JOINT BULLETIN No. 8

# Vermont Botanical and Bird Clubs

OCTOBER, 1922

Published Annually by the Clubs

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# VERMONT BOTANICAL AND BIRD CLUBS

**Joint Bulletin No. 8** **October, 1922**

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### Botanical Club

PRESIDENT.....Dr. Ezra Brainerd, Middlebury
VICE-PRESIDENT.....Harold G. Rugg, Hanover, N. H.
SECRETARY-TREASURER.....Mrs. Nellie F. Flynn, Burlington
LIBRARIAN.....Lewis H. Flint, Burlington
EDITOR.....George L. Kirk, Rutland

### Bird Club

PRESIDENT.....Dr. H. F. Perkins, Burlington
VICE-PRESIDENT.....Dr. Anne Perkins, Collins, N. Y.
SECRETARY-TREASURER.....Mrs. Nellie F. Flynn, Burlington
EDITOR.....George L. Kirk, Rutland

## EDITORIAL

The plan of issuing the BULLETIN in the spring has been done away with and hereafter it will appear annually in October. This change was brought about by discontinuance of the winter meeting, when all papers were formerly presented and business sessions held. For the present, at least, only one meeting will be held each year, in the summer, and the time will be given up to both field work and an indoors program which will permit the reporting of "finds," discussions and the presentation of articles on natural history.

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There is urgent need of more matter for publication in the BULLETIN. The organ is issued for the benefit of the members that each may know what the other is doing in adding to the knowledge of the flora and fauna of the State, for the publication of local lists and any other items that show progress along the lines of the clubs' endeavors. Suggestions for intensive study are especially desirable. The BULLETIN belongs to the members and it is for them to say whether it shall consist of few or many pages. There are ample funds to issue a much larger BULLETIN than we are now putting out if the material is furnished.

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## SECRETARY'S REPORT

*Nellie F. Flynn*

### Report of Meetings

A business and field meeting of the Vermont Botanical Club and the Vermont Bird Club was held at Willoughby Lake in July, 1921, with 33 members present. In the absence of the president, Dana S. Carpenter of Middletown Springs was elected chairman and Dr. George P. Burns, Burlington, secretary *pro tem.*

After a full discussion of the matter of meetings, it was voted not to hold a winter meeting in 1922, but to combine the winter and summer sessions, the members presenting at the July gathering papers

which were formerly the feature of the winter meetings. The secretary was asked to arrange the program.

Invitations were received from a number of towns for the summer outing of 1922. It was finally decided to go to Montgomery. The chairman appointed a committee consisting of the secretary, Mrs. L. Frances Jolley of Berkshire, Miss Mary Gates and Prof. George P. Burns of Burlington to make arrangements. A program committee was also named, consisting of Mrs. Flynn, Harold G. Rugg of Hanover, N. H., and Miss Inez Addie Howe of St. Johnsbury.

Miss E. M. Kittredge urged the immediate revision of the State Flora and it was voted to appoint a committee to have charge of this work. This committee shall consist of five members, who shall have general supervision of the work and they may appoint as many district leaders as they see fit. Mrs. Flynn is the general chairman.

The matter of organic union of the Bird and Botanical Clubs was again considered and it was voted to request the secretary to write to the life members and get their opinions on the matter, reporting at the next meeting.

It was voted that notice be given of an increase in dues from 50 cents to $1 a year.

Several persons were elected to membership.

## Montgomery Meeting

The field and business meeting of the Vermont Botanical Club and the Vermont Bird Club at Montgomery in July, 1922, was called to order by President Ezra Brainerd with 18 members in attendance. The minutes of the 1921 meeting were read and approved. The question of uniting the two clubs was taken up and Mrs. Nellie F. Flynn read opinions on the subject given by life members, on request.

It was voted to keep the clubs separate.

A nominating committee, consisting of Prof. George P. Burns of Burlington and Mrs. Elizabeth B. Davenport of Brattleboro presented the following names of officers for the two clubs and they were elected.

BOTANICAL CLUB:

President, Dr. Ezra Brainerd, Middlebury.
Vice-President, Harold G. Rugg, Hanover, N. H.
Secretary-Treasurer, Mrs. Nellie F. Flynn, Burlington.
Librarian, Lewis H. Flint, Burlington.
Editor, George L. Kirk, Rutland.

BIRD CLUB:

President, Dr. H. F. Perkins, Burlington.
Vice-President, Dr. Anne Perkins, Collins, N. Y.
Secretary-Treasurer, Mrs. Nellie F. Flynn, Burlington.
Editor, George L. Kirk, Rutland.

The report of the treasurer was read and approved. It was voted that the summer meeting of 1923 be held at Bread Loaf Inn, Ripton, and at Middlebury, assembling, probably, June 29, and that an invitation be extended to the National Ornithological Club and the Brookline Bird Club of Massachusetts to meet with the Vermont Clubs.

Mrs. Davenport and Dr. Burns voiced the enthusiastic appreciation of Dr. Brainerd's work on "The Violets of North America" and its free distribution by the State Agricultural College of the University of Vermont.

The following papers were read: "Plants of My European Trip," Mrs. Nellie F. Flynn; "Notes on Plants at Collins, N. Y.," Dr. Anne Perkins. Others were read by title, some coming too late to be given before the meeting. All of these will appear in the BULLETIN.

## Bird List

Dr. Anne Perkins and others reported that the following birds were observed during the Montgomery outing:

Spotted sandpiper, ruffed grouse, red-tailed hawk, barred owl, kingfisher, hairy woodpecker, downy woodpecker, yellow-bellied sapsucker, flicker, whip-poor-will, chimney swift, hummingbird, kingbird, phoebe, olive-sided flycatcher, wood pewee, alder flycatcher, chebec, blue jay, American crow, bobolink, cowbird, red-winged blackbird, meadowlark, bronzed grackle, purple finch, English sparrow, goldfinch, vesper sparrow, Savannah sparrow, white-throated sparrow, chipping sparrow, field sparrow, slate colored junco, song sparrow, swamp sparrow, rose-breasted grosbeak, indigo bunting, scarlet tanager, cliff swallow, barn swallow, tree swallow, bank swallow, cedar waxwing, red-eyed vireo, warbling vireo, blue-headed vireo, Nashville warbler, Tennessee warbler, parula warbler, yellow warbler, black-throated blue warbler, myrtle warbler, magnolia warbler, chestnut-sided warbler, black-throated green warbler, pine warbler, ovenbird, mourning warbler, Maryland yellowthroat, Canadian warbler, redstart, catbird, house wren, winter wren, black-capped chickadee, wood thrush, veery, olive-backed thrush, hermit thrush, robin, bluebird.

# TREASURER'S REPORT

*Nellie F. Flynn*

## Botanical Club

RECEIPTS

| | |
|---|---|
| Cash on hand, January 1, 1921 | $ 97.53 |
| Dues | 123.41 |
| Club pins | 1.30 |
| Bulletins | .50 |
| | $222.74 |

EXPENDITURES

| | |
|---|---|
| Half printing bill, Bulletin 7 | $ 43.20 |
| Postage | 12.08 |
| Printing notices, etc. | 5.38 |
| Subscription, Rhodora, two years | 4.00 |
| Half dues, N. E. F. of N. H. S., two years | 3.00 |
| Dues Wild Flower Preservation Society | 1.00 |
| Half typewriting bill, Bulletin | 2.00 |
| Stationery | .91 |
| | $ 71.57 |
| Cash July 10, 1922 | 151.17 |
| | $222.74 |

| | |
|---|---|
| Deposited in Chittenden County Trust Company Savings Department | $100.00 |
| Life membership fund | 150.00 |
| Accrued interest | 58.00 |

## Bird Club

RECEIPTS

| | |
|---|---|
| Cash January 1, 1921 | $ 33.85 |
| Dues | 81.50 |
| Bulletins | .50 |
| | $115.85 |

EXPENDITURES

| | |
|---|---|
| Half printing bill, Bulletin 7 | $ 43.20 |
| Postage | 9.80 |
| Dues National Audubon Association | 5.00 |
| Printing notices, etc. | 5.37 |
| Half dues, N. E. F. of N. H. S., two years | 3.00 |
| Half typewriting, Bulletin | 2.00 |
| Stationery | .91 |
| | $ 69.28 |
| Cash July 10, 1922 | 46.57 |
| | $115.85 |
| Life membership fund | $ 30.00 |
| Accrued interest | 13.18 |

## BOTANICAL AND BIRD CLUBS AT LAKE WILLOUGHBY

*Inez Addie Howe*

It was on the afternoon of July 4, 1921, that delegates to the number of 30 from the Vermont Botanical and Bird Clubs assembled at the Gilman Cottage on the shores of Lake Willoughby for their annual field meeting. It was a free and easy camping party of whole-souled men and women who so genuinely love everything that is beautiful in nature that this outing meant four days of intensest delight as well as four days of scientific investigation of great value to Vermont.

It was our aim to miss no opportunities, so on the morning of July 5th at 4.30 the bird enthusiasts were abroad despite the protests of those who wished an additional "forty winks." During this trip and those that followed 63 species of birds were observed, many of them rare warblers that love to nest at high altitudes.

The trip planned for this day was to the famous Long Pond region which was reached by an easy walk of two miles over very good roads, the sides of which abounded in rare ferns and orchids as well as the commoner plants. After exploring the vicinity of the pond and

looking at large-leaved orchis, coralroot, twayblades, and several species of rattlesnake plantains, listening to the songs of six different warblers at once, to say nothing of the exclamations of each of our party when some new treasure appeared, we decided to return to the shores of the pond for our basket lunch supplemented by hot coffee, very graciously served by Mr. and Mrs. Carpenter, who were travelling with camping outfit, complete. On assembling for lunch we were joined by W. W. Eggleston of Washington, D. C., who was one of the founders of the Vermont Botanical Club, 25 years ago. After dinner we were photographed by one of the "bunch" and then decided to take the hike over the old "County Road" back to the cottage. A walk of several miles along a road bordered by Braun's holly and dilate spinulose ferns, luxuriant in the extreme, brought us to the "County Road," long since unused as a highway, and overgrown with grateful shade, but carpeted with ferns and flowers, rare and beautiful. At five p. m. we reached the cottage after a 12-mile walk as tired, dusty, happy and hungry as only a party of field naturalists can be. With "just time to dress for dinner," which meant, in our cases simply clean faces and clean clothes, the jolliest of parties assembled to partake of a hearty and toothsome dinner, prepared by Mrs. Wheeler of Westmore, who catered for us, making our experience truly "Camping de luxe."

The Vermont Botanical Club stands for plant protection as well as for plant study, so the most of our specimens which we brought away were some that are needed to complete some really valuable herbaria, not a ruthless collection of rare plants that should have been left for posterity to study.

On Wednesday, July 6th, it was voted to climb the slides, to the "Garden of Eden," just at the foot of the cliffs on Mt. Pisgah. The morning was smoky and humid, so that a climb to the summit was not considered profitable. The ascent to the cliffs was strenuous, but the rare little ferns, and saxifrages nestling among them, more than repaid the effort. After the descent had been made we lunched at the famous Boulders Tea House, then explored the marl bogs south of the lake. This was an afternoon long to be remembered.

