VERMONT BOTANICAL AND BIRD NEWSLETTER

FEBRUARY 2016

2016 Annual Meeting Announcement

The 121st Annual Meeting of the Vermont Botanical and Bird Club will be held on Thursday, June 16 - Sunday, June 19, 2016 at Johnson State College in Johnson, Vermont.

We look forward to exploring this region of north central Vermont for birds and plants from the heights of Smugglers' Notch in the Sterling Range of the Green Mountains where Peregrine Falcons nest on the shear cliff faces and where many interesting plants grow right along the Mountain Road's edge; down to the lowlands with bogs, swamps and rivershore habitat in the Lamoille River watershed.

Johnson State College is one of the five Vermont State Colleges. We will stay in Arthur Hall on the campus with spectacular views to the Green Mountains.
See http://www.jsc.edu .

120th Annual Meeting at Goddard College, Plainfield, Vermont June 18 – 21, 2015

Vermont Botanical and Bird Club at Goddard College June 20, 2015 **photo: Peter Hope**

Front Row left to right (13):
Shona Marston (blue shirt), Sheila Palfey, Susan Elliott, Annie Reed, William Martin, Dorothy Allard, Sara Hand, Charlotte Hanna, Mary Hill, Rosemary Bevan, Susan Brown, Connie Youngstrom, Louanne Nielsen

Back Row left to right (22):
Whitney Burgess (Scholarship Student), Erin Buckley (Scholarship Student), Bryan Palfey, Marvin Elliott, Everett Marshall, Michael MacCaskey, Lynn Ocone, David Mook, Roy Pilcher, Tom Kastner, Scott Bassage, Charlotte Kastner, Charlotte Bill, Deborah Benjamin, Gail Yanowitch, Mary Metcalf, Susan Shea, Marcia Angermann, Anne Hill, Sarah Jane Hills, Eric Wood, Peter Hope

EVENING PROGRAMS
THE CLOCKHOUSE 7:00 PM

THURSDAY, JUNE 18, 2015:

Insects for Birders and Botanists, by Bryan Pfeiffer, Writer and Field Biologist, Montpelier.

We enjoyed an evening of photos and stories from Vermont and Costa Rica as we explored the fertile intersection of plants and flying things.

When looking at the diversity of life in Vermont or anywhere by category, the Insects by far outnumber the rest:

Birds	202 breeding species
Vascular Plants	2150 species (incl non-native)
Butterflies	103 species
Dragonflies	99 species
Damselflies	43 species
Other Insects	"No Clue how many"

We then looked at the relationships between groups of organisms.

Birds and Botany.
We saw Yellow-rumped Warbler, a species that spends Winter further north than others in the northeast, dining on Poison Ivy berries. Even Red-eyed Vireo is happy to switch its Winter diet to fruits including the non-native plant Barberry. American Bittern demonstrates the ability to conceal itself in cattail reeds that works except when the bird is out in the open. The Three-wattled Bellbird of Costa Rica used to be found in the high mountain forests of Monteverde but more and more is being found in immature and intermediate forests.

Butterflies and Botany.
The Baltimore Checkerspot has as its host plant Turtlehead and Lance-leaved Plantain. The Bog Copper likes to lay its eggs on Leatherleaf and it will both lay eggs on the leaves and nectar from the flowers of Cranberry. The Harvester is our only carnivorous butterfly where the caterpillar feeds on woolly aphids and the adult may use Speckled Alder as a host plant. And dipping southward again to Costa Rica, we saw the Red Leafcutter Ant on a fern leaf tip.

Birds and Butterflies.
One April in North Carolina, Bryan, a birder of forty years, relayed an experience that convinced him of his growing appreciation of butterflies. "I knew I was hooked when I saw a Yellow-rumped Warbler eating a lovely Red-Banded Hairstreak, the warbler of butterflies, and I thought I hate this bird!" We saw Early Hairstreak at the railroad bed at Marshfield Pond in American Beech with its mint green color with orange lightning bolts on the wings contrasting with blue upper wings. Mustard White Butterfly likes Toothwort as a host but can make a lethal mistake choosing the invasive non-native Garlic Mustard on which its caterpillars will not mature.

Birds and Dragonflies.
Scarlet Tanager feasts on a Spiketail. Merlins during migration frequently snatch "fast food" on the wing such as migrating Common Green Darners. We saw Elfin Skimmer, the smallest dragonfly in North America, at Chickering Bog (Fen) in its favorite intermediate graminoid fen habitat. And we will look for Ebony Boghaunter at Chickering Bog (Fen) a rare species that often perches on light-colored surfaces, such as the boardwalk or the bleached out trunks of Northern White Cedar. A new species in Vermont, Giant Swallowtail, first seen 5 years ago has steadily increased to a status of established. Most recently, a White-M Hairstreak has been observed at West Mountain in Dummerston.

The constant interplay of life forms brings new relationships to light. In the past year first ever bird sightings in Vermont include: Brown Booby, Prairie Falcon, Pink-footed Goose, Ancient Murrelet, Willow Ptarmigan,Trumpeter Swan.

Even in the familiar, such as the infinite variation in the Fall coloration of Hobblebush leaves, we see all around us "wonderful things that are common that we can enjoy".

FRIDAY, JUNE 19, 2015:

A Botanical and Ecological Expedition to Nunavik, Quebec, by Charles Cogbill, Winooski Field Naturalist and Ecologist, Plainfield.

In late July of 2014, three colleagues set off on a two-week expedition in search of historical and new locations for Dryopteris fragrans, fragrant shield fern, in Pingualuit National Park, Nunavik on the Ungava Peninsula at the far northern reaches of Quebec Province 61° North Latitude. They were particularly interested in comparing the growth habits of plants from this far northern location with populations in the southern part of its range, such as at Owl's Head in Groton State Forest in Vermont or at the Catskill Mountains.

