NYFA Newsletter

New York Flora Association
of the New York State Museum Institute

Vol. 1 No. 2 Co-Directors: **Richard S. Mitchell** New York State Museum **Robert E. Zaremba** The Nature Conservancy **April - 1990**

About the New York Flora Association --

by **Richard Mitchell**

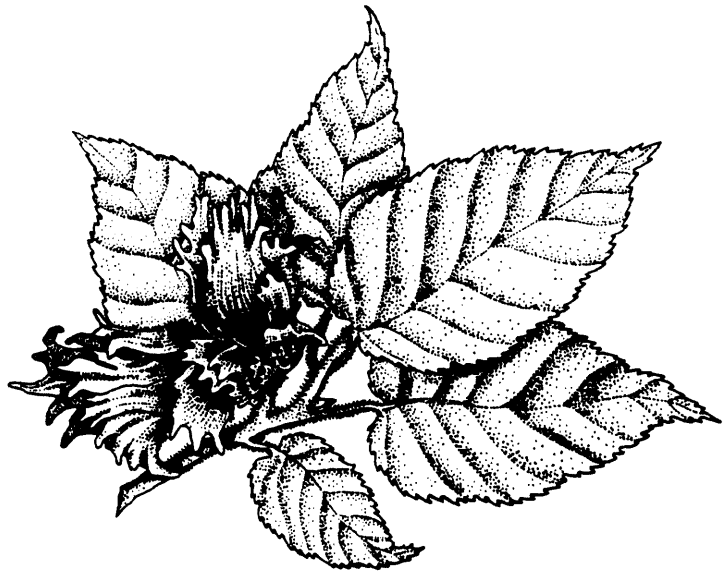
A warm welcome to charter members of this new organization from Bob Zaremba and me. This type of coalition of field biologists is certainly not a new idea. Let me quote from a 1913 letter, written by the famous botanist and horticulturist, Liberty Hyde Bailey, to the New York State Botanist's office at that time: "*I have long had it in mind that there ought to be an organized and progressive movement in New York State to stimulate the making of local floras and local faunas, to the end that eventually we should have a complete survey of the plant and animal life of the State.*"

In answer to Bailey, Homer House (then Assistant State Botanist) wrote: "*Your letter suggests a state wide organization for the furtherance of the study of local floras and faunas. The letter interests me greatly. I think New York is far behind some of her neighboring states in that respect, and yet probably no other one state possesses so many people interested in just that work, either professionally or as amateurs.*" Sound familiar?

In 1988, I called for a meeting of friends of the State Flora Committee, and many of you attended. I asked your advice about the direction that the state flora project should take, and it was almost unanimously decided that our monographic-style flora series be continued in its current format, rather than reduced to a less ambitious project. Together we decided to form a support organization for mutual benefit and information exchange. It has taken a while to get it organized, but I now have great hopes that we can involve most people interested in New York's wild plants in some common projects that will lead both to enjoyment and to a better understanding of our green plants.

Some things you should know about how we plan to run the NYFA:

1) We aren't democratic (at least not yet) in that Bob Zaremba and I have appointed ourselves co-directors representing the state and private sectors to implement the initial phases of NYFA development. Members will have more to say about how NYFA is run once it is established; meanwhile, we'll provide space in the newsletter for just about any suggestion you may have.
2) Our money is to be handled through an account with **The New York State Museum Institute**, a private, non-profit organization that works closely with the N.Y. State Museum on many projects involving the public.
3) The money will be used initially for production of the atlas and newsletter (expensive matters) and for mailing costs.
4) An advisory board will soon be elected by NYFA members to make decisions on expenditures to be incurred later, when we hope to support field and



American hazel or filbert (*Corylus americana* Marsh.) forms thickets in open places, providing cover for wildlite. It is a successional species, found mostly at the edges of woods, or on disturbed sites. The nuts are eagerly collected by squirrels, often before they fully ripen. Hazels are not commonly cultivated, but wild hazelnuts, which are slightly smaller, but have the same flavor as domestic filberts, are collected and used by people in rural areas. Look for hazels in Vol. VIII. of the Flora Contributions later this year.

herbarium projects of our members through small grants. We also hope to be able to subsidize certain publications written by members. Decisions on the use of NYFA funds for such projects will be made only by the elected advisory board. Polls will also be taken whenever matters of serious financial, political and/or ecological importance arise, and the results will be published in this newsletter.

