NYFA Newsletter

New York Flora Association
of the New York State Museum Institute

Vol. 1 No. 3 Co-Directors: Richard S. Mitchell, New York State Museum; Robert E. Zaremba, The Nature Conservancy August - 1990

The Organization is off to a Fine Start with Over 260 Members. Thanks!

A Membership and Address List is Included Here

A Call for Nominations for an NYFA Advisory Council --

by Richard Mitchell & Robert Zaremba

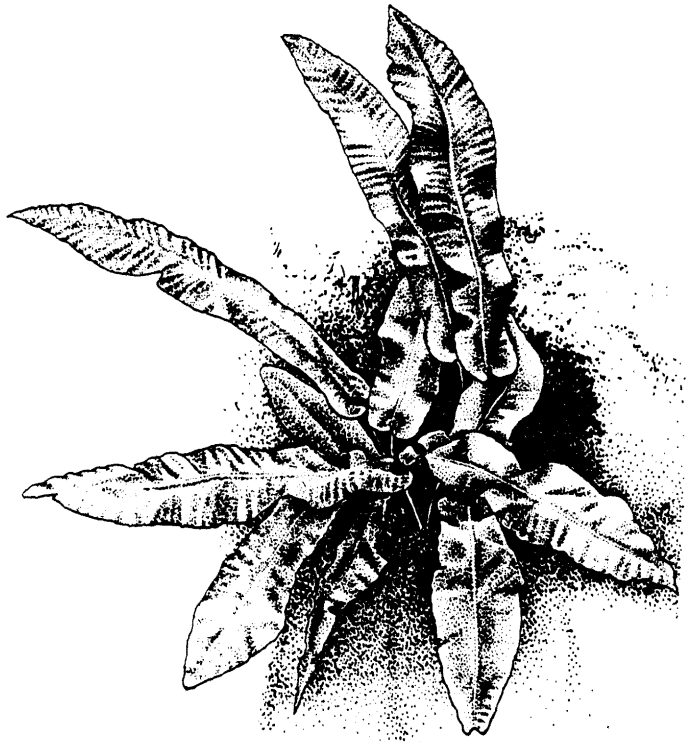
Members of NYFA will have the opportunity to vote into existence a seven member panel that will advise the directors. They will make policy decisions on how the funds of the organization may best be put to use to further the cause of field botany in the state. We, as co-directors, will sit in on the council's meetings but, because we are self-appointed, we will not vote. Among the more important functions of the council will be to offer small grants and awards to worthy field and herbarium projects, and to help choose what the NYFA will publish under its name.

Who to nominate - yourself or any other member of the organization, but first contact the person, find out if they want to serve and if he or she is willing to travel to Albany once or twice a year for advisory council meetings.

Who is the nominee? Just include a very brief sketch of who the person is and what their professional and personal interests are... no more than a couple of sentences.

Choose from - the membership list printed at the end of this newsletter.

Send nominations - before October 1 to:
The New York Flora Association, 3132 CEC, Albany, NY 12230, or make your nomination while attending the fall meetings in Albany.



Rare Hart's-tongue Fern in New York State

by Donald Leopold

The American hart's-tongue fern (*Phyllitis scolopendrium* (L.) Newm. var. *americana* Fern. was originally discovered a few miles west of Syracuse, in Geddes, New York, in 1807 by Frederick Pursh. The last "new" hart's-tongue site in New York was found near Munnsville in 1934 by G. L. Stebbins. Later correspondence, between Homer House and Mildred Faust during the 1940's, however, suggests that the species may have been planted at this location. A population at Big Nose Mountain in Montgomery

County, New York, is known to have been planted there around 1945 by Orra Phelps.

Native populations are known in eastern North America from two widely separate regions: (1) the northern range includes the Niagara Escarpment in Ontario (with numerous sites in seven counties), the Upper Peninsula of Michigan (four sites in two counties), and central New York (eight sites in two counties); (2) in the southern range, the fern is found in sinkholes in eastern Tennessee (one site) and northern Alabama (two sites in two counties).

In July, 1989, the U. S. Fish and Wildlife Service officially listed American hart's-tongue fern as a federally threatened species. The species is also protected under New York State law, with a rank of E (endangered). The New York Natural Heritage Program ranks hart's-tongue fern G4 (apparently secure globally) and S2 (typically 6-20 occurrences and vulnerable in New York State). Approximately 4000 individuals exist in the United States, of which about 92% are found in New York's Onondaga and Madison counties, comprising only sixteen populations. In addition, nearly 80% of all the hart's-tongue fern in New York occurs at Clark Reservation State Park.

The six populations at Clark Reservation have been censused about every five years since 1916 (Hunter, 1922; Faust, 1960; Cinquemani *et al.*, 1988). The remaining New York populations have also been censused at irregular intervals. The late Mildred E. Faust of Syracuse University and members of the Syracuse Botanical Club studied these populations from the mid 1920's to the late 1980's. The data indicate that the large population fluctuations occurring this century coincided with severe regional droughts, as expressed by the Palmer Drought Severity Index, and with abnormally low temperatures in winter, when there was little or no snow cover (Cinquemani Kuehn & Leopold, in prep.).

A strong relationship between macrosite characteristics and hart's-tongue fern occurrence has long been well-established. Nearly all the populations in New York are found in glacial plunge basins, cross channels or ravines, on dolomitic, Onondaga limestone talus, on north- or northeast-facing, mesic, steep slopes at mid-slope position, and beneath hardwoods. More recently, Cinquemani Kuehn (1989) indicated that microsite requirements vary with the growth stage of the fern (*i.e.*, sporeling, immature and mature individuals). For example, sporelings are more vigorous beneath herb and shrub canopies and on bryophyte mats, whereas mature hart's-tongue ferns are more vigorous without herb and shrub cover and when bryophyte mats are absent. Mature hart's-tongue ferns grow in rock crevices where organic matter accumulates and root anchorage is good. Cinquemani Kuehn's work also suggests that the distribution of hart's-tongue fern in New York is further limited by average annual snowfall, and that snow depth at mid-slope position on north-facing slopes might be a key to the establishment and maintenance of populations. It appears that hart's-tongue fern is most abundant in central New York because certain climatic factors (*i.e.*, annual snowfall) and bedrock (*i.e.*, dolomitic limestone) provide an ideal habitat. Additional site requirements (*e.g.*, high humidity, moist soil, and bright light without direct sunlight) are met by the local conditions of north-facing slopes which support mature hardwoods. The combination of factors involved in maintaining Alabama and Tennessee sink populations has yet to be studied.