At dinner all save one unsuspecting lady were bubbling with mirth, for word had been passed to our hostess that it was "Somebody's" birthday. Accordingly when dessert was served and the telltale birthday cake, with the requisite number of chocolate creams resting in its frosting, in lieu of candles, was brought in, the secret was out and congratulations and best wishes were in order.

But all things have an end, and the birthday party abruptly adjourned to the porch and lawn, where a formal business meeting was held. At this session it was voted to consolidate the summer and winter meetings of the clubs and to hold one annual meeting in July of each year.

The extreme heat of Thursday, July 7th, somewhat abridged the explorations of the party, although some good work was done in the bogs and swamps at the north end of the lake.

On Friday morning it was voted to break camp as many of our party were obliged to leave on that day.

The summer meeting of 1921 will go down in the history of the clubs as one of the best. Much of the success of the occasion was due to the expert guidance of Mr. E. J. Winslow, who knows the region of Lake Willoughby as well as he knows the ferns of New England. When reports are all in from each individual's work, substantial additions to the Willoughby Flora will have been made.

But better than all of this, 30 members went to their homes the better citizens for the week's intercourse with nature, face to face, and for the bonds of human love and sympathy that are always cemented more closely, by such a convention of kindred spirits.—From *The Vermonter.*

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## SUMMER MEETING OF 1922

*Nellie F. Flynn*

The summer meeting of 1922 was held at Montgomery Center with an attendance of about 25.

The first day's trip was from Montgomery to Eden through Avery's Gore and Belvidere and back to Montgomery through Hazen's Notch, stopping on the way at the numerous ponds, swamps and boggy places to collect the interesting plants growing there.

After eating our lunch at the foot of Belvidere Mountain we climbed to the asbestos mine to see the particular object of the trip, the new variety of maidenhair fern, *Adiantum pedatum* var. *aleuticum.* This is the first station for this fern in Vermont and also the first in the United States. An account of its discovery here is given elsewhere in this BULLETIN by the finder, Mrs. L. Frances Jolley. It was first seen in eastern North America on Mt. Albert in the Gaspé penin-

sula and occurs in the Selkirks and on Vancouver Island. In these places it is on serpentine rock, and a professor of geology tells me that asbestos is derived from serpentine rock.

This station on Belvidere Mountain may be destroyed at no distant day as they are mining the asbestos rock for commercial purposes.

The second day's trip was to Hazen's Notch between Lowell Mountain and Montgomery Mountain. The frowning cliffs, almost perpendicular on the notch side, kept the majority of the party from the climb to the top of Montgomery Mountain, but two of the party did it from another direction and came back with one of the mountain saxifrages, *Saxifraga Aizoon* and *Clematis verticillaris*. The rest of us, made lazy by the heat, wandered around in a rather small area, but found Braun's holly fern, *Polystichum Braunii*, and the maidenhair spleenwort, *Asplenium Trichomanes* in the rocky woods, and strangest of all the sweet William, *Dianthus barbatus*, in the woods not far from the road. We looked around for signs of an old habitation but found nothing except a few stones that looked as if the hand of man had once thrown them together for some purpose. This plant is very persistent, as I know of a place where no one has lived for 25 years where it still grows and blooms along with *Artemisia pontica*.

The third day opened with rain and it was afternoon before we could get out to explore. We went to Black Falls, but nothing noteworthy was found. A few stopped at the station for *Polypodium vulgare* var. *cambricum*. This fern as lately shown by Prof. M. L. Fernald in Rhodora for July, 1922, should be called *Polypodium virginianum* L. forma *bipinnatifidum* Fernald.

While this meeting was not as productive of new plants as some we have had, the new maidenhair fern makes up for that and at least we now know something of what is to be found in this territory.

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## THE REVISION OF THE VERMONT FLORA

*Nellie F. Flynn*

The writer was appointed chairman of a committee to revise the Vermont Flora and Dr. Ezra Brainerd of Middlebury, Dr. George P. Burns of Burlington, Dana S. Carpenter of Middletown Springs and Harold G. Rugg of Hanover, N. H., have been chosen as the other

members of the committee. The following are named as sub-chairmen with power to appoint their own local committees:

Mrs. Elizabeth B. Davenport, Brattleboro; Harry C. Ridlon, Bennington; George L. Kirk, Rutland; Mrs. L. Frances Jolley, Berkshire; Miss Elsie M. Kittredge, Proctor; Miss Inez Addie Howe, St. Johnsbury; Mrs. Carrie E. Straw, Stowe; Jay G. Underwood, Hartland; Mrs. Mabel S. Heselton, Taftsville.

We want this State Flora to be accurate, above all, and at the same time to be as complete as possible. It is not probable that it can be printed for about five years and that time will give every opportunity to gain the desired end.

I wish that those members who feel that they can do so would send 25 cents to Miss Mary A. Day, Gray Herbarium, Cambridge, Mass., for a check list of Gray's Manual. In this all plants found in Vermont may be checked. Every plant checked must have an herbarium specimen back of it, in either a public or private collection. There have been many new species and varieties recognized since the seventh edition of Gray's Manual appeared and a list of these will, it is hoped, be ready for the next BULLETIN. Let every member of the club do his part in making this new Flora accurate and complete.

I am sure that Charles A. Weatherby, 11 Wells Avenue, East Hartford, Conn., or Dr. B. L. Robinson, 3 Clement Circle, Cambridge, Mass., will be willing to help verify doubtful plants.

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## NESTING OF THE VIRGINIA AND SORA RAILS IN WINDSOR COUNTY, VERMONT

*Karl A. Pember*

The collecting of bird's eggs first interested me as a boy back in the early nineties. I made the usual boy collection of that period along with the other lads of the neighborhood, but kept at it longer and became interested in the subject not only as a pastime but as an enjoyable scientific study. I have been at it intermittently ever since and now have a collection big enough to be of considerable interest and scientific value. Recently I have gone at it still harder, specializing in different species from time to time. One of my boyhood friends has accompanied me more or less along these lines.

At the beginning of a recent attack of this collecting fever I took considerable interest in obtaining a good representative series of eggs of the red-winged blackbird. This bird being fairly common and its eggs showing wide variation, the result was quite successful and led to other matters along zoological lines as you shall see.

In the search for locations of red-wings' nests my friend and I were discussing where to try next, and he remarked incidentally that 30 years before a small boy had brought him a hat-full of rail's eggs, which he claimed to have found in a small swamp near Hartland. This looked encouraging to us for both red-wings and rails, and so we went to the locality. The finding of the small swamp was not so easy as might have been expected. Neither of us had ever been there before and the information was 30 years old and rather sketchy. Finally, however, we found the swamp typically located in a rolling meadow and not more than 200 feet long and 100 wide. Upon our approach about a dozen red-wings started into the air with their usual clatter and assured us of a chance to examine some of their nests, at least. In fact, we found five red-wings' nests, each containing from one to five young birds.

This was all well enough so far as it went; but we were anxious to solve the rail problem and made a careful search of the whole swamp with this in mind. The reward was a nest containing one addled egg of the Virginia rail. As we gathered about the nest strange squawking noises greeted us and later a glimpse or two of the funny little rails dodging here and there among the reeds. My first impression was of a lively little toy duck swimming about. There appeared to be only one pair of rails breeding here and this condition had doubtless obtained for upwards of 30 years. We watched these strange, shy little birds for a short time, but refrained from disturbing them much for fear that they wouldn't come back the next season.

Within a few miles of this swamp is a larger one covering nearly 20 acres. We visited this and found in it countless red-wings' nests in all stages, from incomplete nests to those containing well fledged young. This swamp, situated about 500 feet from a main highway and quite near a village, is composed of large areas of tussock grass growing in from one to four feet of water and furnishing most uncertain footing. These areas are interspersed with small tracts of low-growing bushes, with here and there a bit of open water. A great confusion of sounds accompanied us through the swamp as frogs, red-wings, swamp sparrows, rails and possibly other creatures were dis-

NEST AND EGGS OF THE VIRGINIA RAIL—WINDSOR COUNTY, VERMONT.
(Reed canopy pulled aside to show eggs.)
*Photographed by Karl A. Pember, 1920.*

turbed by our unexpected and unwelcome, not to say splashy and uncertain, progress.

Near the place of our entrance we found an empty rail's nest with egg shells scattered about below it. This was on May 25th, and it seemed probable that some bird or animal had dined here rather than that young birds had hatched and departed. During the hunt we located nine rails' nests—six Virginias and three soras—containing from eight to 12 eggs each, slightly incubated.

The nests were, in some instances, of dry cat-tail rushes bent down to form a shallow cupped platform canopied over with the same material; in others, they were on bunches of tussock grass and of similar design. All were difficult to find, being so well hidden that one might stand almost within reach of the eggs and not see them without the most diligent search. Then, too, the birds either slipped off their nests long before we came near or darted away from almost under our feet and vanished immediately, thus rendering discovery of the nests by flushing the bird most uncertain. We marked each nest as we located it so that we could choose the best sets of eggs from the total find without needlessly disturbing any.

Later in the afternoon we went the rounds again to collect the chosen sets; but had considerable difficulty in re-locating the last one and were diligently hunting over the immediate vicinity when, just as I was about to step from one tussock to another, a rail flushed from almost under my foot and I, somewhat startled, just missed stepping into a nice little Virginia rail's nest containing 11 eggs; but didn't miss going splash into the water and getting thoroughly soaked! Thus the imperfect end of a perfect day and the opportunity for the critic to say, "Good enough for you, egg-robber!"

I have visited both swamps since and found only a single sora in the small swamp, and numerous nests of the Virginia in the large one, but no further sora's nests.

No one would suspect the presence of rails in either of these swamps, except perhaps by reason of the nature of the terrain. Only by careful search may one find any sign of the birds, so quiet are they and so craftily expert in keeping out of sight and hiding their nests. I believe these birds are said to have a variety of call-notes, but I have rarely heard them; and then only when in the close vicinity of their nests. Suddenly from out the tangle of marsh grass and reeds may come a short, disgusted sounding "chuck"; a squawk, with rising

inflection; or a low chuckle; and these together with other indescribable squeaks, quavers and chudderings, I attribute to the rails.

We probably found only a small part of the nests that this large swamp actually contained, those that we did find being so cunningly camouflaged. They ranged from six to 16 inches above water level and were placed near the edge of the swamp rather than toward the middle.

Such eggs of the Virginia rail as I have seen show a ground color of light buff or dirty cream color, while those of the soras were light tan. The Virginia's eggs remind me of a small edition of the Florida gallinule and the spots are smaller than those on the sora's eggs. Also the Virginia's are shorter and blunter than the more elongated eggs of the sora.

We found a number of nests of the swamp sparrow, some in the tussock grass and others in the bushes. All contained beautifully marked eggs, more heavily blotched than usual.

Altogether it is most desirable to slosh about in such a swamp with the alluring hope and anticipation of the next possible find; but, although I have thus sloshed about in a goodly number of swamps hereabouts, I have found no rails in any other than those above described.

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## CHARLES C. FROST'S TRIP TO WILLOUGHBY MOUNTAIN

*W. W. Eggleston*

In November, 1852, John Lewis Russell published in the *Magazine of Horticulture* (18:481-485) the following account of Frost's visit, the latter part of July, 1852. Quite plainly railway travel was a new diversion and as much appreciated by the botanists of Frost's time as automobile travel is by present day botanists. It also seems that they had no through trains from Boston to Montreal at that time.