5) We will also have a mechanism to account for expenditures from funds raised through dues, donations or grants over any given period of time.
6) Bob Zaremba will be handling most arrangements for field trips. Write to him or me in care of the NYFA post office box at my address at the State Museum. If you have questions about the organization write us or call: (518) 486-2027

Richard S. Mitchell, New York State Museum, 3132 CEC, Albany, NY 12230.

A New York Metropolitan Flora Now Getting Underway --

by Steven E. Clemants

The Brooklyn Botanic Garden is currently undertaking a study of the flora of the New York Metropolitan Area. The last thorough floristic study in the region was by Norman Taylor of the Brooklyn Botanic Garden, published in 1915. H. A. Gleason published a key to the plants of the vicinity of New York City in 1962, but it is now out of print.

I have defined our study area as: all lands within a 50 mile radius of Columbus Circle, NYC, which includes New York City, all of Long Island, Fairfield county CT, southeastern NY to Putnam and Orange counties and northern NJ south to Monmouth and Mercer counties.

The proposed flora will be modeled after the Wiegand and Eames *Flora of the Cayuga Lake Basin, New York*, and McVaugh's *Flora of the Columbia County Area, New York*. The *New York Metropolitan Flora* will include keys to the families, genera, species and varieties of all vascular plants currently or historically collected in the vicinity of New York City. Current synonymy, detailed habitat information, distribution in the New York area, phenology, notes and selected references will be included.

We hope to complete the flora within about five years, in four phases. The first phase is well underway. I have recently produced a checklist and database of the plants reported from our region. It includes nearly 3,000 taxa, approximately one third of which are introduced. I have included all species reported from the area, even though some are of questionable identity, and some were probably not naturalized. Such entries will be verified or eliminated as the project proceeds.

The database for the metropolitan flora now has entries for the county of occurrence of each species, and it can be used to generate checklists and atlases. I plan to expand this database to include nearly all of the information that will appear in the flora.

Phase two is a survey of the plant life of our region. The Brooklyn Botanic Garden is working closely with the Torrey Botanical Club and the Long Island Botanical Society to organize a thorough and systematic survey of local plant life. People interested in participating the metropolitan plant surveys should contact me for more information. Checklists and atlases for counties and specific subregions will be compiled during this phase of study.

Phase three will be a thorough study of herbarium collections and literature on the plants of the region. These will undoubtedly lead to field studies of selected taxa as problems arise. Phase four will be the writing and publishing of the metropolitan flora.

Information from this study will be shared in an extensive exchange of data with the New York State Flora Project, centered at the State Museum in Albany. Location data will be recorded on their Geographical Information System for detailed mapping. Two members of the Brooklyn Botanic Garden staff, Kerry Barringer and I, are actively contributing to the State Flora series (see p. 9)

If you want more information or a copy of the preliminary checklist of metropolitan plants, contact me: Steven E. Clemants, Brooklyn Botanic Garden, 1000 Washington Ave, Brooklyn, NY 11225.

New State Records of Native Plants in 1989:

Peter Zika distinguished himself during his first collecting season as a botanist for the New York Natural Heritage Program by discovering two native plants new to the flora of New York state, both from the Adirondacks:

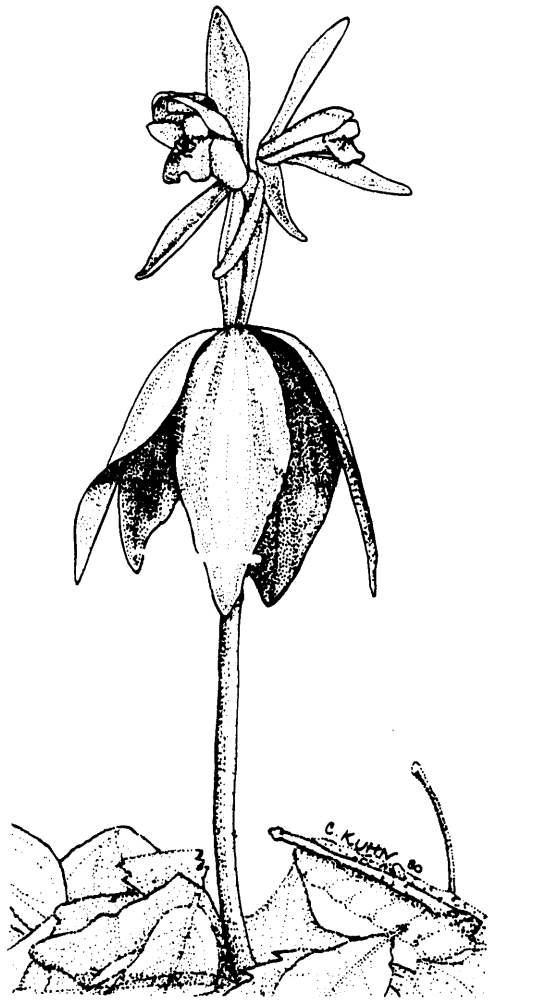
He found purple crowberry [*Empetrum rubrum* Vahl ssp. *eamesii* (Fern. & Wieg.) R. Good var. *atropurpureum* (Fern. & Wieg.) R. Good] in Essex County. The plant had previously been collected nearby, and a specimen was present in the State Herbarium, but it had been misidentified as black crowberry (*Empetrum nigrum* L.), and remained undetected for over 50 years. Since the berry color was very dark on the dried specimen, the only character that could easily be used to identify the species was the pubescence of the leaves and stems. This find emphasizes the need for botanists to go through herbaria with New York State specimens, not only to record distribution data, but to search for all the surprises that are undoubtedly waiting for us.