The U. S. Fish and Wildlife Service, in listing hart's-tongue fern as a threatened species, indicated that it is threatened throughout most of its range by trampling and alteration or destruction of its habitat by timber removal, quarrying and residential or other developments. The Federal recovery plan urges that new sites should be sought. Although central New York has been searched for over 180 years for hart's-tongue fern, with little recent success, there is some chance that a new site for this species still may be discovered. The best hope for this fern is that its steep, rocky habitat has kept all but the most adventurous hikers away.

Literature:

Cinquemani, D. M., M. E. Faust, and D. J. Leopold. 1988. Periodic censuses (1916-1986) of *Phyllitis scolopendrium* var. *americana* in central New York State. Amer. Fern Jour. 78(2): 37-43.

Cinquemani Kuehn, D. M. 1989. Demographic and habitat studies of *Phyllitis scolopendrium* (L.) Newm. var. *americana* Fern. in central New York State. M.S. Thesis, State University, College of Environmental Science and Forestry, Syracuse, New York, 83 p.

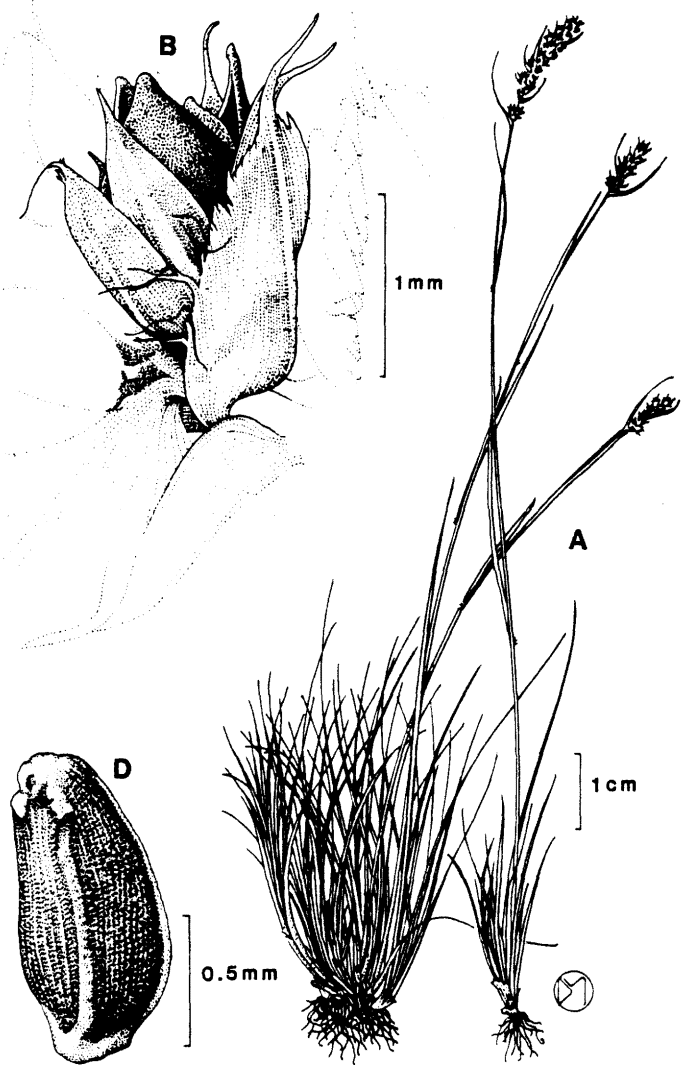
_____ & D. J. Leopold. Long-term demography of *Phyllitis scolopendrium* (L.) Newm. var. *americana* Fern. in central New York (submitted to the Bull. Torrey Bot. Club).

Currie, R. C. 1990. Technical Draft Recovery Plan for American Hart's-tongue Fern. U.S.F.W.I., Asheville, N.C. (mimeo) 36 p.

Faust, M. E. 1960. Survival of hart's-tongue fern in central New York. Amer. Fern Jour. 50: 55-62.

Hunter, M. 1922. The present status of *Scolopendrium* in New York State. Amer. Jour. Bot. 9: 28-36.

Donald J. Leopold, State University of New York College of Environmental Science & Forestry, Syracuse, NY 13210



Luzula spicata, **the rare spiked woodrush, known from only two New York state sites in the Adirondacks. (Illustration by Deborah Morrison Vriesen, from Steve Clemants' Juncaceae of N.Y. State, 1990.)**

A Classification of New York's Ecological Communities

by Carol Reschke

A new publication on community classification will soon be available from the New York Natural Heritage Program. The book, entitled *Ecological Communities of New York State*, is being published by the New York State Department of Environmental Conservation.

The main body of the text is a set of descriptions of New York's plant and animal communities, organized by systems and subsystems. The systems are similar to those used for wetlands classification by the U.S. Fish and Wildlife Service. Each community description lists characteristic or dominant species, environmental features, distribution of the community in New York State, and the Heritage Program element rank. Many descriptions also include a list of sites with a good example of the community, as well as sources of information about the community type.

An introduction and table of contents provide an overview of the classification. Following the set of community descriptions are reference citations and three appendices. Appendix A describes the Heritage Program element ranking system, Appendix B is a glossary, and Appendix C is a key to systems and subsystems. Also included is an index to systems, subsystems, and communities. Inside the back cover are two maps showing New York's counties and the ecozones used to describe community distribution. The cover of the publication also includes several photographs illustrating communities. The book is an 8½ x 11 inch paperback with 108 pages, and it will be available at no charge from the New York Natural Heritage Program (see address below).