### Some of the Rarer Plants of Vermont

The substance of the following article I was kindly permitted to use by Rev. A. H. Clapp and Charles C. Frost of Brattleboro, who, in the latter part of the month of July, last, made an excursion to a re-

markable botanical region, in the neighborhood of Willoughby Lake, in quest of plants and other objects of interest. Deeming such information congenial to the spirit of your magazine, I have placed it at your disposal, as subserving the cause of botany and floriculture.

Have you ever heard of Willoughby Lake? If my reader says no, let me inform him that said Willoughby Lake is in the small township of Westmore, Vermont, 21 miles north of St. Johnsbury. St. Johnsbury is easily accessible from any quarter, but we were borne first along the Vermont Valley Railroad on the banks of the Connecticut, catching glimpses through the opening hills, on either hand, of such delightful bits of landscape as Fisher, or Brown or Cole would have loved to paint. An hour—and we were at Bellows' Falls, where, by delay of the Boston train, we indulged in admiration of the scenery adjacent, and of other noticeable subjects, until, admonished by the shrilly whistle of the time of departure we embarked on the Sullivan train, and off again through a succession of other delightful scenery, looking now down on quiet farms ornamented with the graceful elm side by side, yet in striking contrast, with the staid and proper maple—and now at Ascutney, with its sociable peaks, 3,100 feet high, wooded to the top, and seemingly sloping gently down into the plain, and so to Windsor. Hence, the Vermont Central Railroad enabled us to reach White River, where, by another railroad, *viz.*, the Connecticut and Passumpsic, we were transported to St. Johnsbury. The scenery has been changing its character, meanwhile, for these last 60 miles. Northeastward, the White Mountain range—elements of the grand mingling with the bewitching beauty of the nearer view.

Everybody knows what a wonderful and curiously contrived convenience a railroad is; and to him who would fain explore mountain streams or mountain lakes for the finny tribes, or, in no less exciting devotion, to flower hunting would engage, such modern innovations on the primitive style of forest traveling are, with all their injuries inflicted on Dame Nature, of an available commodity. We can easily imagine the delight which sprung up in the breast of one of our tourists, who, thus, in the brief space of a day's time, was rapidly approaching—not, my reader, the, but—a Garden of Eden—where the plants, if not the fruits, of tempting beauty, had almost wasted their charms and fragrance on the desert air. It were not necessary, then, to tell you of all the wonders to be seen about the last mentioned town, nor how there is a great factory, where one of the emblems of justice

is produced in vast quantity, nor how proverbial for thrift, industry, and morality the village is; for to reach Willoughby Lake, you must betake yourself, after due refreshment by bed and board, an' you like, to some vehicle which shall carry you through Lyndon. Emerging thence into the rural districts where good farms, well cultivated, and fine specimens of grazing cattle, engage your attention close at hand; while Burke Mountain, 3,500 feet high, of ever-changing, but ever noble outline, continually attracts your eye eastward. The first good view of the mountains between which the lake lies, is obtained about eight miles this side of it. On the east,, Pisgah or Annance, so named in the latter instance from a chief of the St. Francis tribe of Indians, its western face bare and rocky. Hor, on the west, presents a long tabular outline, sloping gently to the north, and dropping suddenly off to the northern and southern extremities. Ascending now a wooded slope, the height of land separating the tributaries of the Connecticut from those of the St. Lawrence, a scene of grandeur and of beauty opens upon you; the lake, of clear deep blue, calmly sleeping between its two overhanging sentinels—in the distance, Owl's Head, rising out of Memphremagog like a giant, keeping also its ceaseless watch over the region.

Once upon the bosom of the lake, you begin to appreciate the features of your locale. There you may glance your eye upwards from its waters on the perpendicular fronts of those two mountains, the eastern towering 1,950 feet, and the western one 1,500 feet, from where you are lying in your boat. Annance is the more striking object, however. Its base is wooded for about 600 feet; then a sheer precipice of slate rock for 800 feet, with a granite tower pushed through it, and perhaps 550 feet more of woodland crowns the whole. A cave on the east shore, just where the granite cloven foot of Annance steps down into the lake, bears the universally accepted if not acceptable name, wherever anything strange or mysterious is found, of Devil's Den; on the wet rocks in the entrance of which, some interesting lichen was detected by Mr. Frost—a Collèma, I presume.

It is by the aid of a road, and while opposite this place, that you must turn directly east up the mountain, on an angle of 40 degrees, and difficult of ascent from fallen trees, undergrowth, and, worse than all, branches of the white cedar. Would you enter the domains of Flora, in her modern Garden of Eden? Never mind, then, but crawl on for 500 or 600 feet, and you shall be more than repaid by coming

into an open field of five or six acres, clear of trees, a part of it overhung by the precipice, protected from the winds and storms—a natural conservatory. This is the flower garden. It was on this ascent that Mr. Frost felt himself entering a region of great botanical interest. The southwestern slope of Mount Annance he found covered with trees, principally *Thuja occidentalis* and *Cupressus thyoides*, as far upward as the 600 feet just mentioned. There was scarcely a rock or boulder to be seen. The surface consists of a rich black soil, and cold; and he found those plants which usually occur in such soils. The specimens were of unusual size and luxurance; *Clintonia borealis*, with leaves four to six times as large as are common, and with scapes having two or even four umbels. The beautiful mosses, *viz.*, *Hypnum splendens* and *Hypnum crista castrensis*, were of great extent. Passing these and arriving at the open field, nearly destitute of stones and grassy sod, the area was covered with flowers of almost innumerable kinds and colors. The declivity on which the "Garden" lies is much less than that of the rest of the mountain, and above it towers the precipice of naked rock, projecting in some places 20 or 30 feet, and affording by this feature, and by its crumbling character, both shelter and richness to the sea of flowers which grow at its base.

The region had been explored some years previous by Mr. Wood, a botanist of merit, and through whose remarkable discoveries there, our tourist was induced to visit the spot. Here Mr. Frost detected again the *Hedysarum boreale* (Nutt.), not known to exist in any other locality in the United States and which Professor Gray calls a "fine discovery," also *Saxifraga oppositifolia* and *Saxifraga aizoides!* Here, likewise, he collected the rare *Primula mistassinica* (Mx.) a veritable Primula, reader, bringing in a co-species, "the primrose by the river's brim" of Old England into a pleasant proximity with its representative of our dear New England. Would not some of our florists delight to have them growing together on some rich border of their gardens? Here, also, grew two sedges of some variety, *viz.*, *Carex scirpoidea* (found likewise on the Alpine summits of the White Mountains), and *Carex eburnea*, which we had previously noticed on the picturesque and rocky limestone banks of the Winooski. Here, lastly, among other treasures beside, occurred the very rare *Woodsia glabella*, a tiny fern of the Arctic regions—though found once before on the rocks about Little Falls, New York, as we learn through Gray's Botany, etc., p. 630.

The face of the precipice itself would be a fine place for rare

lichens, but the muddy surface of the constantly crumbling rock renders its approach very difficult. *Pteris atropurpurea*, a fern of much beauty, grew here; and with an undetermined species of *Collema*, two or three lichens, elsewhere noticed, occurred; as likewise on the same rock were seen *Arabis lyrata*, *Draba arabisans* and *Phaca Robbinsii*. Nor were any mosses noticed here—although elsewhere on the mountain, beside the two species before mentioned, were *Hypnum umbratum* and *Hypnum cupressiforme* in abundance, with several others.

The Gramineae found in the garden were *Lolium perenne*, *Danthonia spicata*, *Panicum nitidum* and *P. depauperatum*, *Muhlenbergia sylvatica*, *Calamagrostis canadensis*, and *Oryzopsis melanocarpa*.

Among the more common plants, 17 of them in flower, were the following, *viz.:*

*Achillaea millefolia*,
*Anemone cylindrica*,
*Anemone virginiana*,
*Antennaria margaritacea*,
*Apocynum hypericifolium*,
*Artemesia canadensis*,
*Asclepias cornuti*,
*Asclepias quadrifolia*,
*Campanula rotundifolia*,
*Circea alpina*,
*Clematis virginiana*,
*Cirsium lanceolatum*,
*Eupatorium ageratoides*,
*Eupatorium purpureum*,
*Fragraria virginiana*,
*Helianthemum canadense*,
*Lonicera ciliata*,
*Oenothera fruticosa*,
*Rosa blanda*,
*Rubus occidentalis*,
*Rubus odoratus*,
*Rubus strigosus*,
*Rubus triflorus*,
*Solidago corymbosus*,
*Solidago lanceolata*,
*Vitis cordifolia*.

As we have observed already, the above list contains but a part of what might be obtained by visiting the garden at the different seasons when the species make themselves conspicuous by flowering. Indeed, its geology and mineralogy present not a few unusual phases to excite and reward investigation. But a rich return is in store for the botanist, or for the lover as well as cultivator of our native plants, who shall make a thorough exploration of this Garden of Eden, and of its adjacent rock and mountain side.

C., F. and R.

Hingham, October 3, 1852.

# THOMPSON'S WILLOUGHBY LAKE GUIDE

*W. W. Eggleston*

Vermont naturalists as well as historians are immensely indebted to Zadock Thompson. Graduates of the University of Vermont and all other Vermonters have a right to be proud of his work. A sketch of his life and work ought to be prepared.

Brought up from boyhood on Thompson's Vermont History and with some knowledge of his other publications I received a most agreeable surprise recently in an old bookstore in New York when I found his Northern Guide. The first edition was published in 1845, three years after his History of Vermont. But it is with the second edition of the Northern Guide (1854) that we are interested now because this edition describes Willoughby Lake. The title page reads as follows:

NORTHERN GUIDE

LAKE GEORGE,
LAKE CHAMPLAIN,
MONTREAL AND QUEBEC,
GREEN AND WHITE MOUNTAINS,
AND
WILLOUGHBY LAKE,
WITH
MAPS AND TABLES OF DISTANCES.

By Z. THOMPSON,
*Author of History and Gazetteer of Vermont.*

BURLINGTON:
PUBLISHED BY S. B. NICHOLS,
1854.

On pages 36 to 38 is the following:

## "Willoughby Lake

"This lake, which has became a favorite place of resort for pleasure parties in the summer, is in the township of Westmore, Orleans County, Vermont. It is 5½ miles long, and from half a mile to 1½ miles wide. Its south end lies in a chasm between two granite mountains, the sides of which, facing each other, are nearly perpendicular, and about half a mile asunder. That on the east side is called *Pisgah*, and that on the west *Hor*. These names were given to the two summits long before there was any settlement in that part of the county, and there is no good reason why the former name should be supplanted by that of *Annance*, which some are endeavoring to substitute for it. The surface of Willoughby Lake is 1,161 feet above the ocean, and the summit of Pisgah 1,586 feet above the lake, or 2,747 feet above the ocean. The bed of the lake is, for the most part, a clean white sand and pebbles, and the water clear and pure. The coldness and purity of the water, the salubrity of the air, and above all, the wild grandeur and beauty of the scenery (and I must add, the savory longe), render it one of the most inviting summer retreats from the dust and heat and turmoil of city and village, anywhere to be found. Three years ago the lake was hardly accessible, on either side. Now a good road passes along the whole length of the eastern shore, and at the south end a spacious public house, called the Lake House, has been erected for the accommodation of travelers and visitors, where stages arrive and depart daily, evening and morning, in both directions. The site of the Lake House is 122 feet above the lake. The *Natural Flower Garden*, so interesting to the botanist, is situated on a sloping surface, in the western declivity of Pisgah, 583 feet above the lake. The ascent to the garden is somewhat difficult, but that from the Lake House to the summit of Mt. Pisgah is quite easy, and the view from it exceedingly fine. Willoughby Lake and the adjacent mountains, from a point three miles to the northward, form one of the finest views found any where in New England.