The 3 colleagues are:
Scott Bailey – geomorphologist
Brett Engstrom – endangered species specialist
Charlie Cogbill – plant communities investigator

The furthest northern region of Canada (formerly the Northwest Territories) became autonomous on April 1, 1999 and, after consultation with local native people, was named Nunavut - "The Land". The flag depicts a red Inuksuk or rock cairn that signifies "the people showing the way". The red signifies its relationship to Canada and is bordered to the left by a gold background and to the right by white, signifying the riches of land, sea and sky. In the fly portion of the flag is a dark blue/black star signifying Niqirtsuituq, the North Star, and representing the leadership of Elders in the community.

To the east of Hudson Bay and south of Hudson Strait and Ungava Bay lies Nunavik which means "Our Land" and covers the northern third of Quebec Province. It is bounded by Côte-de-Nord to the south and Labrador to the east.

Their journey northward was by First Air plane from Montreal to Kuujjuaq, capital of Nunavik; then by twin Otter plane (arrive a half-day before the flight time and be prepared to wait up to three days) north to Kangiqsujuaq and eventually to a base cabin in the Pingualuit National Park.

Pingualuit National Park has two geological features of unique significance. One is a crater that formed after a meteor strike 1.2 million years ago and named Pinguala. It is three miles in diameter and is filled with rainwater that is so pure that the lake is the second clearest and purest lake in the world. The other is the Povungnituk River which cuts a canyon north of the crater and exposes many layers of bedrock including ultramafic, basaltic, calcareous and granitic along its 250 mile long watershed. By following this river canyon, the three learned a great deal about the floral diversity and were able to establish transects that will allow for future investigation.

On granitic base they found Cassiope tetragona, Potentilla hyparctica, Luzula confusa, Potentilla tridentata, and Empetrum nigrum – all low-growing plants that have adapted ways to survive in a cold and exposed windy environment. "It's just gray and wet and cold all the time." "If you get too high up you get blown to bits."

In more calcareous areas they found Dryopteris fragrans, Vaccinium uliginosum, Diapensia lapponica, Vaccinium vitis-idaea, Loiseluria procumbens, Silene acaulis, Saxifraga aizoides, Salix herbacea and Carex castenea. These are plants that are also known from New England's highest elevation mountains above treeline.

In addition to searching for Dryopteris fragrans they were looking for two additional Arctic species of interest: Hulteniella integrifolia, Small Arctic Daisy; and Braya glabella, Purple Rockcress. On this journey, Scott, Brett and Charlie contributed a great deal to the purpose of Pingualuit NP which includes preservation, more information and monitoring for the future.

See more at: Nunavik Parks ;
Canadian Arctic Flora at www.nature.ca/aaflora
Wikipedia – Pingualiut National Park; Flag of Nunavut.

SATURDAY, JUNE 20, 2015:

Annual Business Meeting, 7:00 PM
The Clockhouse
Goddard College
Plainfield, Vermont

followed by **Slides by Members Show**

1. Secretary's Report

This year's Secretary's Report is a catalogue of three events that occurred in recent time.

In May, 2015 Susan Greenberg wrote to the Club's website manager Fritz Garrison to say that she was a member of the Hartland Nature Club and had found a picture of the Vermont Botanical and Bird Club from the 1920's when the Club had its meeting at Sharon, VT and would send it to us. The Club had its meeting at Charles Downer State Park in Sharon, VT on July 6 – 11, 1925, almost ninety years ago. We tried to identify Henry Potter in the photo and thought that it might be ninth from the left in the back row. Peter described Henry as a farmer from Clarendon who went to school through the eighth grade and who would spend his Winters up in the hay loft with Asa Gray's Manual of Botany keying out weeds and grasses. Roy remembered that Henry was a photographer and made a short film of Peregrine Falcon nesting at White Rocks in 1955. We all agreed that it would be neat to find that film.

On June 6, 2015 Club member and former Club President, Dr. Philip D. Chiaravalle, Sr. passed away in Morrisville, VT at the age of 85. Phil taught Biology and Botany at Johnson State College from 1966 – 1986 and continued part time until 2008. Phil was President of the Vermont Botanical and Bird Club in 1985 – 1986. Barbara Murphy, President of Johnson State College, wrote: Dr. C. could well be described as the College's beautification program; and that as recently as last week, he was seen pushing a wheelbarrow and planting bulbs on the quad at the alumni bell tower, a tower funded and dedicated by alumni for which Dr. Chiaravalle, Professor Emeritus, was a founding benefactor.

Sue Elliott announced that on May 22, 2015 Rutland County Audubon Society co-president Roy Pilcher received the Green Mountain Power-Zetterstrom Environmental Award (named after Meeri Zetterstrom, who was instrumental in restoring Ospreys to Vermont), which is given to people and organizations committed to improving the environment. Roy said that he was surprised and very pleased and that the award is a beautiful cut glass plaque. After the ceremony at West Rutland Marsh on a sunny day, an Osprey flew overhead as if to give its appreciation and thanks.

2. Treasurer's Report

Treasurer Charlotte Bill reported the balances in the Club's three accounts:

Merchant's Bank CD
Balance 11/09/14 $11,131.80; minus $5,000.00 that was moved to the checking account when the bank discontinued the flexible CD option; plus interest $10.82 for a CD Balance on 6/9/15 of $6,142.62.

People's United Checking Account
Balance on 6/12/15 of $13,141.48

Green Century Equity Fund
In the past year the value of the Equity Account in 6/9/14 of $18,030.18 (594.271 total shares valued at $30.34/share) rose to $19,662.15 on 6/16/15 (603.689 total shares valued at $32.57/share). Since its inception in 2000, the Fund in the past ten years has increased 104%.