The Latin names of purple (and red) crowberries are confusing to most of us, because the status and taxonomic levels of these widespread taxa have been

reinterpreted so often. The plants have variously gone under the names: *E. atropurpureum* Fern. & Wieg., *E. eamesii* Fern. & Wieg. and *E. eamesii* ssp. *atropurpureum* (Fern. & Wieg.) D. Löve. Our office is currently following the judgment of Arthur Cronquist, who treats the species *E. rubrum* as a circumboreal complex, and recognizes both subspecies and varieties within the group.

Peter Zika also found wood cudweed (or owl's-crown) [*Gnaphalium sylvaticum* L.] while exploring a seldom-visited part of Herkimer County. Both of the newly reported species generally range to the north of us, and they are welcome additions to our alpine and montane floras.

Another exceptional find for the state was *Juncus ensifolius* Wikström. **Ken Dean** of the New York State Museum first annotated a specimen as possibly representing this typically western North American species. During a recent study of the state's rushes, **Steve Clemants** of the Brooklyn Botanic Garden determined that two specimens, one each from Sullivan and Delaware Counties, were indeed plants of *J. ensifolius*, occurring considerably disjunct from the previously known range of the species. That range has now been redefined as: South Dakota to Alaska south to California and Texas, disjunct in northern Wisconsin and southeastern New York; the species has also been introduced into Europe. Steve Clemants' comprehensive, illustrated treatment of the rushes of New York State is now in press, and will appear later this spring as volume VII of the state flora contributions (see page 9 for a citation).



***Isotria medeoloides* (Pursh) Raf. Small Whorled Pogonia. A Federally Listed Endangered Orchid.**

Guidelines for the Conservation-Minded Collection of Orchid Specimens --

by **Charles Sheviak**

Taxonomic, floristic, and ecological studies of any plant group are facilitated by extensive herbarium collections. Orchids are no exception, and, considering the comparative rarity of members of the Orchidaceae, herbaria are surprisingly rich in specimens of our native species. The temporal distribution of collections, however, is for the most part not representative of the plants' occurrences: the vast majority of specimens were collected before the middle of this century.

Increasing awareness of the need for conservation of rare species and a decreasing interest in the building of large personal collections seem to have been responsible for the dearth of recent orchid specimens, rather than any decrease in abundance of the plants themselves. Although some species have become exceedingly rare, and some have been extirpated from large areas, many species are now evidently more abundant than they were at the turn of the 20th century. Up-to-date collections help researchers locate extant populations for study, and these are essential to provide evidence of ongoing distribution and habitat changes, including decreasing population levels and range contractions. Hence current collections can be important to the conservation of the species by drawing attention to any critical declines in abundance.

Collection of specimens of orchids should be guided by a concern for the conservation of the species, and this can be accomplished by obtaining a knowledge of certain aspects of the biology of the plants and examination of the population to be sampled in that light.

The abundance of the species at a given site is the first and most obvious factor guiding collection. Like other plants, orchids occur in populations that may vary from one or a few individuals to hundreds or even many thousands. In the latter case, collection of a few complete specimens is appropriate. Not only will collection not adversely affect the large population, but the addition to herbaria of good material from such populations may lessen collecting pressure on smaller populations. On the other hand,

in the case of very small populations conservation concerns clearly are uppermost, and the destruction of one or more individuals is out of the question. Most commonly, however, populations fall somewhere between these extremes. In such cases a knowledge of the annual growth cycle of the plants and an appreciation for their often tenuously balanced mycorrhizal associations is important.

