	Hairy Palmate Liverwort	1
Pyrola elliptica	Common Shinleaf	3,5

Ranunculus abortivus	Dwarf Buttercup	2
Rhus radicans	Poison Ivy	5
Ribes sp.	Gooseberry	5
Ribes cynosbati	Dogberry	2
Saelania glaucescens	Glaucous Hair Moss	4
Salix sp.	Willow	5
Salix eriocephala	Wooly-headed Willow	3
Sambucus racemosa	Red Elderberry	2
Sarracenia purpurea	Pitcher Plant	6
Saxifraga virginiensis	Early Saxifrage	3
Scapania nemorosa	Common Scapania	1
Sedum sp.	Sedum	5
Sium suave	Water Parsnip	5,6
Smilacina racemosa	False Solomon's Seal	2
Smilacina stellata	Starry False Solomon's Seal	5
Smilax herbacea	Carrion Flower	5
Solidago canadensis	Canada Goldenrod	5
Solidago flexicaulis	Zigzag Goldenrod	2
Sorbus americana	Mountain Ash	2
Sphagnum girgensohnii	Girgensohn's Peat Moss	1
Spiraea alba	Meadowsweet	5
Streptopus roseus	Rose Twisted-stalk	2
Taraxicum officinale	Common Dandelion	2
Taxus canadensis	Canada Yew	2
Thalictrum pubescens	Tall Meadow-rue	5
Thelypteris palustris	Marsh Fern	6
Thuja occidentalis	Northern White Cedar	4
Tiarella cordifolia	Foamflower	2,3
Tilia americana	Basswood	2,5
Trientalis borealis	Starflower	3
Trillium cernuum	Nodding Trillium	5
Trillium erectum	Stinking Benjamin	2
Tritomaria quinquedentata	Tritomaria	3
Tsuga canadensis	Eastern Hemlock	3,4
Typha angustifolia	Narrow-leaved Cattail	6
Typha latifolia	Broad-leaved Cattail	5,6
Ulmus americana	American Elm	3,5,6
Ulota crispa	Curled Leaf Moss	5
Veronica americana	American Brooklime	2
Veratrum viride	False Hellebore	2,5
Viburnum acerifolium	Maple-leaved Viburnum	5
Viburnum alnifolium	Hobblebush	2
Viburnum lentago	Nannyberry	3,5
Viburnum opulus	Highbush Cranberry	5
Viola canadensis	Canada Violet	2
Vitis riparia	River-bank Grape	5

BIRD NOTES 2007

Barton River Marsh photo by Mike MacCaskey

Eager bird watchers, fueled by coffee and muffins, stepped out into the early morning sunshine that was already warming the grassy stretches of Jay's newly completed golf course. There we strolled about, birding mainly by ear, without actually seeing many species. American Robins and the ever present Baltimore Oriole began our long list for the meeting.

The real adventure began, however, when the entire group boarded the Jay Peak Tram for an exhilarating ride to the summit. Once atop the 3968 foot peak, we were immediately greeted by singing Blackpoll Warblers. Everyone was excited to see, and hear, high elevation nesting birds. We were not disappointed. Debbie Benjamin played a tape of a Bicknell's Thrush, briefly so as not to disturb the birds. While the group was intently listening for a response, Fritz Garrison, ever the mischief maker, replied with his own tape of a Bicknell's from a distance away! A good laugh was had by all once he was found out. Soon, most birders had heard the elusive thrush for real, along with a Yellow bellied Flycatcher, Winter Wren, White Throated Sparrow, Purple Finch, and Ruby-crowned Kinglet. On our return trip to the summit the next morning, some of us were fortunate to have a good long look at a singing Bicknell's Thrush, while another group spotted White-winged Crossbills.

At our lunch stop along the Barton River, where the silver maples arched over the smoothly flowing water, we watched and listened to Baltimore Orioles and Warbling Vireos. The Barton River Marsh and Fen was host to an abundance of marsh dwelling birds, some of which we both saw and heard. An immature Northern Harrier was seen by birders and by a group of mobbing Red-winged Blackbirds. Tiny secretive Marsh Wrens caused the greatest excitement, especially when someone spotted one moving deep within the thick cattail leaves. Other birds seen and or heard at this location included Great Crested Flycatcher, Wilson's Snipe, Swamp Sparrow, American Bittern, and a nice look at an Eastern Kingbird, sitting on its nest over the railroad track.

The early birders gathered once again on Saturday morning for a walk to the resort's snowmaking pond where we enjoyed excellent views of Spotted Sandpipers and a family of Common Grackles busy atop a beaver lodge. Finally a long overdue Rose-Breasted Grosbeak was heard by Roberta Whitmore. An immature Bald Eagle was seen soaring high over the parking lot at the resort. Our group later traveled to Hazen's Notch where we were thrilled to hear and see Peregrine Falcons soaring over the high cliffs of Sugarloaf Mountain.