The Scholarship Funds which reside in the three accounts on 6/16/15 is $1,778.29 in the Current Year/Rollover in the Checking Account and is $12,986.69 in the Scholarship Endowment portion in the CD and Equity Fund.

The Annual at Lyndon State College realized $5,183.00 in receipts and incurred $5,508.87 in

expenses for a net loss of $325.87.

Roy Pilcher commented that the balance of Club moneys in the various accounts is a good balance and moved that the Treasurer's Report be approved. Peter Hope seconded. The Treasurer's Report was unanimously approved.

3. Scholarship Report

Secretary Scott Bassage and Peter Hope called on Erin Buckley and Whitney Burgess to relay a highlight about this year's meeting. Erin said that she loved learning about warbler songs and putting a species to its voice; and she enjoyed learning about ferns. Whitney said "I love mosquitoes and this morning at Chickering Bog (Fen) the insectivorous plants were beautiful".

Scott said that he puts up a poster on bulletin boards around the state and that word of mouth referrals work very well. Thank you Scott and Peter for this year's great students. (See more under Henry Potter Scholarship Students later in this Newsletter.)

4. Nominating Committee

Peter Hope, Chair of the Nominating Committee, read the Slate of Officers:

Secretary	Scott Bassage
Treasurer	Charlotte Bill
Vice-President Birds	Connie Youngstrom
Vice-President Plants	Everett Marshall
President	Deborah Benjamin

Peter Hope moved that the Secretary be instructed to cast one unanimous ballot for the Slate. The members voted All in Favor.

5. Field Trip Reports – Plants, Birds

Lists of Plants and Birds occur later in this Newsletter.

Plants 2015

Vice-President of Plants Everett Marshall called for people's favorite plant sitings on the West Trip. Erin liked the Goldie's wood fern that they found in the woods at Chickering Bog (Fen). Charlotte H. liked the twinflower; Lynn O. thought the Hudson Bay sedge was beautiful with the pitcher plants. And Whitney liked the native honeysuckle. Mary H. liked the one-flowered pyrola and Charlotte B. liked the crested wood fern.

On the East Trip, Everett said that the large trees at Lord's Hill were very special. Marvin E. liked the black ash with the white ash seedling at is base for good comparison. Charlotte B. loved VT's only two evergreen rhododendrons at Kettle Pond.

Birds 2015:

Vice-President of Birds Connie Youngstrom said that the numbers were down a little perhaps due to cool weather but nonetheless great birds were observed: Blackburnian Warbler at Owl's Head, Ovenbird and nest at Stranahan Town Forest, Red-eyed Vireo nest at Annie's house, and Yellow-bellied Sapsucker nest on the way to Chickering Bog (Fen). Cedar Waxwing was seen capturing a dragonfly at Chickering Bog (Fen) and then flying to a Northern White Cedar where its mate awaited and engaged in courtship feeding.

A Broad-winged Hawk flew low over the parking area at Lord's Hill. Magnolia Warbler was heard singing no doubt on territory. Norway Spruce, not native to Vermont held many warbler species, especially Blackburnian Warbler. An Eastern Towhee was heard at Stranahan TF. And Sunday morning a pair of Barred Owl's were calling back and forth making us wonder if their young may have just fledged.

Roy Pilcher read a list of Butterflies seen this year. See complete Bird List and Butterfly List later in this Newsletter.

6. 2016 Meeting

Possible places for the 2016 Annual Meeting were discussed: Eagle Camp on South Hero, North Hero House, Quimby Country, Newport Area, Putney School. Stay tuned.

7. Other Business

Everett attended the NEBC meeting at Smith College earlier this month and found it interesting as botanical societies/clubs face the future in terms of building membership and scheduling events. It was agreed that the VT B&B Club should look at co-sponsoring outings with other groups such as North Branch Nature Center and Vermont Center for Ecostudies.

Charlotte Hanna announced that David Sibley would be giving a talk at the Main Street Landing in Burlington on June 26 and praised Audubon Vermont for pioneering techniques, such as managing forests for birds, which the National Audubon Society is taking up as a model.

Peter Hope moved and Connie Youngstrom seconded that the Annual Business Meeting adjourn. The members voted All in Favor.

SLIDES BY MEMBERS SHOW

1. Charlotte Bill has a new camera and shared with us amazing pictures of birds in places and positions that highlighted identification features – Grasshopper Sparrow at Franklin County Airport with its distinct eye-ring; Vesper Sparrow with white tail edges and rusty coverts; Tree Swallow at Mississquoi National Wildlife Refuge with its long claws clasping its perch outside the nest. At Campbell's Bay one picture included Dunlin and Short-billed Dowitcher and another held Least Sandpiper and Semi-palmated Plover. Black Tern drew oohs and aahs from the group. A Raven at the top of Jay Peak showed a wedge-shaped tail. We saw two Wood Thrushes in her yard that displayed an unusual behavior of lying on the ground before getting up and flying away.

[Insert between 1. and 2. Debbie showed a notice by Vermont Center for Ecostudies in celebration of the 134th Anniversary of discovering Bicknell's Thrush on Mount Mansfield on June 16, 2015 one day after the celebrated discovery on June 15, 1881 by Eugene P. Bicknell. Present were Gene and Nina Doggett and their grandson, Edward "Teddy" Bicknell Dogget, a fifth generation descendant of Eugene's, and staff from VCE. At 5:00 am, Teddy, a budding BITHnologist, was handed a Bicknell's Thrush caught in a dawn mist net to release thus continuing in the appreciation of this montane species. See pictures at: http://vtecostudies.org/blog/bicknell-legacy-shines-on-mt-mansfield/]

2. Sue Elliott showed pictures of a wide array of dragonflies with beautiful colors and intriguing names: Eastern Pondhawk, Sedge Sprite eating a bug, American Rubyspot, Four-spotted Skimmer, Zebra Clubtail, Spiny Baskettail emerging at Old Marsh Pond by the thousands, Emerald Spreadwing, Calico Pennant at Beaver Pond in Proctor, Spangled Skimmer when they were at the Virginia Arboretum, and Dot-tailed Whiteface.