Like many other monocots, most of our orchids sprout in the spring from a bud produced during the preceding year. If the shoot is destroyed, it will not be replaced during that season. A new bud must first develop to some minimum size and then overwinter before another growth will appear above ground. Depending on the size of the bud at the time the original growth was destroyed, the plant may appear the following season or not again for two or more years. During this period, the growth of the bud and the survival of the plant rely on the energy stored in the plant's root system, perhaps supplemented by the associated mycorrhizal fungus.

The lower the energy stores of the plant at the time of shoot loss, the more difficult will be the survival of the plant. Hence, collection of an entire shoot of a spring-blooming plant, which has just depleted reserves during its new flush of growth and bloom, may be much more likely to kill the plant than collection of one in the fall, after it has been storing energy for most of the season.

The role of mycorrhizae in plant survival after shoot loss is doubtless important but very poorly known. The fungal partner in symbiosis evidently functions to provide water and some nutrients, perhaps including energy-storing carbohydrates. The balance between orchid and fungus is often a tenuous one, however, and easily upset. Many of the fungi involved are facultative pathogens, and the balance between the two organisms is more of a constant battle than a mutualistic relationship. Under these conditions, the shock of shoot loss may upset the balance so that the plant succumbs to the pathogenic invasion of the fungus.

In general, then, some guidelines governing collection of specimens are self-evident. Collect whole-plant specimens only from large populations. Under other circumstances, minimize the impact to the vegetative system of the plant, by collecting only individual flowers or inflorescence (the upper portion of the shoot leaving most leaves to continue their photosynthesis); collect whole shoots only from clumps of more than one stem or pick them late in the season. With attention to the status of populations and the biology of the plants, important collections can be obtained without jeopardizing the existence of the population and the species.

Charles J. Sheviak, Biological Survey, New York State Museum, 3132 CEC, Albany, NY 12230

A New State Regulation Protecting Rare Plants --

by Douglas Schmid

On September 1, 1974, New York State enacted a regulation known as *Protected Native Plants* that contained a list of plant species to be protected by New York State Environmental Conservation Law. The intent of the legislation was sound, but the document proved to be inadequate in protecting the rare plants of New York State for several reasons. Designed to protect land owners from removal of frequently picked, decorative plant materials from their land, it did not distinguish between rare and common plants. Thus, most of the very rare plant species were not listed, and there were no guidelines set for the selection, addition and deletion of plant species from the list.

As a result of the efforts of the New York State Museum, the New York Natural Heritage Program, the New York State Department of Environmental Conservation and many other organizations and individuals, a new, revised regulation was adopted on June 22, 1989. This will correct many of the deficiencies of the original *Protected Native Plants* regulation. The 1989 regulation states specific criteria for the inclusion of plants in four categories: endangered, threatened, exploitably vulnerable and rare. If a plant is listed federally as threatened or endangered, it is now automatically protected in New York State.

It is a violation, punishable by fine, to collect or destroy listed protected native plants without specific authorization by the landowner. The identification and subsequent determination of the scientific names of plants will be used to determine enforcement of any suspected violation. "A Checklist of New York State Plants," the book by Richard Mitchell, the State Botanist (New York State Museum), has been used to standardize the naming of all the plants on the lists. It is expected that changes in the status of rare plants and new findings about these plants will require changes in the regulation every two to three years, and provisions have been made for this process. There is a list of plants so rare that they have not been seen in New York State for many decades. These species will be added to the lists of plants protected under the regulation if they are rediscovered.

The *Protected Native Plants* regulation is to be used by the state Department of Environmental Conservation in several ways. Rare plants will be carefully considered in unit management planning on all State Forest and Forest Preserve lands, and these plans will incorporate provisions for their protection and recovery. Rare plants occurrences will also be a factor in the acquisition of lands by the state under

the 1986 Environmental Bond Act, as well as future, proposed bond acts. "Unique Areas" and "Forests of Exceptional Character" are two land-acquisition categories that require consideration of rare plants in their selection processes. The state wetland classification procedure also uses the existence of rare plants in its ranking system, to determine, in part, the relative values of wetland areas.