"From Burlington there are three principal routes to Willoughby Lake. The most direct is by way of Johnson, Craftsbury, and Irasburgh, mostly by stage. Another route is by the Vermont Central Railroad to White River Junction; thence by the Passumpsic Railroad to St. Johnsbury, and then by stage to the lake. Another route is by way of Montreal and Sherbrooke to Island Pond (page 43), then by stage 11 miles to Willoughby Lake."

# NOTES ON THE EARLY BOTANICAL EXPLORATIONS OF WILLOUGHBY LAKE

*W. W. Eggleston*

Dr. G. G. Kennedy[1] in his "Flora of Willoughby, Vermont," sketches the work of its early explorers.

William Oakes in his "Catalogue of Vermont Plants" (Thompson's History of Vermont, 1842), does not mention Willoughby. Neither does Thompson in the Northern Guide of 1845. One could well wonder why two fine collectors like Dr. J. W. Robbins and John Carey did not visit these cliffs, for Robbins was at Brownington and Lake Memphremagog in 1829 and Carey at Sutton in 1835 or 1836, and they were in plain sight of the cliffs, if it were not for the lack of roads about Willoughby Lake at that time.

It was the good fortune of Alphonso Wood,[2] pioneer author of

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[1] Rhodora 6: 93-114. June, 1904.

[2] Rev. Dr. Alphonso Wood was born in Chesterfield, N. H., September 17, 1810. He graduated with honors from Dartmouth College in 1834.

He immediately secured a position as teacher in Kimball Union Academy, Meriden, N. H., and taught there about fifteen years, becoming associate principal. One year was spent at Andover Theological Seminary and later he studied theology with the elder Dr. Barstow of Keene, N. H., but he never was to accept a pastorate because botany soon became his life work.

His first Class Book of Botany was published early in 1845. In 1844 he married Lucy Baldwin of Bradford, Vt., a teacher at Kimball Union Academy. His son was born in the spring of 1845. The spring and summer of 1846 he went with his family to visit his parents in Indiana and did much exploration to perfect his Class Book of 1847, in which the range was extended to the Mississippi Valley.

In 1848 or 1849 First Lessons in Botany were published.

In 1849 his health failed him and he resigned from the Academy and took a position on the engineering force then making the survey for the Rutland and Bennington (Western Vermont) Railway (opened in 1852).

In 1852 he went as principal of the Cleveland Female Seminary and in 1854 became principal of Ohio Female College, College Hill, O. In 1858 he founded the Terre Haute Female College. Despite all of his professional activity he was hard at work getting material and information for another extension of his Class Book, visiting the South twice. The longer trip South in 1857 was extended well into Florida.

In the fall of 1860, when preparing the third copyright of his Class Book, he moved to Brooklyn, N. Y.

The first three parts of the new Class Book came out late in 1860 and the complete work early in 1861.

In the spring of 1861 he opened the Brooklyn Female Academy which proved very successful, even during the war.

In 1863 his "Object Lessons in Botany" was started.

In October, 1865, he started on a trip to the Pacific slope which occupied him nearly 18 months. Starting in at San Diego in January, 1866, he traveled northward nearly to Puget Sound, visiting Yosemite Valley, Mt. Shasta and Mt. Hood, and returned via the isthmus.

In the spring of 1867 he moved his family to West Farms, N. Y., where he resided until his death.

In 1869 was published his *Liliaceae* of the Pacific Coast.

In 1869 fourth copyright of Class Book.

1870, Botanist and Florist.

1877, Illustrated Plant Record.

1879, Fourteen Weeks in Botany.

1879, Flora Atlantica.

In 1879 he became Professor of Botany in the New York College of Pharmacy, which he occupied until his death January 4, 1881.

botanical lessons and manuals and the most successful botanical author and botanical teacher that New England has ever produced, to find the "flower garden" at Willoughby, in August, 1845. An "observation" of his on page 279 of the Class Book of 1847, under *Saxifraga oppositifolia*, is as follows:

"I discovered this and the foregoing species (*S. aizoides*) in the above locality (in the clefts of rocks, Willoughby Mt., Westmore, Vt., 500 ft. above W. Lake), where they had passed flowering." The Class Book of 1847 also lists *Hedysarum boreale* and *Artemisia canadensis* and the Class Book of 1849 gives *Primula mistassinica* as his dis-

By later botanists he is accredited with *Woodsia glabella, Draba* and *Potamogeton praelongus.* Professor Wood at this time must have been an extremely busy man as associate principal of Kimball Union Academy. He was married in 1844 and at the same time was preparing the first edition of his Class Book which tradition tells us was copied entirely by Mrs. Wood. This edition came out early in 1845. This same spring his son was born and it is quite likely that he took his trip to Willoughby Lake while visiting his wife's parents at Bradford, Vt. We have no evidence of another stop at Willoughby and this one must have been a hurried trip. Summer vacations of teachers in those days were extremely short.

In July, 1852, C. C. Frost and Rev. A. H. Clapp visited Willoughby. They secured *Pellaea atropurpurea, Carex scirpoidea, Braya humilis* and *Astragalus Blakei.* They were the first botanists to use the railway to reach Willoughby. Lake Willoughby is on the outskirts of the great Essex County and northern Maine wilderness and must have been exceedingly wild and attractive before the opening of the railways. The Central Vermont was finished in 1849. The Vermont Valley and the Connecticut and Passumpsic in 1851. With the opening of the railways Willoughby was bound to be better known and become exploited. The highway along the east side of the lake and the Lake House at the head of the lake were built between 1852 and 1854.

In 1854 William Boott visited the region. Rev. Joseph Blake came in 1861 or perhaps earlier, and discovered *Saxifraga Aizoon.*

In 1862 Horace Mann visited Willoughby.

In 1873 came the Faxons and Dr. Cyrus G. Pringle. Dr. Pringle found *Woodsia alpina* and the Faxon herbarium treasured *Asplenium viride,* which was found on Mt. Hor by Mrs. Condit in 1887. I have coveries.

no record of the first appearance of Dr. Kennedy on the scene, but he visited and summered at Willoughby many seasons, making many notable discoveries and at last recording them for us.

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## FOUR NEW LICHENS

*D. Lewis Dutton*

About 10 years ago I collected several species of lichens in the town of Hancock, but I did not have them identified until comparatively recently when G. K. Merrill named one *Lecidea parasemoides* sp. nov. and commented, "Seems to be a novelty." The specimens grew on a sugar maple tree among spruces and were about four feet from the ground.

In 1920, while collecting near Lake Dunmore, in Leicester, I secured on shaded rocks a thin crustaceous formation of a grayish brown color, the fruit appearing as small black dots. Mr. Merrill named this *Bacidia Duttonii* sp. nov.

The following year on the edges of Lyon hill, Brandon, the writer collected a plant resembling *Lecidea Russellii* Tuck, but Mr. Merrill called it *Lecidea* (*Psora*) *palidella* sp. nov. On a rock in a pasture nearby I secured a large *Caloplaca* which Mr. Merrill decided was also a new species, naming it *Caloplaca obliterascens* sp. nov.

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## EYEBRIGHT IN VERMONT

*Francis H. Sargent*

During the summer of 1922, the writer found growing abundantly on hillside pastures in parts of Enosburg, Montgomery and Richford a small plant which I decided was one of the eyebrights and specimens were later identified for me as *Euphrasia canadensis* Townsend. As far as I can learn no species of *Euphrasia* has heretofore been reported for Vermont.

Another plant not listed in the Vermont Flora, which I collected in 1922, was *Lysimachia punctata* L. It is common as a dooryard escape in Franklin.

Among other species not common in the State, seen by the writer recently, were *Scirpus debilis* Pursh, Snipe Island pond; *Veronica Chamaedrys* L., maple woods, Lake Carmi, Franklin.

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## SOME FLORIDA BIRDS AND PLANTS

*Mary A. Loveland*

My first observations of birds and plants in Florida were made at Jacksonville, where we arrived early in the morning of January 13, 1922. Having about three hours to wait before starting on the trip across the state, I took a walk in the city and saw palms, ferns and numerous other foliage plants, with lilies and poinsettias in bloom, besides many flowers that I did not know. The only birds noticed in Jacksonville were crows and English sparrows.

One cannot study birds very well on a moving train, but, thanks to fellow travelers, I learned the names of some new trees during the ride. Live oaks, water oaks and scrub palmettos were pointed out. It was unnecessary to ask the names of some of the fine looking plants in the gardens—lettuce, for instance, grown in long rows.

Trees of various kinds were festooned with the so-called "Long Moss," which is really not a moss at all but an air plant which does not injure the trees as a parasite might. There were many pines on the route and in some of the forests the bark was slashed and cups were hung to catch the pitch. At one place a fire had killed the young trees. A vine, covered with masses of yellow flowers, was noticed on houses and trellises. This was learned later to be Bignonia.

The morning after my arrival in Auburndale, a friend and I took a walk on the street, beside which we found five species of wild flowers in bloom. We discovered a dead bluejay not far from the asphalt pavement. The noisy jays were numerous in the trees near the cottage where we stayed. The Florida jay is much like our New England bluejay, but smaller.

An early acquaintance was made with the cardinal or redbird, which, with its brilliant coloring, is sure to attract attention. The female, as in many species of birds, is duller in color although it has tinges of red. In March the song was noticed. Different people interpret it very differently. A neighbor thought the bird said "chew chew!"

A few days after I arrived at my temporary southern home an old friend came and lingered long. It was phoebe. Her wilted look, flirted tail and reiterated cry made certain my identification.

Of course, the mocking birds were eagerly looked for and listened to. They were always about the house and heard at all hours—before we were up in the morning and again in the heat of the day when the mercury was as high as 84. The song reminded me of our northern catbird when he is at his best. As Mrs. Doubleday says in "Bird Neighbors": "This is the angel that the catbird was before he fell from grace."

Woodpeckers were common, the one we call flicker being the most familiar. They are seen working on the ground among orange trees. Query, was it ants that they dug up?

On February 9, a 45-mile automobile ride to Tampa to visit the South Florida fair gave us our opportunity to see some birds and plants. A flock of blackbirds was noticed. At the fair, in addition to a great display of common poultry, there were pheasants, peacocks with brilliant plumage, as well as ducks and geese. On the way back we stopped near a swamp while some of the party visited a market garden to secure cabbage, strawberries and beets. The place was full of birds, many in song, but we could not see them.

Later, while spending a few days in Tampa, we took an enjoyable ride to St. Petersburg. Gulls followed the steamer and we also saw pelicans, buzzards and a loon. It was interesting to watch the pelicans from a wharf at St. Petersburg. They would catch fish readily, but it required some time to swallow one, owing to the journey via the bill and long neck. My attention was called to the "woolly head." The pelicans there were mostly grey, but we saw one that had a white breast. On the return boat it was enjoyable to watch the gulls which followed for the food that was thrown to them. They would take pieces from each other and if a choice morsel sank beneath the water a bird was sure to dive for it.