3. Roy Pilcher showed a selection of wildflowers including Doll's Eyes, Bloodroot, Columbine which provides nectar for hummingbirds, Fringed Gentian and a close-up of Wild Ginger. He showed his special way of labelling his slides from many years which incorporates date, place and name and said that they are posted on the iNaturalist website. On to orchids: Ram's Head Lady's-Slipper, Lesser Purple-fringed Orchid, Showy Orchis at Henry's Cobble, and Whorled Pogonia in Salisbury. And we finished up with Painted Trillium, Red Trillium and Velvetleaf.

4. Debbie Benjamin showed four short videos. The first was of a Hardy Plant Club outing last August 16th in canoes and kayaks on the LaPlatte River and Shelburne Bay that was led by Everett Marshall. Gliding along the river through the floodplain forest, several B&B Club members

came into and out of view – Charlotte Hanna, Scott Bassage, Everett Marshall, Deb Parrella, Ann Burcroff, Eric Wood, Marcia Angermann. The second was of a Barred Owl on January 19 that was napping in a snow-covered ash tree behind the cabin. The bird looked serene as the wind gently moved the tree trunks slowly back and forth. Two months later to the day on March 19, the same (?) owl perched in the same tree on the same branch and again nodded off to sleep only this time it had to grip the branch tightly and lean into a stiff breeze. And, the fourth video was from scouting at Stranahan Town Forest where the field at the entrance was populated by several cows, one brown one of which had just given birth to a white calf that struggled successfully to its feet as a Veery sang in a nearby tree.

5. Marvin Elliott showed pictures from a trip to Washington and Oregon with a stop in North Dakota. We saw Red-tailed Hawk, the Columbia River Bridge, big trees "that all grow right next to each other where it's hard to believe that the land can support all of them" at Rainier National Park. In mid-August the flowers were spectacular in mid-August where the snow had just finished melting. A Brown Pelican glided and stayed just above the waves. Crater Lake National Park holds the second deepest lake in the world at 2000' depth. The Oregon coast has sand that is firm enough to drive on for great access. We enjoyed Wilson's Warbler and Chestnut-backed Chickadee; and Mountain Bluebird at Grand Teton National Park.

6. Whitney Burgess showed some pictures from her visit to Costa Rica with Peter Hope's class trip. We saw a Violet-wing Hummingbird, a bromeliad and a Two-toed Sloth taken with an iPhone through a spotting scope. We saw pictures of Chimney Top Mountain on Spring break in Tennessee; and Tuckaleechee Caverns in Townsend, TN. We wound up watching a deer feeding in the pouring rain.

7. Peter Hope showed gorgeous pictures of Showy Lady's-slippers – both the normal color form and the white form – from a Hardy Plant Club visit to Bisson's Fen in June, 2014. At the mouth of the Lamoille River, snail and mussel "tracks" were left in the fine sand. A northern map turtle posed for its picture. On Mt. Mansfield, students Whitney and Erin were with the class taking a peat core. At Lily Pad Pond in Camp Johnson the bottom layer is 6 meters deep. Spruce and fir pollen gradate into oak and hickory in past warmer periods. Close-ups of the flowers of Norway Maple, Striped Maple and Mountain Maple were captured with an iPhone through a dissecting microscope.

And lastly for show and tell, Debbie Benjamin passed around a block of Northern White Cedar which contained a core of the same species that the Club collected in 2014 at Bugbee Bog.

HENRY POTTER SCHOLARSHIPS

The Club was delighted to welcome two very nice scholarship students this year from Saint Michael's College in Colchester.

Erin Buckley is from Haddam, CT and was a sophomore last year studying environmental science and biology/peace and justice. "My career goals include being a researcher, naturalist, and possibly even a park ranger. I am especially interested in forest ecology, botany, sustainable agriculture, and resource management. I was lucky enough to be accepted to Vermont's EPSCoR's Research on Climate Change Adaptation intern position for this summer, so I will be on campus doing research on land use, tributaries, and phosphorous inputs into Lake Champlain."

Whitney Burgess was a junior last year and is majoring in biology and environmental studies with a concentration in wildlife conservation and management. "Over the summer I will be working primarily with insects and will be immersed within their natural habitats. By attending this conference this summer I will also be able to learn more about the birds and their

habitats that will be feeding on many of the insects that I will be studying."

MEMBERS MEMORABLE MOMENTS

… not every white thing that is flying around in the woods is a moth
… they taste very good after a frost, and every day is right after a frost
… when he hears a bird he looks like a bird and cocks his head to one side
… Annie's paradox
… it was a cold Red-Eyed Vireo
… sometimes it's good to be last in line
… Plover in Glover; Plover in Dover
… what would a human-pollinated flower look like ?
… who knew there were so many chickadees ?
… these mussels are crying for H-E-L-P
… the stonewall just ends as does the agriculture and beyond it is just wild

CLUB NOTES

Charles Gracie Davis, Jr. known to most of us as Pete passed away on May 1, 2015. He and his partner Lucille Beckman were regular attendees of the Vermont Botanical and Bird Club meeting until they moved away to Crested Butte, CO. Pete served as Club Treasurer in the mid-1990's and carried the Club through the lengthy process of receiving its 501 (c) (3) non-profit status. Over the Summer, President Deborah Benjamin learned that Pete had written the B&B Club into his Will. His daughter, Deborah Davis Holloway, of South Hero, is Executor of his estate and has established a Fidelity Charitable Fund in the Club's name for the Club to use in its Scholarship Current Year program. The total amount available in the Fund over the next several years is $10,000.00.

The Vermont Botanical and Bird Club is very grateful for his generous donation.