As the community ecologist for the Heritage Program, I developed the classification and wrote the descriptions to provide a framework for the Heritage Program's inventory of significant natural communities in New York State. This classification represents the fifth revision of a draft classification that has been in use by the Heritage Program since 1985. The community descriptions are derived from a review of literature sources, species lists compiled from field surveys conducted by Heritage Program biologists, and in some cases, either from interviews with biologists studying communities or from reviewers' comments.

In addition to serving as the framework for the Heritage Program's community inventory efforts, the publication is designed to meet a variety of needs. The classification provides natural resource managers with a standard set of terms and concepts to describe plant and wildlife habitats, and it provides mapping units to be used in plans for managing public and private natural areas such as forest preserves, wildlife management areas, parks, and nature preserves. The classification can be used to identify ecological communities for environmental impact statements and other forms of environmental review. The classification and community descriptions also provide a general survey useful to students of the natural history of New York.

The community classification is flexible and open to future modifications. It is our current working model for community inventory work, and it will be refined as new data from field surveys and the

literature become available. If you would like a copy of the book, send me your name and address; I will start distributing the books as soon as they come back from the printer. The Heritage Program welcomes feedback from users of the classification. Readers are invited to send comments or data to me:

Carol Reschke, New York Natural Heritage Program, N.Y.S. Department of Environmental Conservation, 700 Troy-Schenectady Road, Latham, NY 12110

Editor's Note: When making labels for specimens sent to the New York Museum or filling out data slips for NYFA atlas mapping, we highly recommend listing the community type from Ms. Reschke's publication.

Sending Specimens and Data-slips to NYFA:

by Richard Mitchell

Thanks to those of you who have responded to county record gaps in the atlas by sending in specimens and data slips. As you can see, the atlas is truly preliminary. We **do** want to receive county record additions from you, but it will help to set down a few guidelines first, since NYFA doesn't currently have a staff to process tons of data.

What we would like to receive:

1) Heat-dried specimens of *all but the rarest* plants in flower or fruit (spores). In the case of herbs, get roots or rhizomes. Collect enough material to send us your duplicate: a single large specimen or enough small individuals to spread out on two 12 x 18" sheets. Each specimen should be sent folded in a single sheet of newsprint, accompanied by your label or a data slip from the atlas xeroxed and filled out. Give as complete information as possible (See the article by Pahlavan below).

2) Good photos of suspected rarities, so that they are not collected needlessly. We'll follow up, if they look interesting.

3) Data slips for plants that don't pose any identification problems, so long as you cite the herbarium or other location where they are housed. Also, if you are a specialist in a more difficult group (*e.g., Carex* or *Crataegus*), and you have annotated the specimens, we will happily accept the data, but we would very much like voucher specimens too.

What we can't use:

1) Data slips without voucher specimens for plants of taxonomically difficult groups
2) Specimens that have not been pressed and dried
3) Specimens without collection data (especially the specific locations where they were found)
4) Specimens in plastic bags or plants fastened down with plastic ("Scotch") tape.
5) Observations of rarities not confirmed by a good photo or site description that we can visit

If specimens and data start flowing in at a rapid rate, we may not be able to thank you for your contributions right away (especially if they are small), but interesting discoveries that you make will be reported in the newsletter, and you will be credited in future lists as a contributor from your geographic area of interest.

Data Accuracy and a GIS for New York Plants -

The following article is by Nique Pahlavan. She is a geographer and Geographic Information System specialist working for the Botany Office at the New York State Museum. We hope you will find the mapping project exciting and plan to participate:

Working Together to Produce Accurate, Useful New York Flora Maps --

by Dominique Pahlavan

The New York State Museum is in the process of designing a system for putting all known New York herbarium specimen label information into a computerized database. This database will be used with a geographic information system (GIS) to create distribution maps and other documents of interest, pertaining to New York state flora. If such a GIS project is to work, the more precise the collecting data the better; each location will ideally be represented by a small point placed on a topographic map showing exactly where the specimen was collected. Of course this is only the optimal goal, and we will be able to use less precise data.

Unfortunately, because previous collectors did not record their sites with point-mapping in mind, we are finding that it's very difficult to identify the exact locations for most of the museum's older specimens. Because of this, we're are very excited about the quality of collecting information that may be generated by new collections by our staff and other members of the New York Flora Association.

We will find a way to provide maps for collectors who wish to record exact collecting sites on them. The following are some helpful hints on recording locality information for the data slips in a way that will make incoming specimens very valuable to our GIS project and ultimately serve botanists, much in the same way bird atlases do for ornithologists.

An Example: Many of our old records list a locality such as: *"1 mile south of Otselic Center"*. This may seem reasonable, but it is actually very difficult to map. Even taking "1 mile" to mean 1.0 miles, which isn't very likely, this description could mean any point in the 2 shaded areas shown in Fig. 1. Why? Because it isn't clear if the "1 mile south of Otselic Center" is 1 mile from the center of town or the

city's edge (and don't forget city boundaries are not very precise in our minds anyway, and they change over time!) Also, collectors never used SSW

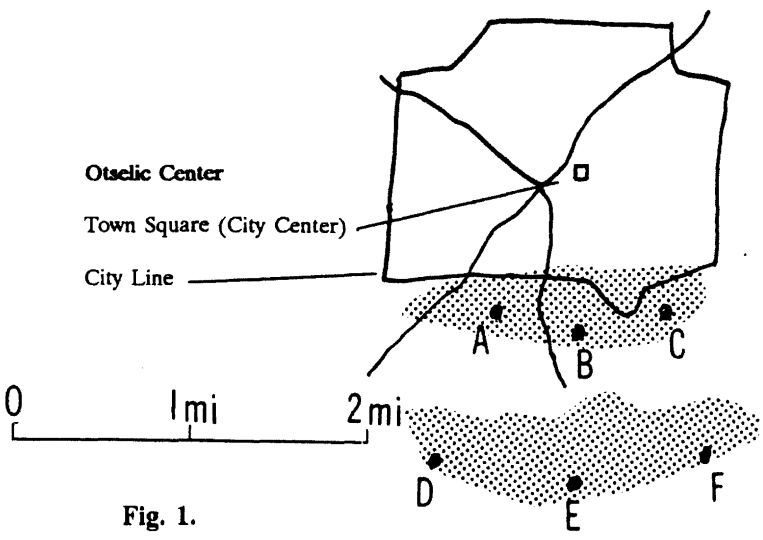


Fig. 1.

or SSE, and only rarely used SW or SE, so "south" could really be anywhere in a 45° or even 90° sweep. To avoid problems like these, we hope future collectors will use the center of town as a reference point for distances. We encourage botanists to use compass directions (N, S, E, and W) as precisely as possible, and not round off to the nearest mile (tenths of a mile would be great, but quarters will also be very helpful).