The last night I was in Auburndale we were invited to a country house. While we were at supper one of the ladies spoke of chuck will's widow which was singing near. Although the bird is closely allied to our whip-poor-will, the song is different.

It was easier to observe the vegetable than the animal life because, as plants remain stationary, we could go time after time to see a certain thing. Much pleasure was derived from the cultivated groves

and gardens. Being in the midst of the citrus fruit raising, it was a never-to-be-forgotten sight to look at the rows of orange-laden trees, which covered many acres. In March the blossoms were out and, in many cases, one could still see the golden ripe fruit, still ungathered, while the air was sweet with the fragrance from the blossoms on the same trees.

Many old Hawaiian fruits were about. One in particular it was good to see—the papaya or paw paw, as they call it in Florida. "Melons on trees" seems an appropriate description of the fruit. At one place we were given some paw paw blossoms. The odor carried me back over many years, proving that the sense of smell is abiding and memory stirring.

After making two calls one day, we carried home kumquats, limes, lemons, loquats, oranges, grapefruit and tangerines, and we found fresh guavas at home.

Ponderosa lemons were seen as big as grapefruit. Mangoes and alligator pears were not in season so these old favorites were not tasted.

Clusters of purple wistaria are associated with the oldest house in the United States, at St. Augustine, where the vine covered the garden fence.

In the park surrounding the magnificent Tampa Bay hotel there are many fine cultivated plants and trees, some of which are named.

At Ballast Point, we saw a banyan tree which had made quite a spreading growth by sending down branches to take root.

Ferns, similar to our maidenhair, grew on the walls of one of the dungeons at old Fort Marion. Very few ferns were seen growing wild.

Among the flowers we met blue violets, lupines, milkweeds, a portulaca, Cherokee rose, dwarf dandelion and blue iris. It was hard to find the names of some of the native flowers as there was no botany of the southern states at hand and not all were given in the familiar Gray Manual. Some were pressed and identified on reaching home.

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## NOTES FROM COLLINS, N. Y.

*Anne E. Perkins*

We are situated, fortunately, on the edge of the Cattaraugus Indian Reservation, near the Cattaraugus Creek, in a thinly settled district, with much underbrush and thickety growth, but little woods. It is a

rich field for botanizing and bird-study and a brief account of some of our plants and birds may be of interest.

I find many plants not familiar to me in New England. I have collected considerable for the state botanist of New York, but not for myself. In June, 1920, I sent him *Carex bicolor*, not previously reported in this state. *Mertensia* is very common and is sold, by bushels, on the streets of Buffalo, by squaws. *Erythronium albidum* is common, though less so than *E. americanum*. *Pentstemon pallidus* is fairly common, *Hybanthus concolor* local, *Chamaelirium luteum* not common but I have one good station for it. *Orchis spectabilis* is common, and *Cypripedium hirsutum* I have seen most abundantly in the swamps and sold by the Indians. It is no exaggeration to say that I have seen a thousand blossoms at once in the train en route for the city. *Cypripedium pubescens* and *parviflorum* are common, *C. acaule* less so, other orchids I do not come upon as commonly as in New England. *Spiranthes lucida* is plentiful, *Microstylis unifolia* not very common, *Corallorhiza maculata* not common; *Habenaria dilatata Hookeri, lacera* and *psycodes* occasional. *Habenarias* in general not frequent. *Lobelia syphilitica* is extremely common, also *Polemonium reptans, Phlox divaricata, Disporum lanuginosum, Evonymus atropurpureus, obovatus, americanus*. Less common are *Cassia marilandica, Stachys palustris, Houstonia ciliolata, Euphorbia corollata, Vaccinium stamineum, Polanisia graveolens. Gaura biennis*, both *Polymnias*, both *Agastaches, Parnassia Caroliniana*, are common as are *Alliaria alliaria, Orobanche, Nicotiana rustica. Onobrychis* stations, never reported nearer than Wisconsin, have become established in two places in a field in Gowanda (two miles from here), spreading through imported hides in a field near a tannery. *Sorghostrum nutans, Arrhenatherum, Andropogon furcatus, Cynosurus cristatus* are among the grasses found. Once I found *Geranium pratense*, but the station has been destroyed, the same being true of *Cuphea petiolaris. Triosteum perfoliatum* and *aurantiacum* both occur.

The tulip tree, cucumber tree, spice-bush, *Xanthoxylum americanum*, tupelo, sassafras, *Dirca palustris* are all very common.

The small white ladies' slipper has been reported, but I have not seen it and suspect it to be a white form of *acaule*. There is an active botanical section of the Buffalo Society of Natural Sciences, known as the Botanical Hobby Club, and various members are exploring the swamps and creek-banks. *Aralia spinosa* has been found near. Too

often, the Indians cut and burn over sections containing one's rarest finds and in this way many of my best stations have been destroyed. The state botanist plans a trip here for collecting as there is undoubtedly a rich field not thoroughly examined.

Some plants so common in New England are rare here, for instance, *Houstonia caerulea, Drosera, Cornus canadensis, Spiraea tomentosa* and *salicifolia.* But the woods are full of hepaticas, yellow violets, chiefly *pubescens,* some *rotundifolia,* canada, spurred and *striata, Podophyllum,* both *Dicentras, Cardamine bulbosa, Dentaria laciniata* and *diphylla, Collinsonia,* etc. I have never seen so much *Caltha palustris.*

My time is so limited for exploration that I feel there is yet much undiscovered.

Bird life is abundant. There are now several pairs of cardinal grosbeaks between here and Buffalo. Two males were recently shot for the Buffalo Museum. I have seen four at one time, year after year in the same location, and this season found two nests of the same pair. For resident warblers we have, abundantly, hooded, chestnut-sided, magnolia, blackburnian, oven-bird, Louisiana water thrush, parula, mourning, yellow, Maryland yellow-throat, redstart. The black-throated blue and black-throated green nest sparingly, also the Canada, rarely the Nashville. We have many rose-breasted grosbeaks and scarlet tanagers, chewinks, thrashers, wood thrushes, veeries, indigo buntings. Last season I found the nest of a parula partly built in a dead limb of a pine, which was broken off and hanging in the tree. I watched the female building while the male bird sang close by, but alas! the limb was blown down before the nest was completed. I have found nests of hooded, magnolia, oven-bird, chestnut-sided, black-throated blue, Louisiana water thrush. Last season I found the marsh hawk's nest with five eggs, all of which hatched. In migration we have yellow palm, palm, rarely the golden-winged and cerulean warblers, usually several Connecticut warblers, and once I have seen a blue grosbeak and a Philadelphia vireo and almost yearly the Lincoln sparrow.

The tufted titmouse has been taken a few miles away. The red-bellied woodpecker is rare but reported occasionally, also the pileated. A bald eagle or two appear by the creek rarely.

I have found the nests of alder flycatcher, migrant shrike, rough-winged swallow.

# NOTES FROM FERRISBURG

*E. M. Kittredge*

Last year much ground usually covered to a depth of several inches along the shores of Lake Champlain was laid bare by the steady fall of the water and plants not before noticed were found growing way beyond former limits. *Cyperus esculentus*, *Stachys tenuifolia var. aspera*, and *Lactuca scariola var. integrata* were collected in October, as were also some species of *Xanthium*. Of these latter *X. curvescens* and *X. leptocarpum* are new species described by Millspaugh and Sherff in their recent monograph as occurring only on the Vermont shores of Lake Champlain. *X. commune* has been the only species in this vicinity heretofore.

Little opportunity for collecting was afforded me this spring, but it was a great pleasure to notice several plants and collect a few in my hum-drum coming and going between camp and railroad station. I traversed fields for part of the mile and the highway the rest, and although the trip was made about three times a week, something of interest usually presented itself—not always of wild excitement, but new or rare to me. In particular I was struck by the great variation in color of the blue vetch (*Vicia Cracca*), ranging from two or three isolated plants bearing pale, almost white, lavender flowers, to large and many groups of deep red, purple (more red or crimson than purple) flowered plants, as well as large areas covered with plants having the normal colored flowers. As I have been fairly observant of the fields and roadsides of that trip for several years, I wondered if the unusually wet season was accountable in any way for the color variation. Another species to attract attention was the common stitchwort (*Stellaria graminea*), the variation there being in the size of the flowers. Large colonies of this plant flourish in the ditches both sides of the road, and some had such tiny flowers as to be almost unnoticeable, some were of normal size, and some bore flowers measuring half an inch or more in diameter. Stems and leaves as far as I could observe were exactly alike. Near the station was a large group of *Rumex altissimus* just coming into bloom when the section men cleaned up the right of way, and growing abundantly among the cinders of the roadbed, was the little toad-flax (*Linaria minor*), its pale flowers, although tiny, showing clearly above the dirty leaves and stems. This species can no longer be considered rare in the State, as it follows the railroads in all directions. In one of the clay fields near the track

were several plants of the ray-less fleabane (*Erigeron ramosus discoideus*) reported by Mr. Ridlon as found in Bennington in 1920, and collected for Miss Billings in Woodstock last year. The Woodstock and Ferrisburg plants were truly ray-less. In this same field and further west of the track I collected the poverty grass (*Aristida dichotoma*) last fall, thus adding another station for that species. Just before I left Ferrisburg, I found what I have long searched for, a pure white flowered *Vicia Cracca*. Three years ago I saw a plant in a corn field, but had no means of removing it, and lost the specimens I collected and pressed. This year there were several plants growing freely with the typical form on a steep bank. Again I had nothing to dig with, but plants are marked, and if fortune favors, the roots will be removed to a safe place later in the year. Specimens have been sent to Mrs. Flynn for the state herbarium. The flowers dried very nicely under press without acquiring even a tinge of blue as so many albinos disappointingly do. Has this form been reported before?

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## SOME PLANTS OF MY EUROPEAN TRIP

*Nellie F. Flynn*

In a two months' trip abroad there is no time to do real botanizing or collecting. The best that I could do was to carry a magazine around under my arm and grab a plant or a piece of a plant as I passed by. In a very few places I had a chance to see of what the Flora really consisted. On the train and on automobile trips I kept a pencil and book handy and jotted down plants that I recognized or the family to which they belonged if I was not able to tell the species.

The wild carrot, *Daucus Carota*, was in every country that I visited, Italy, Switzerland, France, Belgium and England, and more common than with us. The blue weed, *Echium vulgare*, was also everywhere, even in the hills back of Algiers and up on the highest Alps. Fireweed, *Epilobium angustifolium*, both magenta and white, and the white and yellow sweet clovers, *Melilotus alba* and *M. officinalis*, were very common. The fireweed, especially, grew in great masses and was very showy even high up in the Alps. In northern Italy, a holly hock, *Althaea officinalis*, of a sort of lavender color, grew along the railway for miles.

One of the loosestrifes, *Lythrum Salicaria*, was along most of the brooks and edges of swampy places. It made me think of a trip by automobile from Montreal to Quebec when it grew so thickly on the opposite bank of the St. Lawrence as to look like a broad red ribbon. The black medick, *Medicago lupulina* was ubiquitous.

I have a fine specimen of rabbit's foot or stone clover from Pompeii.