FIELD TRIPS:

II. WEST TRIP

1. Chickering Bog Natural Area, East Montpelier and Calais

Chickering Bog is actually a fen fed mostly by rainwater and sitting upon sweet calcareous bedrock. Its 112 acres are owned by The Nature Conservancy, with 17 acres under conservation easement.

It began forming 13,000 years ago as glaciers receded and the subsequent filling in of a thick layer of peat (thirty feet deep near the north end) supports today's vegetation. Dominated by low sedges, grasses and brown mosses, it hosts a wide variety of fen plants including Blue Flag, Grass Pink, Rose Pogonia, Showy Lady's-slippers and other orchids; insectivorous Sundew and Pitcher Plant; three species of blueberries; Cranberry, Cotton Grass, Sweet Gale, Bog Candle.

2. Lunch Stop: Annie Reed's home on Hollister Hill Road, Marshfield

3. Stranahan Town Forest, Marshfield

The Stranahan Town Forest is a 622 acre parcel named in honor of Virginia (Dinny) Stranahan created for the people of Marshfield and was established October 12, 2007. Dinny loved the land that she owned and after her death her children generously offered the parcel at a greatly reduced price to the Vermont Land Trust and it was purchased with the help of a large grant from the Vermont housing and Conservation Board and donations from over 100 local residents. The land was then gifted by the Vermont Land Trust to the Town of Marshfield for the betterment and enjoyment of the people of the town, as well as the public at large, in perpetuity.

EAST TRIP

1. Lord's Hill Natural Area, Marshfield

Lord's Hill Natural is 25 acres of land owned by the State of Vermont on the southwest slopes of Lord's Hill and is an outlier parcel to Groton State Forest. The site contains many large specimens of white ash, sugar maple, red maple, basswood, yellow birch, beech, red spruce, balsam fir, and hophornbeam. The total acreage of old trees is about 40 acres and a previous owner gave the property to the State of Vermont in 1977.

2, 3. Groton State Forest, Marshfield/Groton

Owl's Head Natural Area – A 0.5 mile drive up the access road brings us to a pavilion and overlook toward Kettle Pond; a short, steep hike brings us to the top with views toward the Granite Hills including Lord's Hill and several others. Owl's Head is at elevation 1958' and is covered with many species of northern shrubs and wildflowers.

Kettle Pond – A glacial kettle pond of 109 acres, there is a trail that circumnavigates the pond. There are species of northern shrubs and included is a northern station for Rhododendron maximum which grows very slowly and only occasionally blooms on good years.

BUTTERFLY LIST 2015 by Roy Pilcher

Canadian Tiger Swallowtail
Eastern Tiger Swallowtail
Aphrodite Fritillary
Northern Crescent
Mourning Cloak
Clouded Sulphur
Luna Moth (not a Butterfly)
White Admiral
Red Admiral
Little Wood Satyr
Hobomok Skipper
Cabbage White
Common Ringlet

BIRD LIST 2015 by Connie Youngstrom

Canada Goose
Mallard
Ruffed Grouse
Common Loon
Turkey Vulture
Broad-winged Hawk
Killdeer
Rock Pigeon
Mourning Dove
Barred Owl
Chimney Swift
Ruby-throated Hummingbird
Yellow-bellied Sapsucker
Hairy Woodpecker
Pileated Woodpecker
Eastern Wood Pewee
Alder Flycatcher
Eastern Phoebe
Great Crested Flycatcher
Eastern Kingbird
Blue-headed Vireo
Warbling Vireo
Red-eyed Vireo
Blue Jay
American Crow
Common Raven
Tree Swallow
Barn Swallow
Black-capped Chickadee
Tufted Titmouse
Red-breasted Nuthatch
White-breasted Nuthatch
Brown Creeper
House Wren
Winter Wren
Golden-crowned Kinglet
Veery
Hermit Thrush
Wood Thrush
American Robin
European Starling
Cedar Waxwing
Ovenbird
Black-and-white Warbler
Nashville Warbler
Common Yellowthroat
American Redstart
Northern Parula
Magnolia Warbler
Blackburnian Warbler
Chestnut-sided Warbler
Black-throated Blue Warbler
Pine Warbler
Yellow-rumpled Warbler
Black-throated Green Warbler
Eastern Towhee
Chipping Sparrow
Song Sparrow
Swamp Sparrow
White-throated Sparrow
Dark-eyed Junco
Scarlet Tanager
Northern Cardinal
Indigo Bunting
Red-winged Blackbird
Common Grackle
Brown-headed Cowbird
Purple Finch
American Goldfinch