With the following information we can tell points A, B, E and F apart:

Point A: .9 miles SSW of Otselic Center
Point E: 1.7 miles S of Otselic Center
Point B: .9 miles S of Otselic Center
Point F: 1.7 miles SSE of Otselic Center

An important point to remember is that roads, and especially **intersections**, can be **very good** reference points to use.

How Can I Make my Label Data Useful to the GIS?

The Gazetteer Option: (preferred method)

With this option, you put a dot on a map we give you, and we plot the coordinates. Here at the museum, we have found the *New York State Atlas and Gazetteer* very useful (published by DeLorme Mapping Company and selling for $12.95). For those of you wishing to record your collecting localities as dots on a map, we have devised a system that we hope will facilitate this. We will send an index map from this state geographical atlas to all NYFA members free. From this index, you will be able to find the page numbers of the atlas that cover areas where you plan to collect. When you call or write to let us know which areas you will be collecting in, we'll send you photocopies of the relevant pages (along with a self-addressed stamped envelope, while they last). You can mark your localities on these maps. Please number your data slips, write in the numbers with arrows pointing to the dots on the maps, and send them back to us. We will then send you replacement map copies. We don't want our cooperators to have to do the photocopying of the atlas maps, although active collectors may wish to buy one of these atlases to keep as a complete reference for the state. On request, we will also send you a copy of the map scale, divided into tenths, on a sheet of acetate, so you can lay it over the map in any place; this should make reading the map easier.

The Topo Map Option: (a good alternative)

If you have a United States Geological Survey (USGS) topographic map for your collecting area and are comfortable using it, the very best way to record the collecting data is to record the UTM (Universal Transverse Mercator) coordinates shown on the topo sheet. The UTM Grid is one of three coordinate systems shown on USGS topographic maps (sheets at the 1:24,000 scale, shown with BLUE ticks) - the other two are latitude and longitude (black ticks), and the state plane system (dashed ticks). Why use the UTM grid instead of the latitude and longitude we are all familiar with? There are two reasons. First, the USGS is encouraging the adoption of the UTM system as a basic reference for use with their maps. New topo sheets will have a full fine-line UTM grid printed across the map, which makes locating coordinates for all points on the map much easier. The USGS is also advocating the use of the UTM reference system for any data collections related to maps. Secondly, because the units of this grid are simply meters, it is much easier to use than latitude and longitude, which can become cumbersome when degrees must be divided in 60th's (minutes) and those 60th's must be divided again into 60th's (seconds).

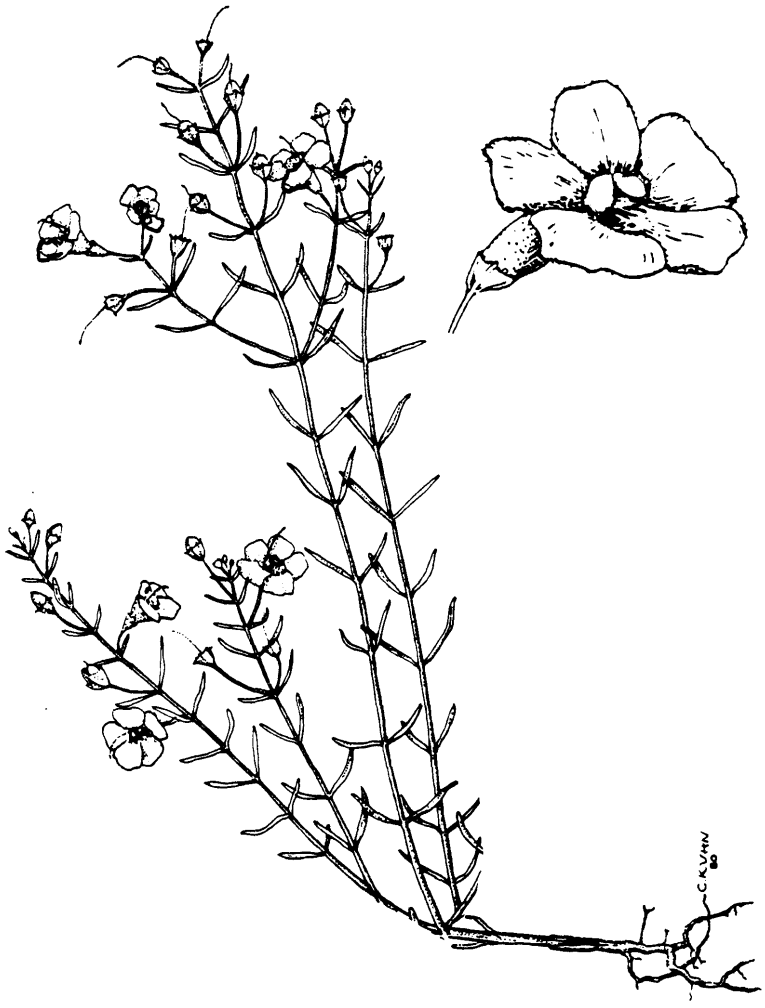
One caution -- because the UTM units are meters, the numbers can get very large; for example, the coordinates for the State Museum are 4,722,200 N., 601,400 E., Zone 18. (These coordinates are always recorded as North and East, and New York state covers two zones, Zone 17 in the west and Zone 18 in the center and east, although on some maps Zone 18 is extended across the whole state.) Despite the unwieldy numbers, this coordinate system truly is easier to use than others. These USGS topo sheets are wonderful maps, but they may be more difficult to use than the atlas maps, because their scale of 1:24,000 means that each map covers only a small

ground area.