A pamphlet entitled, "***PROTECTED NATIVE PLANTS***" was recently issued by the New York State Department of Environmental Conservation. This pamphlet outlines the new regulation and lists New York's rare plants under the four categories of protection under the regulation. If you belong to NYFA, you will receive a copy of this pamphlet with your membership. It is also available free of charge at any regional DEC office, or by contacting the Bureau of Forest Resource Management, 50 Wolf Road, Room 406, Albany, NY 12233. (518) 457-7370.

Douglas Schmid, DEC, Division of Lands and Forests
50 Wolf Rd., Albany, NY 12233

TAXACOM -- A Computer Communications Service for Botanists

by **Richard Zander**

TAXACOM, established January 12, 1987, is a free data communications service for collections-oriented biologists, both professional and amateur. It is completely user-supported, meaning that no services are sold, and users simply share data files and programs with each other. It is based at the Clinton Herbarium of the Buffalo Museum of Science (BUF). We offer members of the New York Flora Association the opportunity for free electronic communications, including electronic mail, file transfer, and database searching.

The purpose of TAXACOM is to explore opportunities for modern communications among systematic biologists. In addition to electronic mail services, both public and private, we intend to provide innovative means of access to computerized data and biologically oriented programs, and to demonstrate the utility of online searchable databases and formal electronic publication of scientific papers.

Flora Online is the first electronic publication to be assigned an ISSN number from the US Library of Congress (ISSN 0892-9106). Twenty monographic style issues have been published to date, mainly of data-intensive lists and "publications" generated by botanically related programs, including:

-"***Bibliography of Niagara Frontier Botany***" **by R. Zander and J. Battaglia**

-"***Pteridophyte Checklist and Index to Synonymy for New York State.***" **by R. Mitchell**

-"***New York Natural Heritage Program Rare Plant Status Report***" **by S. Clemants.**

Flora Online is available online on TAXACOM and on diskette (5.25 or 3.5 inch, DS-DD, MS-DOS format) by subscription. Write L. Seivert, Research Library, Buffalo Museum of Science, 1020 Humboldt Pkwy, Buffalo, NY 14211 USA, for ordering information.

Readers of the NYFA newsletter are invited to contribute computerized scientific papers to *Flora Online;* instructions to authors are found in the second issue which is available, of course, online.

An electronic edition of *Clintonia,* the bimonthly magazine of the Niagara Frontier Botanical Society, is also available on TAXACOM. *Clintonia* commonly includes lists of plant records from western New York State as well as announcements of field trips and other activities of the club.

Searchable databases on TAXACOM include the Field Museum of Natural History Botanical Type Photograph Database, consisting of more than 62,000 records. This is, as far as we are aware, the first substantial, searchable database of type-collection information to be made freely available by modem to researchers and the public. A simple query system is used to retrieve records of specimen label information and the appropriate Field Photograph number. This database can also be used to ascertain the whereabouts of many type specimens of vascular plants at the Field Museum and certain other herbaria. The ease of access to this large type database should make tracking down the location of types less arduous. For types deposited at Berlin-Dahlem (B) but destroyed during WW II, the Field photograph collection is the only remaining record. Other searchable databases include ferns and orchids of western New York State, and historical records (1800's) in the Clinton Herbarium.

Conferences on TAXACOM are mini-symposia in which particular topics may be discussed publicly. Messages may have binary or text files "attached" to them (uploading is by Xmodem protocol). The present public Conferences include: Botanical Latin, Bryology & Lichenology, Curator's (specimen exchange and conservation techniques), Membership, Mycology, Niagara Frontier, Offers of Positions, Online Communications, Open, Ornithology, Phylogenetics, Questionnaires, Research, and Share Programs. A special conference on the DELTA (DEscription Language for TAxonomy) system is moderated by one of the developers of this widely used key-generating software, M. J. Dallwitz (CSIRO, Canberra, Australia). An additional three conferences, DBMS Design, Geographic Information Systems and Technical, are hosted by J. Beach (Field Museum, Chicago). There are several libraries of downloadable text files and programs, *e.g. Flora*

Online, Cyclopedia (miscellaneous publications, including two electronic magazines), Botanical Programs, Communications Programs, and Database Help.

A Botanical Latin Service, run by Patricia Eckel, provides systematists with Latin translations of descriptions of new taxa. Fine points and questions of language may be discussed in the Latin Conference.