PLANT LIST 2015 By Everett Marshall

Stranahan Town Forest, Marshfield

Scientific Name	Common Name	Family
Trees and shrubs		
Abies balsamea	balsam fir	Pinaceae
Acer pensylvanicum	striped maple	Anacardiaceae
Acer rubrum	red maple	Anacardiaceae
Acer saccharum	sugar maple	Anacardiaceae
Betula alleghaniensis	yellow birch	Betulaceae
Cornus amomum	silky dogwood	Cornaceae
Fagus grandifolia	American beech	Fagaceae
Picea rubens	red spruce	Pinaceae
Populus grandidentata	large-toothed aspen	Salicaceae
Prunus serotina	black cherry	Rosaceae
Tilia americana	basswood	Malvaceae
Viburnum lentago	nannyberry	Adoxaceae
Viburnum nudum	wild raisin	Adoxaceae
Herbs and others		
Actaea pachypoda	doll's-eyes baneberry	Ranunculaceae
Actaea rubra	red baneberry	Ranunculaceae
Adiantum pedatum	northern maidenhair	Pteridaceae
Agrimonia gryposepala	common agrimony	Rosaceae
Anemone acutiloba	sharp-lobed hepatica	Ranunculaceae
Antennaria plantaginifolia	plantain-leaved pussy-toes	Asteraceae
Aquilegia vulgaris	garden columbine	Ranunculaceae
Aralia nudicaulis	wild sarsaparilla	Araliaceae
Arctium lappa	great burdock	Asteraceae
Arisaema triphyllum var. triphyllum	Jack-in-the-pulpit	Araceae
Asarum canadense	wild ginger	Aristolochiaceae
Brachyelytrum erectum	shorthusk	Poaceae
Cardamine diphylla	common toothwort	Brassicaceae
Carex deflexa	northern sedge	Cyperaceae
Carex gracillima	slender sedge	Cyperaceae
Carex hirtifolia	hairy-leaved sedge	Cyperaceae
Carex intumescens	swollen sedge	Cyperaceae
Carex plantaginea	plantain-leaved sedge	Cyperaceae
Carex rosea	rosy sedge	Cyperaceae
Carex scabrata	rough sedge	Cyperaceae
Caulophyllum thalictroides	blue cohosh	Berberidaceae
Chelone glabra	turtlehead	Plantaginaceae
Coptis trifolia	goldthread	Ranunculaceae
Cornus alternifolia	alternate-leaved dogwood	Cornaceae
Corylus cornuta	beaked hazelnut	Betulaceae
Cystopteris tenuis	slender fragile fern	Cystopteridaceae

Dennstaedtia punctilobula	hay-scented fern	Dennstaedtiaceae
Deparia acrostichoides	silvery glade fern	Athyriaceae
Dicentra cucullaria	Dutchman's-breeches	Papaveraceae
Dryopteris campyloptera	mountain woodfern	Dryopteridaceae
Dryopteris goldiana	Goldie's fern	Dryopteridaceae
Dryopteris intermedia	intermediate woodfern	Dryopteridaceae
Equisetum arvense	field horsetail	Equisetaceae
Equisetum scirpoides	dwarf scouring-rush	Equisetaceae
Erigeron philadelphicus	Philadelphia fleabane	Asteraceae
Erigeron pulchellus	Robin's-plantain	Asteraceae
Geum canadense	white avens	Rosaceae
Geum rivale	purple avens	Rosaceae
Gymnocarpium dryopteris	oak fern	Cystopteridaceae
Hieracium sp.	hawkweed	Asteraceae
Homalosorus pycnocarpos	glade fern	Diplaziosidaceae
Hydrophyllum virginianum	Virginia waterleaf	Boraginaceae
Impatiens capensis	common jewelweed	Balsaminaceae
Impatiens pallida	pale jewelweed	Balsaminaceae
Laportea canadensis	wood nettle	Urticaceae
Lychnis flos-cuculi	ragged robin	Caryophyllaceae
Maianthemum racemosum	false Solomon's-seal	Amaryllidaceae
Medeola virginiana	Indian cucumber-root	Liliaceae
Milium effusum	wild millet	Poaceae
Onoclea sensibilis	sensitive fern	Onocleaceae
Osmunda claytoniana	interrupted fern	Osmundaceae
Panax trifolius	dwarf ginseng	Araliaceae
Phegopteris connectilis	long beech fern	Thelypteridaceae
Poa pratensis	Kentucky bluegrass	Poaceae
Polygonatum pubescens	common Solomon's-seal	Amaryllidaceae
Polystichum acrostichoides	christmas fern	Dryopteridaceae
Ranunculus abortivus	kidney-leaved crowfoot	Ranunculaceae
Ranunculus acris	common buttercup	Ranunculaceae
Ranunculus repens	creeping buttercup	Ranunculaceae
Rubus odoratus	flowering raspberry	Rosaceae
Rubus pubescens	dwarf raspberry	Rosaceae
Rumex crispus	curly dock	Polygonaceae
Sambucus racemosa	red-berried elder	Adoxaceae
Sanicula marilandica	black snakeroot	Apiaceae
Sisyrinchium angustifolium	blue-eyed grass	Iridaceae
Solidago flexicaulis	zig-zag goldenrod	Asteraceae
Spinulum annotinum	stiff clubmoss	Lycopodiaceae
Symphyotrichum cordifolium	heart-leaved aster	Asteraceae
Symphyotrichum lateriflorum	calico aster	Asteraceae
Symphyotrichum puniceum	red-stemmed aster	Asteraceae
Taraxacum officinale	common dandelion	Asteraceae

Thalictrum pubescens	tall meadow-rue	Ranunculaceae
Tiarella cordifolia	foam flower	Saxifragaceae
Trillium erectum	red trillium	Melanthiaceae
Uvularia sessilifolia	wild-oats	Colchicaceae
Veronica officinalis	common speedwell	Plantaginaceae
Viola canadensis	Canada violet	Violaceae
Viola labradorica	dog violet	Violaceae
Viola pubescens var. scabriuscula	stemmed yellow violet	Violaceae
Zizia aurea	golden Alexanders	Apiaceae