Unfortunately, *The New York State Atlas and Gazetteer*, which we have chosen because it is drawn at a good scale for our purposes, and shows roads and creeks very well, does not have UTM grids on its maps. So if you choose to record your collecting sites on these maps, **we will determine the UTM coordinates** of your points here at the Museum.

Advise or Questions?

If you have expertise to offer or **any** suggestions on how to enhance the smooth operation of this map copy system, or if you have comments or questions about the mapping project, we welcome them. It is very important to us to make data collection simple and painless for you, and as accurate and precise as possible for the sake of a project we can all be proud of.



Sandplain Gerardia, *Agalinis acuta* Pennell, in New York --

by Robert Zaremba

In *The Vegetation of Montauk* (1923), Norman Taylor described *Agalinis acuta* (sandplain gerardia) as one of the eight most common plants of the Montauk Moorlands. Even if that were a gross exaggeration, *A. acuta* certainly must have been present in many scattered locations. Fifty-four years later, when Bruce Sorrie located *A. acuta* in a Massachusetts cemetery, no one had recorded seeing the species for 36 years. Subsequently, systematic searches have turned up 51 historical records and only ten extant populations: one in Rhode Island, one in Maryland, two in Massachusetts, and six in New York. In 1988, the U.S. Fish and Wildlife Service listed *A. acuta* as an endangered species.

Agalinis acuta is an annual and a member of the figwort family (Scrophulariaceae). Plants range in size from 1 to 40 cm in height with ascending branches and needlelike leaves. The flowers are a pale pink and appear from mid-August to early October. These plants are easily confused with *A. tenuifolia* and *A. setacea*, which also both occur in New York. *Agalinis acuta* does not occur sympatrically with *A. tenuifolia*, and it can be distinguished from *A. setacea*, with which it does occur, by having yellow seeds and its stems and leaves drying a tan color, while *A. setacea* has dark brown or black seeds and dries black.

The six extant New York populations are all located on Long Island in grasslands dominated by *Schizachyrium scoparium* (little bluestem). Plants occur in small openings with exposed mineral soils. Most of these openings were created or are maintained by human disturbance, including mowing, bulldozer scraping of the soil, horseback riding, dirt bike riding, and herbicide use.

Searches for information on *Agalinis acuta* revealed that, like most plants, very little was known about the ecology and biology of the species. All information about the species and related taxa has been reviewed by Caljouw (1988). Initial research focused on pollination biology.

Why is this plant so rare? Is there a problem with pollination or seed set? Field observations by Lundgren (1983) and Blanchard (1990) revealed that *A. acuta* is pollinated by a broad range of insects and that it produces copious seeds, so seed production is not limiting. Further work, at the Garden-in-the-Woods (Brumbach, 1989), showed that *A. acuta* can be successfully grown in pots, that it does not need a cold treatment, and that it must be grown with *Schizachyrium scoparium* on which it may be hemiparasitic. All populations have been monitored since they were relocated. In 1988, a very dry year, there were fewer than 900 plants at all known sites.

Research has recently shifted toward developing an understanding of the habitat of *Agalinis acuta*, so

that plants can be reintroduced at historical sites (U. S. Fish and Wildlife Service, 1989). It is hoped that soil analysis will help reveal why *A. acuta* germinates in almost the exact same spot each year.

The Nature Conservancy holds protection agreements on two of the Long Island sites. Another site is federally owned, but may be sold for development, except for the small area around the plants. Two sites may have been destroyed this past winter (89/90) when narrow trenches were dug near the plants disturbing the soil surface. Much remains to be done to protect *A. acuta* and to understand the biology and ecology of this rare plant.

Literature Cited:

Blanchard, O. L. 1990. Further observations on the reproductive biology of *Agalinis acuta* in New York. Report to The Nature Conservancy N. Y. Field Office. 20 pp.

Brumbach, W. 1989. Propagation of *Agalinis acuta*. Report to U. S. Fish and Wildlife Service. 2 pp.

Caljouw, C. 1988. Element stewardship abstracts: *Agalinis acuta*, sandplain gerardia. Unpublished report to the Eastern Heritage Task Force, Boston.

Lundgren, J. 1983. Autecological study of *Agalinis acuta* at two cemeteries in Massachusetts. Unpublished report of The Nature Conservancy, Mass./R.I. Field Office.

Taylor, N. 1923. The vegetation of Long Island. Part 1. The vegetation of Montauk: a study of grassland and forest. Brooklyn Bot. Gard. Mem., 2:1-107.

U.S. Fish and Wildlife Service, 1989. Sandplain gerardia, *Agalinis acuta*, Recovery Plan. U. S. Fish and Wildlife Service. Newton Corner, Mass. 47 pp.

Alvar Landscapes - New York's Stone Prairies -

By Bruce Gilman

Alvar landscapes occur where horizontally-bedded limestones are covered by little or no soil. These landscapes are rare across eastern North America, but in New York, along the eastern shoreline of Lake Ontario, such conditions do exist. In McClintock & Stewart's (1965) report on the Pleistocene geology of the St. Lawrence Lowland, the existence of this unique physiographic surface is explained in the following manner: "...because the melting glacial ice margin stood in a lake, calving ice bergs carried away drift which otherwise would have covered the bedrock." As the glacial waters receded, large areas of the underlying Ordovician limestone were exposed. Despite the time elapsed since the last glacial advance, a close relationship remains between surface topography and bedrock structure. Glacial scouring is evidenced by the sculptured nature of limestone exposures. Thin, organic soils have accumulated, in place, directly on the bedrock, but only in protected sites.

Alvar vegetation characteristically has low community cover comprising species that are tolerant to limestone substrate and extreme seasonal fluctuation in moisture and temperature, such as vernal wetness followed by severe summer drying. Four community types are recognized: calcareous pavement barren, alvar grassland, cedar glade and limestone woodland. Species identified as rare by the New York Natural Heritage Program occur as components of each of these vegetation types.