A species of mourning bride or scabiosa, *Knautia* sp.?, was also everywhere in Italy and elsewhere on the continent with its pale lilac heads. It looks like the *Knautia arvensis* that Mr. Ridlon found so much of in Bennington grass land. I saw plenty of Mediterranean heather on the Amalfi drive but was unable to get any. I secured one plant of a different species on the Rigi. Wild clematis, like our American *Clematis virginiana*, was common and very pretty, climbing over other vegetation with its wreaths of white flowers.

Chicory, *Cichorium Intybus*, made the roadsides and fields as blue as they are in Canada and are getting to be around Burlington. Other plants which I knew were coltsfoot, *Tussilago Farfara*, willow herb, *Epilobium hirsutum*, bouncing bet, *Saponaria officinalis*, black mustard, *Brassica nigra*, prickly lettuce, *Lactuca Scariola* var. *integrata*, rose-colored and white yarrow, *Achillea Millefolium*, heal-all, *Prunella vulgaris*, English plantain, *Plantago lanceolata*, tansy, *Tanacetum vulgare*, and butter and eggs, *Linaria vulgaris*.

I was rather surprised to see so many of our common plants, but when I stopped to think that the botany said that they were all adventive or naturalized from Europe, I understood.

The only blackberry that I saw in Italy had a pink blossom and very good fruit. Afterwards at Kew Gardens, near London, I saw a double flowered form which was very ornamental.

The big heads of the teasel, *Dipsacus sylvestris*, were prevalent and between Paris and Brussels I noticed a cattail that looked like the broad-leaved one, *Typha latifolia*. Weeds, like pigweed, *Chenopodium* and *Amaranthus*, docks, *Rumex*, of various species, goat's beard, *Tragopogon pratensis*, a Silene, like our bladder campion, purslane, *Portulaca oleracea*, and various mustards were plentiful by roadsides and in cultivated fields.

On the Rigi, where we stayed overnight, I had a chance to see of what the flora was made up. There were two species of *dianthus*, or grass pinks, one having very much fringed petals, several kinds of *campanula*, or bluebells, one reddish, one or two species of *Thymus*,

or wild thyme, eyebright, *Euphrasia minima*, a very handsome *Senecio*, six species of thistles, one of which *Carlina acaulis* had rays like thin white celluloid, an inch and a half long all around the flower head and mostly flat on the ground; wild margoram, *Origanum vulgare*, *Galinsoga*, a species of *Eryngium*, or sea holly, a beautiful dark red, almost black orchid, *Nigritella nigra* and *Astrantias*. I did not see edelweiss growing, but at most of the railway stations big stiff bunches were on sale, as was a blue gentian. I found *Dryas octopetala* to which Mr. Weatherby, one of our members, sent his respects, but I did not see the alpine poppy which he also included.

Every possible square inch of land is cultivated in Italy and in the lowlands there were great fields of hemp, *Cannabis sativa*, and on the higher ground olive and fruit orchards, vineyards, chestnut groves, etc. They grew all sorts of fruit, but that set before us at the hotels was very poor and generally unripe.

The green almonds, which I first thought were green peaches, made a delicious dessert.

The American troops used to say that they raised nothing but carrots in France, but now, all over the continent, they seemingly raised nothing but string beans, at least we had them everywhere.

To show the value of scientific names, I always thought that the celebrated Ilex groves of Italy were composed of holly, but they are an oak, *Quercus Ilex*, or holm oak. And the famous chestnut groves near Hampton Court are not chestnuts, *Castanea*, at all, but horse chestnuts, *Aesculus*.

The famous gardens of the Louvre were very lovely, with great masses of flowers beautifully laid out, but not so interesting from a botanical standpoint as the species were few. The Jardin des Plantes in Paris was disappointing, but Kew Gardens in London made up for it. The rock garden alone was worth going to see; and there was so much besides, palm houses, and lots of other glasshouses, rhododendron and azalea plantations and everything belonging to a large, well cared for botanic garden.

## CLARENDON NOTES

*L. Henry Potter*

*Rumex persicarioides*, L., which is new to Vermont, was collected by me at our farm in Clarendon, July 8, 1922. The station, which contains several plants, is in a meadow.

Another addition to the Flora is *Polygonum cuspidatum* Sieb and Zucc., which I secured in Chittenden on September, 1921. The specimens were some distance from any dwelling.

*Asplenium Ruta-muraria* L. and *Pellaea atropurpurea* (L.) Link var. *Bushii* were taken on a cliff in the west part of Clarendon in June, 1922, and at the base of the same cliff. G. H. Ross of Rutland found a large colony of *Polymnia canadensis* L.

Two stations for *Botrychium lanceolatum* (Gmel) Angstroem var. *angustisegmentum* Pease and Moore, were located the same day in the town of Clarendon. One contained over 200 plants.

*Polygala verticilata* L. var. *ambigua* (Nutt.) Wood, was collected at Tinmouth in 1921.

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## USEFUL NATURE BOOKS

*Anne E. Perkins*

In reply to the request for a list of good nature books, I would suggest many by John Burroughs, especially, "Wake Robin," "Ways of Nature," "Signs and Seasons," "Leaf and Tendril," "The Summit of the Years."

Bradford Torrey's books, especially, "Birds in the Bush," "The Clerk of the Woods," "Footing It in Franconia," "A Rambler's Lease," "The Foot-Path Way," "Field Days in California," "A Florida Sketch Book."

Dallas Lore Sharp's "Face of the Fields," "The Lay of the Land"; Herbert K. Job's "How to Study Birds"; Ernest Harold Baynes, "Wild Bird Guests"; Trafton's "Methods of Attracting Birds"; "Our National Parks," John Muir.

"The Nature Library" (large edition), Doubleday, Page & Co.; Illustrated Flora by Britton & Brown; William Hamilton Gibson's "Sharp Eyes"; E. H. Forbush's "Useful Birds and Their Protection";

"Natural Enemies of Birds"; "The Domestic Cat"; also the periodicals *The Auk*, *Bird-Lore*, magazines of bird life.

Get lists of publications of the State of Massachusetts, New York, and the United States Department of Agriculture. Some are for sale at a nominal price; others free. They contain valuable information regarding birds, their food, etc. Several bulletins are on "Nesting Boxes," "How to Attract Birds," "Plants and Shrubs to Attract Birds," etc. Many are on plants.

F. Schuyler Mathews has fine books: "Field Book of Wild Flowers," "Field Book of Birds and Their Music," "Field Book of Trees and Shrubs."

Mrs. Parsons has a good book on "How to Know the Ferns." Harriet Keeler has a good book on trees and one on shrubs.

Frank Chapman's "Bird Life" (for beginners); "What Bird is That?"; "Handbook of Birds" and "Warblers of North America," for more advanced students.

"Wild Flowers of New York," House; "Birds of New York," Eaton; Gibson's "Mushrooms"; Atkinson's "Mushrooms."

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## INTERESTING PLANTS AT SWANTON

*Clarence H. Knowlton*

On the east side of the main road leading from St. Albans to Swanton are some very interesting ledges of red rock. According to the geologists (Sixth Annual Report of Vermont State Geologist, 1907-08) these are Ordovician rocks of dolomite, or magnesian limestone. When polished they are the mottled red "marble" familiar to most people in the state. These ledges are covered with arbor-vitae trees, with *Ostrya virginica*, occasional slippery elms and at one place there are one or more trees of *Quercus macrocarpa*. The general appearance of the region is rather fascinating, and I was first led to stop there 10 years ago, when I spied my first specimens of *Trillium grandiflorum* at the foot of the ledges in a beautiful glade. Since then I have paused here nearly every time I have passed in spring or summer, and last May I took a whole afternoon for my researches.

The woods at the base of the rocks contain some very interesting carices. The most conspicuous of these is *Carex laxiflora*, var. *latifolia*, a most striking calciphile sedge, with very broad pale green

leaves and bracts. Two other striking sedges with long leaves and very long flowering stalks are *C. cephaloidea* and *C. sparganioides. C. longirostris* is another tall sedge that I discovered this year. In drier soil and among the loose fragments fallen from the ledges above is *C. Hitchcockiana,* which comes into fruit rather later than the others. In places the ground is carpeted with *C. pedunculata,* and this year I was pleased to detect with it, and superficially resembling it, some fine specimens of the rarer *C. Backii. C. rosea* and *C. albicans* are rather common here, as elsewhere in Vermont. In wet clay not far away across the road is an abundance of *C. aurea.*

There are three grasses in the dry open woods, *Melica striata, Oryzopsis asperifolia* and *Festuca nutans.* They grow on the dry ledges and on the talus-slopes, often under the arbor-vitae. It is most surprising to find the bloodroot, *Sanguinaria canadensis,* not only in moist glades, but everywhere over and in the ledges. Many of the plants are very small with reduced leaves, but the crevices are full of them. At an old quarry nearby I once found the curious strawberry blite, *Chenopodium capitatum,* in similar crevices fully fruited in mid-July.

*Viola sororia, V. rostrata,* and *V. canadensis* are abundant and very characteristic of these woods. In rich woods not far away are other common violets. Where the ledges are exposed in the dry pastures, there are the two introduced borages so common in the limestone country, *Cynoglossum officinale* and *Lithospermum officinale.*

I have found this region most attractive and promising, and further investigation ought to develop other surprises. There are abundant rich woods nearby, with the flowers and ferns so familiar in western Vermont, the trees mostly sugar maples. West of Swanton is the big delta of the Missisquoi River reaching far out into the lake, with an entirely different association of plants.

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## 1921 IN WOODSTOCK

*E. M. Kittredge*

The greater part of my few weeks' stay in Woodstock was spent in establishing a portion of the collection in the cases Miss Billings has had made to display the mounted specimens, so comparatively little collecting was done, but we feel that the record for the season is worthy of note. The first plant collected was the meadow fox-tail

grass (*Alopecurus pratensis* L.), which was found growing abundantly in a meadow near the highway. Unfortunately the meadow was mowed in a day or two, so additional specimens were not obtained. Another grass, tall oat grass (*Arrhenatherum elatius*), was collected a few days later, and the next week at the field meeting of the Hartland Nature Club, held in Dr. Dana's grounds, Miss Rogers discovered a few plants of the dogs-tail grass (*Cynosurus cristatus* L.), which so far as we can learn is a new plant for the state. Later in the season I found a few more plants growing along the road, a mile or more from the Dana place. The rock muhlenbergia (*Muhlenbergia sobolifera*) was collected on the Billings estate late in August.

About the same time the roughish meadow grass (*Poa trivialis*) was collected on the roadside near West Woodstock, and *Panicum tennesseense* was found on a dry hillside in a pasture. Of this latter, Dr. Hitchcock, who determined the grasses for me, wrote, "Unusually lax in habit." *Panicum philadelphicum* was again found, this time as a weed in ground that had been formerly used as a garden. Odd forms of the green fox-tail and the witch grass were also collected. Many sedges, new to the Billings herbarium, were collected, but only a few were of more than local interest. The wood bulrush (*Scirpus sylvaticus*) was collected during the season of 1920, but was not determined until last January. *Carex stricta* var. *angustata* was found in some abundance in a swampy meadow. *Carex pennsylvanica* var. *lucorum* was found on a very dry hillside, growing with the common reindeer moss (*Cladonia*) but, unfortunately, it was considerably infested with a rust. An interesting juncus was at first thought to be *J. secundus*, but a student of that group pronounces it "apparently a form of *J. tenuis*." A colony of *Salix purpurea*, the purple or basket willow, firmly established alongside the road on one of the hills of this locality, was of much local interest. Inquiry among old settlers in that region failed to elicit any information regarding any cultivation or use of the willow in former times. The strawberry blite (*Chenopodium capitatum*) has occurred as a weed on the Blood farm for several years, but no special attention was paid to it until last year, when specimens were sent to Mrs. A. B. Morgan, and through her courtesy I met Mrs. Blood and obtained specimens for the Billings herbarium.