Lord's Hill Natural Area, Marshfield

Scientific Name	**Common Name**	**Family**
Trees and Shrubs		
Abies balsamea	balsam fir	Pinaceae
Acer pensylvanicum	striped maple	Anacardiaceae
Acer saccharum	sugar maple	Anacardiaceae
Betula alleghaniensis	yellow birch	Betulaceae
Betula papyrifera	paper birch	Betulaceae
Fagus grandifolia	American beech	Fagaceae
Oryzopsis asperifolia	mountain rice-grass	Poaceae
Ostrya virginiana	hop-hornbeam	Betulaceae
Picea rubens	red spruce	Pinaceae
Prunus serotina	black cherry	Rosaceae
Quercus rubra	red oak	Fagaceae
Ribes hirtellum	smooth gooseberry	Grossulariaceae
Rubus pubescens	dwarf raspberry	Rosaceae
Tilia americana	basswood	Malvaceae
Tsuga canadensis	eastern hemlock	Pinaceae
Herbs and others		
Actaea pachypoda	doll's-eyes baneberry	Ranunculaceae
Aralia nudicaulis	wild sarsaparilla	Araliaceae
Arisaema triphyllum	Jack-in-the-pulpit	Araceae
Athyrium filix-femina	lady fern	Athyriaceae
Botrychium simplex	least moonwort	Ophioglossaceae
Carex debilis	weak sedge	Cyperaceae
Caulophyllum thalictroides	blue cohosh	Berberidaceae
Circaea alpina	dwarf enchanter's nightshade	Onagraceae
Dennstaedtia punctilobula	hay-scented fern	Dennstaedtiaceae
Dryopteris carthusiana	spinulose woodfern	Dryopteridaceae
Dryopteris intermedia	intermediate woodfern	Dryopteridaceae
Epipactis helleborine	helleborine	Orchidaceae
Geranium robertianum	herb robert	Geraniaceae
Glyceria striata	fowl manna grass	Poaceae
Gymnocarpium dryopteris	oak fern	Cystopteridaceae
Impatiens capensis	common jewelweed	Balsaminaceae

Laportea canadensis	wood nettle	Urticaceae
Maianthemum canadense	false lily-of-the-valley	Amaryllidaceae
Medeola virginiana	Indian cucumber-root	Liliaceae
Monotropa uniflora	Indian pipe	Ericaceae
Nabalus altissimus	tall white lettuce	Asteraceae
Oclemena acuminata	whorled wood aster	Asteraceae
Osmunda claytoniana	interrupted fern	Osmundaceae
Oxalis montana	wood-sorrel	Oxalidaceae
Phegopteris connectilis	long beech fern	Thelypteridaceae
Polystichum acrostichoides	christmas fern	Dryopteridaceae
Polygonatum pubescens	common Solomon's-seal	Amaryllidaceae
Ranunculus abortivus	kidney-leaved crowfoot	Ranunculaceae
Ranunculus recurvatus	hooked crowfoot	Ranunculaceae
Streptopus lanceolatus	rosy twisted-stalk	Liliaceae
Tiarella cordifolia	foam flower	Saxifragaceae
Trillium erectum	red trillium	Melanthiaceae
Uvularia sessilifolia	wild-oats	Colchicaceae
Viola canadensis	Canada violet	Violaceae
Viola rotundifolia	early yellow violet	Violaceae

Owl's Head Natural Area, Groton State Forest, Marshfield/Groton

Scientific Name	**Common Name**	**Family**
Trees and Shrubs		
Abies balsamea	balsam fir	Pinaceae
Acer pensylvanicum	striped maple	Anacardiaceae
Acer rubrum	red maple	Anacardiaceae
Acer saccharum	sugar maple	Anacardiaceae
Acer spicatum	mountain maple	Anacardiaceae
Aronia melanocarpa	black chokeberry	Rosaceae
Amelanchier laevis	common shadbush	Rosaceae
Betula papyrifera	paper birch	Betulaceae
Cornus canadensis	bunchberry	Cornaceae
Diervilla lonicera	dwarf bush-honeysuckle	Caprifoliaceae
Fagus grandifolia	American beech	Fagaceae
Fraxinus americana	white ash	Oleaceae
Lonicera canadensis	American fly-honeysuckle	Caprifoliaceae
Picea rubens	red spruce	Pinaceae
Pinus strobus	white pine	Pinaceae
Populus grandidentata	large-toothed aspen	Salicaceae
Salix humilis	small willow	Salicaceae
Sorbus americana	American mountain ash	Rosaceae
Vaccinium myrtilloides	velvet-leaved blueberry	Ericaceae
Viburnum lantanoides	hobble-bush	Adoxaceae
Herbs and others		
Apocynum androsaemifolium	spreading dogbane	Apocynaceae

Aralia nudicaulis	wild sarsaparilla	Araliaceae
Carex tonsa var. rugosperma	shaven sedge	Cyperaceae
Clintonia borealis	bluebead lily	Liliaceae
Cypripedium acaule	moccasin flower	Orchidaceae
Danthonia spicata	poverty-oats	Poaceae
Deschampsia flexuosa	common hairgrass	Poaceae
Erigeron pulchellus	Robin's-plantain	Asteraceae
Oclemena acuminata	whorled wood aster	Asteraceae
Pilosella caespitosa	yellow king devil	Asteraceae
Poa compressa	Canada bluegrass	Poaceae
Pyrola elliptica	shinleaf	Ericaceae
Sibbaldia tridentata	three-toothed cinquefoil	Rosaceae
Solidago juncea	early goldenrod	Asteraceae
Solidago puberula	downy goldenrod	Asteraceae
Streptopus lanceolatus	rosy twisted-stalk	Liliaceae

Kettle Pond, Groton State Forest, Marshfield/Groton

Scientific Name	**Common Name**	**Family**
Trees and Shrubs		
Acer rubrum	red maple	Anacardiaceae
Acer spicatum	mountain maple	Anacardiaceae
Alnus incana	gray alder	Betulaceae
Abies balsamea	balsam fir	Pinaceae
Aronia melanocarpa	black chokeberry	Rosaceae
Betula alleghaniensis	yellow birch	Betulaceae
Betula papyrifera	paper birch	Betulaceae
Chamaedaphne calyculata	leatherleaf	Ericaceae
Fagus grandifolia	American beech	Fagaceae
Fraxinus americana	white ash	Oleaceae
Kalmia angustifolia	sheep laurel	Ericaceae
Picea rubens	red spruce	Pinaceae
Prunus virginiana	choke cherry	Rosaceae
Rhododendron groenlandicum	labrador tea	Ericaceae
Rhododendron maximum	great laurel	Ericaceae
Rubus allegheniensis	common highbush blackberry	Rosaceae
Spiraea alba	meadowsweet	Rosaceae
Vaccinium myrtilloides	velvet-leaved blueberry	Ericaceae
Viburnum lantanoides	hobble-bush	Adoxaceae
Viburnum nudum var. cassinoides	wild raisin	Adoxaceae
Herbs and others		
Aralia nudicaulis	wild sarsaparilla	Araliaceae
Clintonia borealis	bluebead lily	Liliaceae
Coptis trifolia	goldthread	Ranunculaceae
Cornus canadensis	bunchberry	Cornaceae
Doellingeria umbellata	tall white aster	Asteraceae