Community structure is highly patterned, with some species distributions readily attributed to soil-filled crevices or recent surface solution channels. Vertical stratification primarily involves the emergence of arboreal species from bedrock fissures. Small-scale patterns are exhibited along gradients of site quality, seral stage and disturbance history. It is suspected that frost heaving, including needle ice action, may be an important, recurrent disruptive factor. Temporal patterning, related to species phenology and microclimate, is also apparent.

Alvar floristic assemblages vary. New York alvar components show prairie affinities, and include several disjunct species that are rare in the state. Canadian researchers hypothesize that these species migrated across the prairie peninsula during the xerothermic period, expanding their ranges eastward across Michigan, southern Ontario, and into upstate New York (Catling, *et al.*, 1975); however, the phytogeography of most alvar species remains unstudied.

Alvar rarities include lichens (*Pyrenopsis pulvinata*), mosses (*Scorpidium turgescens*, *Brachythecium turgidum*, and *Ditrichum flexicaule*) and vascular plants. *Carex crawei* and *Sporobolus heterolepis* are frequent members of the alvar grassland community, with *Castilleja coccinea* and *Zigadenus elegans* much less common. *Hedeoma hispidum* and *Corydalis aurea* inhabit the dry, sculptured rock surface of the pavement barrens, while *Senecio pauperculus* may grow from a soil-filled crack. Moist moss mats along exposed limestone may be home to *Epilobium hornemanii*, *Scutellaria parvula* and *Geranium carolinianum*. The rare Ram's-head ladyslipper (*Cypripedium arietinum*) occurs on the shaded forest floor of coniferous limestone woodlands. Prairie smoke (*Geum triflorum*), once thought to be extirpated from the state, has recently been rediscovered in an alvar landscape, where it forms impressive colonies locally.

Historically, the owners of most alvar communities considered them to be wastelands. Crops could not be supported there, and the crevices were dangerous to grazing animals. Firewood cutting and use as local dump sites became common. More recently, modular homes supporting population growth in the Watertown region have posed new a threat to alvar landscapes. Fortunately, conservation efforts by The Nature Conservancy and the New York State Department of Environmental Conservation have resulted in the protection of significant alvar sites. Work remains, however, to conserve these unusual botanical sites.

Pertinent Literature:

Catling, P. M., J. E. Cruise, K. L. McIntosh, and S. M. McKay. 1975. Alvar vegetation in southern Ontario. Ontario Field Biologist 29: 1-23.

Jacques, E. and D. Kirk. 1985. Stone road alvar. Seasons 25:24-29.

MacClintock, P. and D. P. Stewart. 1965. Pleistocene geology of the St. Lawrence lowland. NYS Science Service Bulletin 394, 152 pp.

Rosen, E. 1982. Vegetation development and sheep grazing in limestone grasslands of South Oland, Sweden. Acta Phytogeogr. Suec. 72: 5-107.

Stephenson, S. N. and P. S. Herendeen. 1986. Short term drought effects on the alvar communities of Drummond Island, Michigan. Michigan Biologist 25: 16-27.

NYFA members desiring an alvar plant checklist should contact: **Bruce A. Gilman, Department of Natural Resources Conservation, Community College of the Finger Lakes, Canandaigua, New York 14424.**

Report on the NYFA Alvar Field Trip-

by Robert Zaremba and Richard Mitchell

June 9, 1990 was a beautiful day out on the flatrock near Watertown. Seventeen of us gathered at Limerick Cedars in the late morning and spent the day pursuing the secrets of that fascinating community known as "the alvar." Unknown in this state until a decade ago, the prairie-like association first became known first for the rarities it harbors. We saw **all** but the ram's-head ladyslipper on a single day's pleasant walk! Bare limestone, rich with fossils, abounds in the area, but, where thin soils have built up, one can hardly walk without treading on New York state rarities, some of which were thought to be extirpated until recently. Prairie smoke (*Geum triflorum*) was locally abundant and in full fruit with many flowers as well. There were almost no weeds in the areas we visited, both of which were on Nature Conservancy preserves. Responding to the exhilaration of the open spaces, some of us noted that it was truly mastodont habitat. Those of us lucky enough to be there were extremely sorry you missed it. The following are species-lists from the two major areas we visited. Go ahead. Be jealous!

Species Seen at Limerick Cedars Preserve, June 9, 1990- based on a species list provided by Bruce Gilman:

Acer rubrum
Acer saccharum
Achillea millefolium
Agrostis hiemalis
Ambrosia artemisiifolia
Amelanchier spp.
Anemone cylindrica
Antennaria sp.
Apocynum sp.
Arabis stricta
Arctostaphylos uva-ursi
Asclepias syriaca
Aster cordifolius
Aster lanceolatus
Aster novae-angliae
Barbarea vulgaris
Bromus inermis
Campanula rotundifolia
Carex aurea
Carex eburnea
Carex granularis
Carex pensylvanica
Carex umbellata
Centaurea maculosa
Cerastium arvense
Cerastium vulgatum
Clinopodium vulgare
Comandra umbellata
Cornus foemina ssp. *racemosa*
Cornus sericea
Cypripedium calceolus
Dactylis glomeratus
Danthonia spicata
Eleocharis elliptica var. elliptica
Epilobium coloratum
Equisetum arvense
Fragaria virginiana
Galium aparine
Galium sp.
Gaultheria procumbens
Geranium robertianum
Glyceria striata
Hieracium aurantiacum
Hieracium sp.
Hypericum perforatum
Juncus tenuis var. *uniflorus*
Lepidium campestre
Leucanthemum vulgare
Lilium philadelphicum