The nettle-leaved goose-foot (*Chenopodium murale*) appeared with other goose-foots and amaranths in a garden patch in which potatoes

had been grown the previous season, and which owing to press of work elsewhere had been neglected until the plants had attained sufficient size to attract attention, and then several of my selection were allowed to remain some weeks longer for study. Unfortunately, one which from its leaves and other characters seemed to answer to *C. urbicum* did not mature in the time allowed and so, regretfully, I cannot report it as a find. The white goose-foot (*C. album*) appeared in so many forms as to bewilder one. It is certainly a variable species. *Brassica Japonica*, many years ago cultivated as a salad plant, has persisted as a weed in the Strong garden in Taftsville for years. It is a beautiful plant at all times, and before sending up the flower stalk resembles some of the curly lettuces. In that garden there also grows a hedge mustard (*Sisymbrium*), dwarf, and so branched from the root as to appear bushy, with tiny flowers, and very purple stems and petioles. It has not been sufficiently studied at this writing to permit determination. Several plants of the attractive rough-fruited cinquefoil (*Potentilla recta*) were found in a hay meadow in August. They bore evidence of having been cut when the meadow was mowed early in July, but were bravely blooming on short branches. The somewhat rare variety of the Virginia creeper (*Psedera quinquefolia* var. *hirsuta*) was found trailing along the river bank, all but smothered by the masses of the common form. Probably because of its struggle for a place in the sun it bore no fruit. An interesting St. John's wort (*Hypericum*) was collected in two widely separated stations, but it may prove to be merely a form of *H. majus*. The wing-angled loosestrife (*Lythrum alatum*) was found in a swampy part of a pasture, its bright flowers very conspicuous among the rank growths of scirpus, typha, and other swamp plants. The gout-weed (*Aegopodium Podagraria*, L.) was found along the roadside, near the river, probably having been washed down during some period of high water, and now thoroughly at home. The common form, much used as a border plant in old gardens, is a variety of the species. A few plants were found in a field five years ago, their occurrence there occasioning much surprise. In the neglected garden patch before mentioned in connection with the goose-foot, was a very beautiful plant of the dragon head (*Dracocephalum parviflorum*). I believe H. L. Potter of West Rutland reported this species several years ago. The sand bur (*Solanum rostratum*) appeared in odd places on the Billings estate, but was not allowed to mature fruit. The pretty little *Linaria minor* is common along the Woodstock Railroad below Taftsville, and probably will be

found in other situations before many more seasons. Of great local interest were the hare figwort (*Scrophularia leporella*) and the white flowered variety of the moth mullein (*Verbascum Blattaria* var. *albiflorum*). The typical form of the moth mullein still eludes us, but this variety was welcome as much for its beauty, as for its botanical interest. Several plants of the garden Valerian (*V. officinalis*) were found in a field on the Billings estate.

In the composites some interesting species were collected, one not before reported so far as we know. The ray-less fleabane (*Erigeron ramosus* var. *discoideus*) was collected on the edge of a "mowing" which showed many plants of the common form. Mr. Ridlon reported this variety from near Bennington in the last BULLETIN. The two king devils (*Hieracium florentinum* and *H. pratense*) were found in abundance in a meadow in West Woodstock. They had been found on the Billings farm two years previously, but only two or three plants of each and they were promptly removed. The cat's-ear (*Hypochaeris radicata*) was found in the Dana grounds at the time of the Nature Club meeting and a few days later on the roadside a mile or so from the Dana place. Specimens of what I have taken to be the red-seeded dandelion were collected and sent to several correspondents who had requested them, and E. J. Winslow of Auburndale, Mass., wrote that while my plants had the red seeds they were not *Taraxacum erythrospermum*, and he suggested they might be hybrids. As I lack material for comparison, I am sending specimens to New York Botanical Garden and Gray Herbarium for examination. Many species of hepatics, lichens and mosses were collected and have been determined at the New York Botanical Garden, but have not yet been checked up, so it is not known if there are any of special interest.

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## A VARIETY OF MAIDENHAIR FERN NEW TO VERMONT

*L. Frances Jolley*

*Adiantum pedatum* var. *aleuticum* was first found by me two years ago in Canada at the foot of Orford Mountain. There it grows in great abundance and from 12 to 18 inches high and nearly as far across the fronds. I showed some specimens to C. H. Knowlton and he agreed with me that it certainly was different from the common

*Adiantum pedatum* and took specimens to the Gray Herbarium for identification. They immediately said it was *Adiantum pedatum* var. *aleuticum*, found usually more to the north and west and in high altitudes.

Now I desired to find it in Vermont and, knowing that Belvidere Mountain in Eden was in the same range and of the same asbestos formation as Orford, I went there to look for it. To my joy I found it in abundance and beautiful plants. I now have plants from both stations growing in my garden. This last July several members of the Vermont Botanical Club visited the Eden station and collected specimens.

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The differences between *Adiantum pedatum* and its variety *aleuticum* are as follows: Typical maidenhair fern has the pinnae spreading horizontally, with the pinnules oblong and having rounded ends. It grows in moist shady soil.

Var. *aleuticum* grows in crevices of rock in full sunshine. The pinnae are much more upright. The pinnules are wing-shaped and have pointed ends. The plant is of thicker texture and more heavily fruited than the type.—*Nellie F. Flynn.*

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## WHAT THE SEASON OF 1921 BROUGHT TO ME

*Inez Addie Howe*

The season of 1921 was a peculiar one from the naturalist's standpoint. The unusually warm weather of March and early April brought many species of birds abnormally early and rushed trees and plants into bloom at unheard of dates. Then came the frosts of May and early June and the extreme heat and drouth of July and August. All of these conditions produced a strange sequence in the flower calendar of the season.

By May 1 we had recorded 78 species at the museum. Things went on prosperously and by October 22 our list showed 839 species, many of which had been shown both in flower and fruit. This collection was largely local and did not include many of the rare plants brought in from beyond our five mile radius. Included in this list were 36 additions to our local flora, as follows: *Salix sericea, Viola renifolia* var. *Brainerdii, Vaccinium pennsylvanicum, Melica striata,*

*Pedicularis canadensis, Geranium pusillum, Allium vineale, Glyceria laxa, Agrostis hyemalis, Festuca rubra* var. *subvillosa, Valeriana officinalis, Radicula sylvestris, Juncus tenuis, Panicum Boscii, Scirpus cyperinus, Onoclea sensibilis* var. *obtusilobata, Rynchospora glomerata, Lychnis dioica, Iva Xanthifolia, Lycopodium inundatum, Cyperus filmiculmis* var. *macilentus, Leontodon autumnalis, Lepidium sativum, Carex flava* var. *rectrirostra, C. platyphylla, C. eburnea, C. canescens* var. *subloliacea, C. Bebbii, C. Novae-Angliae, C. festucacea, Carex mirabilis, C. straminea, C. vesicarea, C. Pseudo-Cyperus, C. lurida* var. *gracilis.*

The treat of the season was, of course, the meeting of the clubs at Lake Willoughby, a full account of which was published in the *Vermonter*, Autumn edition, Nos. 7 and 8, Vol. 21, reprinted elsewhere in this issue. In October, J. M. Perham, who was surveying on Wheeler Mountain in the town of Westmore, found a large station for *Polypodium vulgare* var. *cambricum.*

The best single day's botanizing which I did last season was at Cole's Pond in Walden. The high altitude, the pond, and the extensive swampy land all contributed habitats for the rarest of plants.

In working over my own area after the Willoughby meetings I found stations for many of the carices that we found there.

I always combine birds and flowers and on June 22 I saw a pair of Arctic three-toed woodpeckers. They were seen on three different occasions and two others besides me saw them.

On May 19 I saw a pair of starlings carrying nesting materials into a hollow tree. I saw them several times in that vicinity, and this spring there were six individuals in the same region. I wondered if these might have been the adults of last year, with their family.

A pair of black-crowned night herons spent over two months, August to October, in St. Johnsbury in the region of Sleeper's River. This was quite an unusual visitation.

Extreme drouth and killing frosts made our season for birds and flowers much shorter than usual, and everything passed so hurriedly that many plant specimens were much less perfect than usual, and fewer well-fruited specimens were obtainable.

On the other hand, the receding of the waters in the ponds allowed many seeds of marsh and water plants to germinate in the oozy borders, so that furnished stations for several species new to our region.

Taken as a whole, 1921 was a strange, but prosperous year.

# NOTES

## New Form of Interrupted Fern

The curious interrupted fern from Bridgewater Corners, discovered some years ago by Mrs. W. E. Mack of West Woodstock, and exhibited to the club. has been examined by several fern specialists, and a description and pnotographs will soon be published in the *Fern Journal.* It will be known as *Osmunda Claytoniana, forma Mackiana.* —*E. M. Kittredge.*

## White-Flowered Polygala

Several plants of *Polygala paucifolia* bearing pure white flowers were found near the village of Proctor by a school girl and later identified by a visitor in the Proctor Library, where the children took their plants to compete for the prize offered by the librarian. Nature work such as is encouraged by the Proctor and Vergennes libraries—and others—is of the greatest benefit to the communities. Would that all villages maintaining libraries or community houses would see the advantage to their residents of teaching the children the value and beauty of the birds and flowers of the vicinity—*E. M. Kittredge.*

## Hartland Nature Club

During the July, 1922, meeting of the Hartland Nature Club, held at North Hartland, nearly 150 plants were observed, and many of the less common were collected for the club herbarium. Of these latter several are of interest to the state at large. Mrs. A. B. Morgan discovered *Selaginella apus* in a little depression of the pasture which was the scene of most of the "birding and botanizing" of the day. This so far as we know makes the fourth station for this species. *Brassica Napus*, in fruit, was collected near the woolen mill, and *Verbena hastata* × *urticaefolia*, growing with both parents in fine flower, on the river bank by Miss Kittredge. Through the courtesy of the club the latter specimen was presented to the New York Botanical Garden in response to Dr. Pennell's request for a specimen from that locality. The wound-wort *Stachys palustris*, Great St. John's wort, *Hypericum Ascyron*, and the small forget-me-not, *Myosotis laxa* were considered good finds in that field. Further down the sandy shore was carpeted with the creeping spearwort, *Ranunculus Flammula* var. *reptans*, and the banks were gay with quantities of the beautiful swamp milk-weed, *Asclepias incarnata.*—*E. M. Kittredge.*

## Yellow-Flowered Veratrum

Several plants of *Veratrum* bearing yellow flowers have been located in a meadow near the village of Woodstock. They differ in many particulars from the yellow flowered plant found in Plymouth two years ago; the flowers are less brilliant in color; the leaves not at all glaucus—quite like the common form in fact. The plants, while less robust than the common form, are not as delicate as the one from Plymouth. They are situated in wet, or at least damp places, and bloomed considerably later than the common form. Three or four plants of the common form are to be seen in adjacent fields, but none are in the immediate neighborhood of the yellow plants. It is hoped that they can be observed next year during the blooming season. It will not be possible to study them after maturing fruit, as the fields will soon be cut.—*E. M. Kittredge.*

## Three-Toed Woodpecker in Mendon

Twenty-five years ago, before the conifers were cut off by lumbermen, it was not unusual to see one or more three-toed woodpeckers in the vicinity of Rutland, especially in the winter, and both the white-backed and black-backed species have been found breeding on Mount Pico in Sherburne by George H. Ross of Rutland. These birds have nearly disappeared from Central Vermont, however, and it gave the writer a great deal of pleasure to see a male of the black-backed species in Mendon on September 25, 1921. The bird was observed at a distance of 20 feet and it was feeding on a dead soft-wood tree, its favorite habitat. Although I have been afield a great deal in every month of the year, the only other records I have for three-toed woodpeckers for two decades are as follows: April 29, 1906; white-backed, Bald Mountain in Mendon, on dead spruce; June 12, 1912, white-backed, Mount Horrid, Rochester, on dead spruce, apparently breeding.—*George L. Kirk.*

## Fern Culture

Miss Nancy Darling of Sky Farm, Woodstock, reports growing successfully young ferns, sent from Florida. *Polystichum adiantiforme* (Forst) J. Sm., is a large luxuriant fern native to the West Indies and South America and having deeply notched, twice-pinnate fronds of a dark green color, glistening, coriaceous and evergreen. It is much

handsomer than the house ferns usually cultivated and it is easily grown. This plant, received in 1913 from Lake Helen, Fla., has been once divided and yet it measured last winter one yard in height and width. It produced yearly several beautiful fronds.