The focus switched to the maidenhair ferns once at the Lowell dunite outcrop. While having a sunny lunch break deep in ostrich ferns growing beside the river, we watched a Raven family, and their antics, around the rocky outcrops; a Broad-winged Hawk riding the thermals; and heard a Canada Warbler, to name a few.

Our final stop was at Troy Big Falls. While searching for the hyssop leaved fleabane, we

heard the songs of Black and White Warbler and Blue-headed Vireo. C. Youngstrom

VERMONT BREEDING BIRD ATLAS

Early in this year's meeting, Charlotte Bill summarized the progress on the priority block of the Jay Peak quadrangle toward the Vermont Breeding Bird Atlas. At the beginning of the meeting, she distributed 2 handouts: one that listed the birds found during the 1st Atlas of 1985 and the current status of this block so far; and a second, copies of the field card with data and codes for people to use.

During the Bird Report at the Saturday Annual Meeting, Charlotte reported that Club members added 10 species to the 55 species observed by the beginning of the meeting which when added to one other species brings the total for the block up to 66. They were: Spotted Sandpiper, Chimney Swift, Pileated Woodpecker, Eastern Wood Pewee, Alder Flycatcher, Ruby-crowned Kinglet, Eastern Bluebird, Baltimore Oriole, Rose-breasted Grosbeak and the 'piece de resistance', White-winged Crossbill. Charlotte thanked everyone for their enthusiastic participation.

BIRD LIST 2007

1. American Bittern
2. Great Blue Heron
3. Green Heron
4. Turkey Vulture
5. Canada Goose
6. Mallard
7. Osprey
8. Bald Eagle
9. Northern Harrier
10. Northern Goshawk
11. Broad-winged Hawk
12. Red-tailed Hawk
13. Peregrine Falcon
14. Ruffed Grouse
15. Spotted Sandpiper
16. Wilson's Snipe
17. Rock Dove
18. Mourning Dove
19. Chimney Swift
20. Ruby-throated Hummingbird
21. Belted Kingfisher
22. Yellow-bellied Sapsucker
23. Downy Woodpecker
24. Hairy Woodpecker
25. Black-backed Woodpecker
26. Northern Flicker
27. Pileated Woodpecker
28. Eastern Wood-pewee
29. Yellow-bellied Flycatcher
30. Alder Flycatcher
31. Least Flycatcher
32. Great Crested Flycatcher
33. Eastern Kingbird
34. Blue-headed Vireo
35. Warbling Vireo
36. Red-eyed Vireo
37. Blue Jay
38. American Crow
39. Common Raven
40. Tree Swallow
41. Bank Swallow
42. Cliff Swallow
43. Barn Swallow
44. Black-capped Chickadee
45. Red-breasted Nuthatch
46. White-breasted Nuthatch
47. Brown Creeper
48. Winter Wren
49. Marsh Wren
50. Golden-crowned Kinglet
51. Ruby-crowned Kinglet
52. Eastern Bluebird
53. Veery
54. Bicknell's Thrush
55. Swainson's Thrush
56. Hermit Thrush
57. Wood Thrush
58. American Robin
59. Gray Catbird
60. European Starling
61. Cedar Waxwing

62. Yellow Warbler
63. Chestnut-sided Warbler
64. Black-throated Blue Warbler
65. Yellow-rumped Warbler
66. Black-throated Green Warbler
67. Blackpoll Warbler
68. Black-and-white Warbler
69. American Redstart
70. Ovenbird
71. Common Yellowthroat
72. Canada Warbler
73. Chipping Sparrow
74. Song Sparrow
75. Swamp Sparrow
76. White-throated Sparrow
77. Dark-eyed Junco
78. Rose-breasted Grosbeak
79. Indigo Bunting
80. Bobolink
81. Red-winged Blackbird
82. Eastern Meadowlark
83. Common Grackle
84. Baltimore Oriole
85. Purple Finch
86. White-winged Crossbill
87. American Goldfinch
88. House Sparrow

List by VP Connie Youngstrom

BUTTERFLIES 2007

Phillip Ballou drew up a list of butterflies.

Milbert's Tortoiseshell	Ringlet
Red Admiral	Pearl Crescent
White Admiral	Tiger Swallowtail
Dusky Wing	Black Swallowtail
Silvery Blue	Harris Checkerspot
Arctic Skipper	Common Sulphur
Hobomark Skipper	Monarch

Listening for Bicknell's Thrush, Jay Peak Summit photo: Bill Arnold