Linaria vulgaris
Lonicera dioica
Maianthemum canadense
Melilotus alba
Melilotus officinale
Monarda fistulosa
Myosotis verna
Oenothera perennis
Onoclea sensibilis
Oxalis stricta
Penstemon hirsutus
Plantago major
Poa compressa
Poa pratensis
Polygonatum biflorum
Populus tremuloides
Potentilla arguta
Potentilla norvegica
Potentilla recta
Rhamnus cathartica
Rhus aromatica
Rhus typhina
Rosa blanda
Rumex acetosella
Salix candida
Sanicula sp.
Saxifraga virginiensis
Schizachne purpurascens
Senecio aurea
Senecio paupercula
Solanum dulcamara
Solidago nemoralis
Solidago ptarmicoides
Spiraea sp.
Stellaria longipes
Symphoricarpos albus
Thuja occidentalis
Toxicodendron radicans
Tragopogon sp.
Trichostema brachiatum
Triodanis perfoliata
Uvularia perfoliata
Verbascum thapsus
Veronica arvensis
Veronica peregrina
Viburnum acerifolium
Waldsteinia fragarioides
Zigadenus elegans ssp. *glaucus*
Zizia aurea

Species Seen at Chaumont Barrens Preserve June 9, 1990 - based on a species list provided by Carol Reschke

Acer saccharum
Achillea millefolium
Amelanchier sp.
Anemone cylindrica
Antennaria neglecta
Aquilegia canadensis
Arctostphylos uva-ursi
Arabis divaricarpa
Aralia nudicaulis
Arenaria serpyllifolia
Asclepias syriaca
Aster cordifolius
Aster macrophyllus
Botrychium virginianum
Campanula rotundifolia
Carex aurea
Carex brunnescens
Carex crawei
Carex deweyana
Carex eburnea
Carex echinata
Carex granularis
Carex pallescens
Carex peckii
Carex pensylvanica
Carex umbellata
Carya glabra
Carya ovata
Castilleja coccinea
Cicuta maculata
Comandra umbellata
Cornus foemina ssp. *racemosa*
Cystopteris fragilis
Danthonia spicata
Daucus carota
Deschampsia caespitosa
Eleocharis elliptica var. *elliptica*
Epilobium hornemannii
Erigeron strigosus
Festuca rubra
Fragaria virginiana
Fraxinus americana
Galium aparine
Galium circaezans
Geranium bicknellii
Geranium maculatum
Geranium robertianum
Geum triflorum
Glyceria striata
Hedyotis longifolia
Hepatica nobilis var. *obtusa*
Hieracium aurantiacum
Hypericum perforatum
Juncus tenuis var. *uniflorus*
Juniperus communis var. *depressa*
Juniperus virginiana
Lepidium campestre

Leucanthemum vulgare
Linnaea borealis
Lilium philadelphicum
Lonicera dioica
Lonicera hirsuta
Luzula acuminata
Luzula multiflora
Maianthemum canadense
Melilotus alba
Minuartia michauxii
Moehringia lateriflora
Monarda fistulosa
Myosotis verna
Oenothera perennis
Onoclea sensibilis
Panax quinquefolia
Parthenocissus quinquefolia
Penstemon hirsutus
Picea glauca
Pinus strobus
Poa compressa
Poa pratensis
Polygala senega
Polypodium virginianum
Populus balsamifera
Populus tremuloides
Potentilla arguta
Potentilla norvegica
Potentilla simplex
Prunus virginiana
Quercus rubra
Ranunculus acris
Ranunculus fascicularis
Rhamnus cathartica
Rhus aromatica
Rosa blanda
Rubus odoratus
Rubus pubescens
Rumex acetosella
Salix bebbiana
Salix discolor
Sanicula sp.
Saxifraga virginiensis
Scutellaria parvula
Sedum acre
Senecio pauperculus
Shepherdia canadensis
Silene antirrhinum
Sisyrinchium montanum
Smilacina racemosa
Smilacina stellata
Solidago nemoralis
Solidago ptarmicoides
Sporobolus heterolepis
Stellaria longipes
Symphoricarpos albus
Taraxacum laevigatum
Taraxacum officinale
Thuja occidentalis
Tilia americana
Toxicodendron radicans
Tragopogon sp.
Trichostema brachiatum
Triodanis perfoliata
Triosteum perfoliatum
Verbascum thapsus
Veronica arvensis
Veronica officinalis
Veronica peregrina
Viburnum rafinesquianum
Viburnum sp.
Vitus riparia
Waldsteinia fragarioides
Zigadenus elegans ssp. *glaucus*
Zizia aurea

Book Review:

Wild Plants of America: A Select Guide for the Naturalist and Traveler. by Richard M. Smith. John Wiley & Sons. 1989. Hardcover, 267 pp. $22.95.

This is a nice book, despite its somewhat provincial coverage and misleading title. The author is a resident of western North Carolina, so it's not surprising that the southeastern states receive the lion's share of attention. Discussion of Carolina "bays," those strange, shrubby coastal plain wetlands, is a unique feature of this guide. The detailed narrative on wildflower sites in the Great Smoky Mountains alone is worth the price of the book.

Aside from this excellent regional coverage, there are few surprises in rest of this book, and really few suggestions of new places to go. Most areas described are, I think, well known to most botanists and naturalists. Residents of the south central states may be forgiven for taking offense at the omission of their regions. Are we to assume that there is no place of botanical interest in the Ozarks or in Texas, for instance? The rain forests of the Pacific Northwest are well covered, but not a peep is made about the inland deserts of eastern Washington and Oregon, so easily accessed, with splendid shows of spring ephemerals.

The text is well written and remarkably free of typographical errors, and the authors, editors and reviewers are to be commended in this regard. The nomenclature used is modern and very much in accord with the latest regional floras. Nearly 100 species are illustrated, and also indexed separately.

I was disappointed to read the account of Asa Gray's half century search for *Shortia galacifolia* (p.

55), and find the telling of the tale in error through omission of the most charming conclusion. *Shortia* was indeed relocated in the wild during Dr. Gray's lifetime, and he visited the site with several other botanists shortly before his death. Upon finding the plants in the North Carolina mountains, they joined hands and danced in a circle around *Shortia* (see Arnoldia 2: 13-28, 1942, for the details of Asa Gray's search for *Shortia*).

The guide provides a separate listing of botanic gardens and arboretums, arranged by state and it seems to be reasonably complete. But what about Bartholomew's Cobble and Berkshire Garden Center in western Massachusetts? I would like to suggest a few additional botanizing localities in the Northeast not mentioned by Smith: New York's Adirondacks; Bashbish Falls and the Great Swamp in the Taconics; and the spring wildflowers of the Finger Lakes gorges and spectacular Letchworth Park; the Great Swamp with naturalized heather in southern Rhode Island; Block Island (take the ferry, rent a bicycle) and see the bright displays of fall goldenrods and asters.