Dryopteris carthusiana	spinulose woodfern	Dryopteridaceae
Dryopteris intermedia	intermediate woodfern	Dryopteridaceae
Epipactis helleborine	helleborine	Orchidaceae
Gaultheria hispidula	creeping snowberry	Ericaceae
Glyceria striata	fowl manna grass	Poaceae
Maianthemum canadense	false lily-of-the-valley	Amaryllidaceae
Medeola virginiana	Indian cucumber-root	Liliaceae
Oclemena acuminata	whorled wood aster	Asteraceae
Osmundastrum cinnamomeum	cinnamon fern	Osmundaceae
Pteridium aquilinum	bracken	Dennstaedtiaceae
Pyrola elliptica	shinleaf	Ericaceae
Solidago gigantea	large goldenrod	Asteraceae
Symphyotrichum puniceum	red-stemmed aster	Asteraceae
Trillium undulatum	painted trillium	Melanthiaceae

Chickering Bog NA, Calais

Scientific Name	**Common Name**	**Family**
Main fen and smaller fen openings		
Alnus incana	gray alder	Betulaceae
Andromeda polifolia	bog-rosemary	Ericaceae
Aulacomnium palustre	moss	
Carex flava	yellow sedge	Cyperaceae
Carex intumescens	swollen sedge	Cyperaceae
Carex lasiocarpa	hairy-fuited sedge	Cyperaceae
Carex limosa	mud sedge	Cyperaceae
Comarum palustre	marsh cinquefoil	Rosaceae
Cornus sericea	red-osier dogwood	Cornaceae
Drosera rotundifolia	common sundew	Droseraceae
Dryopteris clintoniana	Clinton’s woodfern	Dryopteridaceae
Dryopteris cristata	crested woodfern	Dryopteridaceae
Geum rivale	purple avens	Rosaceae
Ilex verticillata	winterberry	Aquifoliaceae
Iris versicolor	blue flag	Iridaceae
Larix laricina	tamarack	Pinaceae
Lonicera villosa	mountain fly-honeysuckle	Caprifoliaceae
Menyanthes trifoliata	bog buckbean	Menyanthaceae
Myrica gale	sweet gale	Myricaceae
Nuphar variegata	common yellow pond-lily	Nymphaeaceae
Onoclea sensibilis	sensitive fern	Onocleaceae
Osmunda claytoniana	interrupted fern	Osmundaceae
Osmunda regalis	royal fern	Osmundaceae
Osmundastrum cinnamomeum	cinnamon fern	Osmundaceae
Rhododendron groenlandicum	labrador tea	Ericaceae
Rubus hispidus	bog dewberry	Rosaceae
Sarracenia purpurea	pitcher-plant	Sarraceniaceae

Solidago uliginosa	bog goldenrod	Asteraceae
Sphagnum warnstorfia	Peatmoss	
Thelypteris palustris	marsh fern	Thelypteridaceae
Thuja occidentalis	northern white cedar	Cupressaceae
Trichophorum alpinum	alpine cotton-grass	Cyperaceae
Utricularia cornuta	naked-stemmed bladderwort	Lentibulariaceae
Vaccinium oxycoccos	dwarf cranberry	Ericaceae
Seep		
Chrysosplenium americanum	water carpet	Saxifragaceae
Eupatorium perfoliatum	boneset	Asteraceae
Glyceria striata	fowl manna grass	Poaceae
Impatiens capensis	common jewelweed	Balsaminaceae
Onoclea sensibilis	sensitive fern	Onocleaceae
Viola cucullata	marsh blue violet	Violaceae
Rich Woods		
Adiantum pedatum	northern maidenhair	Pteridaceae
Acer saccharum	sugar maple	Anacardiaceae
Asarum canadense	wild ginger	Aristolochiaceae
Cystopteris bulbifera	bulblet bladder fern	Cystopteridaceae
Hydrophyllum virginianum	Virginia waterleaf	Boraginaceae
Osmunda claytoniana	interrupted fern	Osmundaceae
Ostrya virginiana	hop-hornbeam	Betulaceae
Pyrola elliptica	shinleaf	Ericaceae
Tilia americana	basswood	Malvaceae
Acid woods near the fen		
Abies balsamea	balsam fir	Pinaceae
Baszzania trilobata	liverwort	
Clintonia borealis	bluebead lily	Liliaceae
Coptis trifolia	goldthread	Ranunculaceae
Cypripedium acaule	moccasin flower	Orchidaceae
Ilex mucronata	mountain holly	Aquifoliaceae
Linnaea borealis	twin-flower	Caprifoliaceae
Medeola virginiana	Indian cucumber-root	Liliaceae
Mitchella repens	partridge-berry	Rubiaceae
Oclemena acuminata	whorled wood aster	Asteraceae
Picea rubens	red spruce	Pinaceae
Pleurozium schreberi	moss	

Special thanks to the Field Trip Leaders for excellent guidance:
West Trip Friday, June 19 – Eric Sorenson, Community Ecologist, VT Fish & Wildlife
Saturday, June 20 – Annie Reed, Botanist/Ecologist
East Trip Friday, June 19 – Brett Engstrom, Winooski Field Naturalist and Ecologist
Saturday, June 20 – Everett Marshall, Natural Heritage Information Manager, VT F&W