The following ferns, grown together in one pot, were sent from Lakeland, Fla., in 1919: *Woodwardia virginica* (L.) Sm., which fruits; *Woodwardia areolata* (L.) Schott.; *Dryopteris floridana* (Hook) Kuntze, and a delicately beautiful fern unknown to Miss Darling. All are living and each has produced several new fronds.

## Eragrostis at Shushan, N. Y.

Frank Dobbin of Shushan, N. Y., writes: "It may be of interest to club members, particularly in Rutland and Bennington Counties, that I found three species of *Eragrostis*, not given in the Vermont Flora, near my home, which is about three miles from the Vermont border, *viz.: Eragrostis Frankii* (Fisch. Mey & Lall.) Steud.; *E. Eragrostis* (L.) Karst.; *E. peregrina* Wiegand., all growing on gravelly soil. These have been identified for me by the New York Botanical Garden and Professor Hitchcock of the Bureau of Plant Industry, Washington, D. C.

## A Giant Amelanchier

The shadbush is generally found as a shrub or small tree in central Vermont, but the writer happened upon a specimen in Mendon during July, 1921, which was a veritable giant of its kind. The tree, *Amelanchier laevis* Wiegand., stood 40 feet high and its trunk measured 16 inches in diameter six feet above the ground. The tree had the spreading form of an apple tree rather than the usual slimmer type of the shad. The specimen is in a pasture on the Gleason farm.—*George L. Kirk.*

## Red Mulberry in Rutland County

In September, 1921, the writer collected *Morus rubra* L. in West Haven, a number of the trees growing on a ledge. At the same place was found *Quercus muhlembergii* Engelm. The mulberry had heretofore been found in Vermont only at Pownal and this is an extension of its range in the State about 50 miles northward. The Flora gives only two stations for the oak, both in the Champlain valley.—*G. H. Ross.*

## Mammoth Horsetail

A specimen of *Equisetum fluviatile* L. collected by Leston A. Wheeler, Townshend, near the "Salmon Hole" in Brookline has a rootstock 50 inches long; 17 stems, the tallest of which measures 56½ inches and with an average of 53 inches. In mounting the specimen Mr. Wheeler used 16 sheets of paper. Mr. Wheeler reports the location of several new stations for *Selaginella apus* in Townshend and Newfane during the past season. In some of the stations the plant is very abundant and beautiful. Mr. Wheeler has collected a considerable number of specimens of *Rudbeckia hirta* which show all forms of gradation in the flower from a bunch of irregularly shaped green leaves to large and perfect flowers. "It will be interesting to watch them another year in order to see if any of these forms again develop," he writes.

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## Program of the Hartland Nature Club

*Miss Nancy Darling*

The Hartland Nature Club, with Miss Elizabeth Billings of Woodstock, President, reports for 1922, a full program, diversified by field meetings, colored slides and lectures.

Among the last is one on "Geological Studies at the Gravel Pit," by Dr. Williams; "Edible and Poisonous Mushrooms," by Miss Burlingham; and "Another Year as an Egg Collector," by Mr. Karl Pember.

The special subjects are "Mosses and Minerals of Windsor County."

The Mother Nature Studies Class of Windsor High School, recently identified with the H. N. C., is making a collection of weeds and minerals.

"I found *Linaria canadensis* in August, 1922, along the railroad track at Starr Farm beach, five miles north of Burlington. This is the most northerly station in the State as far as I know. *Linaria minor* (L.) Desf., first reported for Vermont at West Rutland by George L. Kirk in 1909, is getting very common along the railroad about Burlington and elsewhere."—*Nellie F. Flynn.*

Leston A. Wheeler of Townshend writes: "A flower of *Cypripedium acaule* has just been handed me which was collected near Marl-

boro Four Corners by Miss Eleanor Willard. The flower appeared somewhat larger than ordinary and upon investigation proved to have one perfect 'shoe' nearly enclosed in another, which was a size larger. Both 'shoes' were of good color and otherwise normal."

D. Lewis Dutton of Brandon is endeavoring to compile a list of the lichens of New England and would like to receive information as to any local lists that may have been published.

Mrs. W. E. Mack of South Woodstock has raised several plants from seed of the hybrid Mallow (*Malva alcea* × *moschata*) found a few years ago near Bridgewater. They are now beginning to bloom and are very beautiful, showing clearly the characters of both supposed parents, just as did the original plants.

Vermont, like the rest of northern New England, was visited by an unusual number of crossbills during the summer of 1922, both the American and white-winged species being recorded, the former being the more numerous. The birds arrived unusually early, being first seen about Rutland, August 7. The majority soon passed southward, but a few remained through August and September, only an occasional one being seen after the latter month. Crossbills have not been so numerous in the vicinity of Rutland in many years as they were during the first few days of their incursion.—*George L. Kirk.*

A third Vermont station for *Juncus Torreyi* Coville has been discovered, the writer having found it growing in West Haven. This station is several miles from any railroad, which the plant frequently follows.—*G. H. Ross.*

The Bulletins of the Vermont Bird Club, Nos. 1 to 8, inclusive, can now be obtained of Mrs. Nellie F. Flynn, 251 S. Willard St., Burlington, Vt.

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## Mushrooms

Each summer for the past three years Miss Nancy Darling of Woodstock has found at or near her home morels, coral mushrooms, and edible boleti which she has enjoyed as table delicacies.

## NEW MEMBERS

### Botanical Club

Miss E. Mabel Brownell .....196 S. Willard St., Burlington, Vt.
Mrs. Maud Chisholm .....Proctor, Vt.
Henry T. Douglas .....Burlington, Vt.
J. A. Drushel .....Harris Teachers' College, St. Louis, Mo.
Miss Litta B. Fisher .....500 M Street, N. W., Washington, D. C.
Mrs. Lynn W. Fullam .....Westminster, Vt.
Miss Miriam Hill .....60 Elliott Ave., Yonkers, N. Y.
Miss Gladys W. Jones .....10 High Street, Fair Haven, Vt.
Irving F. Kelley .....St. Johnsbury, Vt.
Mrs. Carroll K. Loomis .....Putney, Vt.
Miss Minnie L. Marshall .....Lancaster, N. H.
Mrs. Robert M. Schley .....74 Summer Street, Buffalo, N. Y.
Mrs. Edward Welling .....North Bennington, Vt.

Miss Margaret MacLean 1 Dr. 72nd St New York, N. Y.

### Bird Club

Dr. John Brainerd .....419 Boylston Street, Boston, Mass.
J. A. Drushel .....Harris Teachers' College, St. Louis, Mo.
Mrs. Lynn W. Fullam .....Westminster, Vt.
Miss Gladys W. Jones .....10 High St., Fair Haven, Vt.
Irving F. Kelley .....St. Johnsbury, Vt.
Mrs. Carroll K. Loomis .....Putney, Vt.
Karl A. Pember .....Woodstock, Vt.
Mrs. Edward Welling .....North Bennington, Vt.

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## CHANGE IN NAME OR ADDRESS

### Botanical Club

Stewart H. Burnham, Department of Botany, Cornell University, Ithaca, N. Y.; Herbert N. Dutton, as previously printed, should be Harry N. Dutton, The Tavern, Grafton, Vt.; Miss Violet S. French becomes Mrs. Harry C. Ridlon, Green Mountain School, Bennington, Vt.; Miss Louise C. Hazen, 63 Washington Square, New York; Miss Margaret Heatley, becomes Mrs. Margaret H. Moss, P. O. Box 1176, Johannesburg, South Africa; Dr. Luther P. Sprague, as previously pub-

lished, should be Dr. Leonard P. Sprague, Chateaugay, N. Y.; Miss Phoebe M. Towle, Enosburg Falls, Vt.; Dr. Phineas W. Whiting, University of Iowa, Iowa City, Ia.; Mrs. Phineas W. Whiting, University of Iowa, Iowa City, Ia.

### Bird Club

Miss Violet S. French, becomes Mrs. Harry C. Ridlon, Green Mountain School, Bennington, Vt.; Miss Lydia Heller, as published, should be Miss Lydia Hiller, State School, Vergennes, Vt.; Mason Towle should be William Mason Towle, Enosburg Falls, Vt.

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## MEMBERS DROPPED

### Botanical Club

Mrs. Ezra Brainerd, Frank H. Brooks, Miss Edwina Butterfield, Mrs. A. H. Colton, Miss Ada Porter Crane, Miss Ethel A. Eddy, Raymond D. Flanagan, Mrs. Chester Loomis, Richard M. Marble, Prof. W. J. Morse, Miss Fannie J. Parkhurst, Prof. A. K. Peitersen, D. Eddy Potter, Mrs. Mary Goddard Potter, Oliver T. Presbrey, Miss Hazel H. Riley, Mrs. W. T. Scofield, Prof. E. A. Shaw, G. C. Shedd, Mrs. Emily H. Terry, Rev. Dr. John M. Thomas, Miss Dorothy Votey, Frederick W. Ward, Mrs. F. W. Ward, Mrs. D. C. Webster, Miss Emeline Webster, Miss Grace Wheeler, Rev. Levi Wild.

### Bird Club

Miss Belle Anderson, Miss M. Elizabeth Bogg, Frank H. Brooks, Miss Julia A. Chase, Mrs. A. H. Colton, Miss Ada Porter Crane, Mrs. J. D. Davis, R. V. N. Davis, Miss Shirley Farr, C. C. Gates, Frank L. Hoag, Miss Annie M. Holcomb, Dr. Clifton D. Howe, Charles H. Jones, Duane E. Kent, Richard M. Marble, Mrs. L. H. Noyes, Mrs. Agnes M. Paxton, W. H. Phillips, C. P. Tarbell, Remington Vernam, Mrs. George W. Wales.