Finally, there are no references listed. A list of local floras and wildflower guides or trail guides, many of which have valuable information for the botanist (like the fine Connecticut Forest and Park Series) would have helped much to round out this work.

Dr. Gordon C. Tucker, Biological Survey
New York State Museum, 3132 CEC, Albany, NY 12230

Goodbye to Two Fine Botanists Leaving New York State --

Dr. William J. Crins -- Bill Crins was known to many of you as the man to whom you could take any *Carex* and get a quick and accurate identification. We're sorry to announce that he is leaving the Generic Flora of the Southeastern U. S. project at the State Museum to join a consulting firm back in his home town of Burlington, Ontario. We wish him the best.

Peter F. Zika -- formerly the botanist for the New York Natural Heritage Program has returned to Oregon to join a consulting firm there (and to be near his lady-love, so we hear). Peter contributed significantly by adding two new native plants to our Adirondack flora during the year he was active in the field in New York. Good luck, Peter.

Do You Have a News Item or Opinion that you want to share? Send us Your Field Trip Adventures and Discoveries!

NYFA Fall Meeting -

The fall meeting will be held **Saturday, September 22**, in Albany at the New York State Museum. We have scheduled both the meeting and the field trip for a Saturday, so that those of you with job and teaching obligations during the week can attend. The meeting will begin in late morning, so people who have to drive a distance can start early, attend the meetings and field trip and return home in one day, if they wish.

Where: The New York State Museum in the Cultural Education Center in The Empire State Plaza

Directions: Interstate 787 parallels the Hudson River just east of downtown Albany. Take the Madison Ave. (Rt. 20 West) Exit. As you climb the hill, you will see the steps of our building arching over Madison Ave. Before you get to the steps turn left into the lot between the big cathedral and the museum; there is free weekend parking. Come into the main lobby and follow the signs, or ask for directions at the main information desk.

Coffee & Socializing: 9:30 a.m. Saturday, Sept. 22.

Meeting Time: 10:30 a.m.

Agenda:

- -- Announcements
- -- Botanical finds and news for 1990
- -- Discussion of the role of the Advisory Council
- -- Call for nominations to the council
- -- Open discussion of options and priorities of the organization
- -- What is the GIS system?
- -- Discussion of options for obtaining funding for field and herbarium work by members
- -- Discussion of possible publications sponsored by NYFA in the future
- -- Further questions and answers
- -- Discuss the field trip and adjourn for lunch

NYFA Field Trip:

Meeting Time: 1:30 p.m., Saturday, September 22.

-- Trip to Joralemon Park, the Helderberg Escarpment & Vicinity to see golden-seal, ginseng, green violet and great fern diversity.

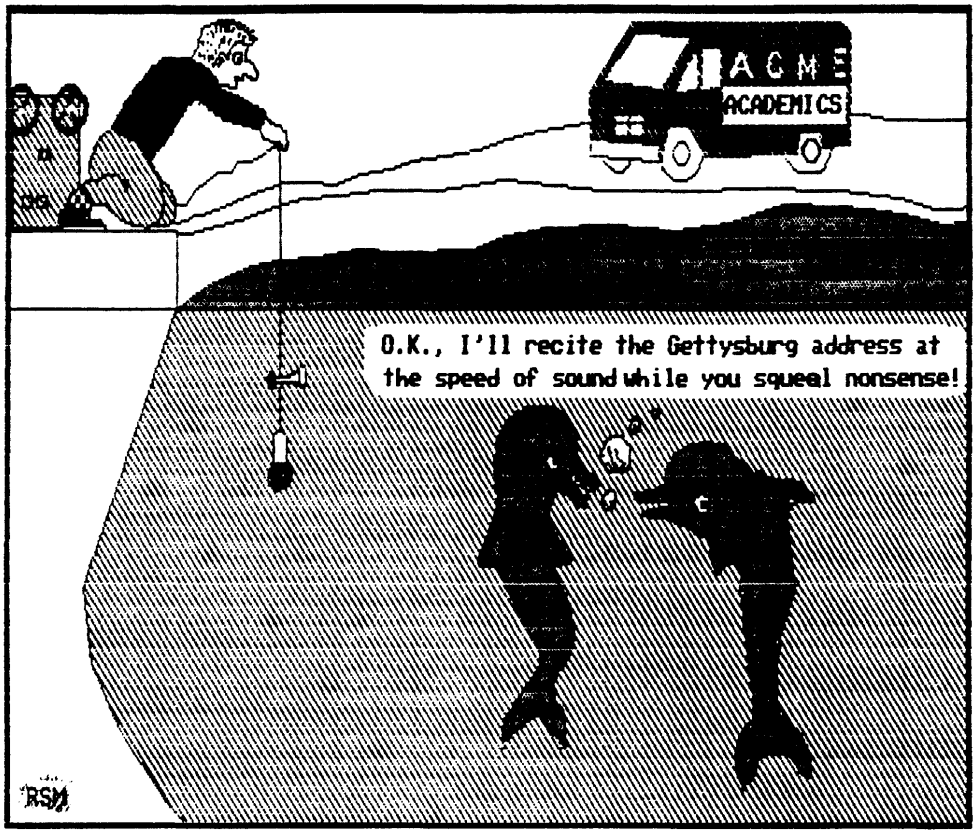
-- Bring along Dr. Ogden's new goldenrod keys, and he will help us test them in the field.

*There may be an informal field trip on Sunday (possibly to Tivoli), if enough people stay overnight

Long Island Botanical Society Field Trip --

Botany for Beach-goers -- August 25.

Lois Lindberg will lead a walk along the beach and salt marsh at Welwyn Preserve, Glen Cove, L.I. Meet at the Environmental Center at 9:30 a.m.


ACME
ACADEMICS
O.K., I'll recite the Gettysburg address at the speed of sound while you squeal nonsense!
RSM