Contact with the system is accomplished by modem, through standard telephone lines at **(716) 896-7581** (300 or 1200 or 2400 bps; 8 data bits, no parity, one stop bit). Users outside the USA should use CCITT protocol at 2400 bps, but change to Bell protocols at 300 and 1200 bps. Any interested person may call and anonymously examine most portions of TAXACOM by logging on as "GUEST"; after signing up and validation, full access is granted. The system is "user-friendly" in that all options are selected from menus, and there are many help-screens available. You must have communications software (Telix, ProComm or Qmodem are recommended for IBM-compatible, PC-type microcomputers) and an asynchronous modem attached to your PC.

Long-distance phone charges should not exceed $.15 to .20 per minute (about $10-12 per hour) for evening access. This is similar to costs of accessing commercial networks such as CompuServe; unlike commercial networks, however, TAXACOM supports both 1200 and 2400 bps connections from anywhere. Although academic data networks like Internet and Bitnet may appear free to most users, the very considerable cost is picked up by the institution. Through the commercial service Starlink, which uses the packet-switching network Tymnet, access to TAXACOM can be reduced to $1.50 per hour.

We will be glad to help other institutions in New York State set up similar electronic services with functions appropriate to their collection character and the particular specialties of their staff. It may be expected that biologists will eventually be able to share data and programs of importance in an orderly and responsible fashion through a series of electronic "bulletin boards," using both dedicated lines (Internet, Bitnet) and standard phone lines (*e.g.* TAXACOM).

Richard H. Zander, Buffalo Museum of Science, 1020 Humboldt Pkwy, Buffalo, NY 14211 USA, Voice: (716) 896-5200.

Botanizing The Great Swamp --

by Gordon Tucker

The Great Swamp is located in the Harlem Valley of southeastern New York quite close to the Connecticut boundary. Straddling the Dutchess-Putnam County line, it covers some 3000 acres and is the second largest freshwater wetland in the state. During the summer of 1989, I had the opportunity to do botanical field work in the Great Swamp working under contract from the Natural Heritage Program.

The entire swamp and its adjacent uplands are calcareous. The swamp supports a forest of red maple for the most part, although silver maple becomes dominant in some of the moister areas. The lizard's-tail, *Saururus cernuus* L., is abundant, covering literally miles of muddy river shore. Small open fens where alkaline groundwater seeps to the surface provide habitat for some interesting species.

I found several plants of interest to New York botanists: *Carex flacca* L., a European adventive, was a new state record; *Centaurium pulchellum* (Sw.) Druce, is a rare European adventive; *Salix cinerea* L., a small shrubby Eurasian willow, also provided a new state record. I found a population of *Cuscuta campestris* Yuncker, known previously from New York state only from a single population in Erie County. *Pilea fontana* (Lunell) Rydb., a native and often overlooked relative of the common clearweed, was found in several locations; it is distinguished from *P. pumila* by its dark green achenes with clear, ridge-like margins. Interestingly, there were few orchids. I found one population of *Platanthera flava*, and only a single plant of *Epipactis helleborine* which is often weedy in such areas.

A field trip to the area is listed below.

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

Report on the September 1989 NYFA Field Trip

by Robert Zaremba

On September 30, 1989, 13 botanists met at the Sam's Point region in the Schawangunks for the first field trip sponsored by NYFA. On a sunny, 70 degree day, we hiked through the dwarf pine ridge community and along several cliff faces and walked through the ice caves. We were able to relocate all of the state-rare plants known from the site and we added several new species to the community species-list that follows:

P=dwarf pine ridges; D=disturbed areas; W=wet spots; I=ice caves area.

D *Achillea millefolium*
P D *Acer rubrum*
D *Agrostis hiemalis*
P *Amelanchier* sp.
P D *Anaphalis margaritacea*
P *Aronia melanocarpa*
I *Asplenium montanum*

P *Aster lateriflorus*
P *Aster pilosus*
P *Betula lenta*
D *Carex cumulata*
W *Carex echinata*
D *Chamaesyce vermiculata*
P W *Chamaedaphne calyculata*
P *Comptonia peregrina*
P *Cornus canadensis*
D *Danthonia compressa*
P D *Danthonia spicata*
W *Drosera intermedia*
W *Eleocharis obtusa*
W *Eleocharis* sp.
W *Eriophorum virginianum*
P *Euthamia graminifolia*
P *Gaultheria procumbens*
D *Gnaphalium uliginosum*
W *Hypericum boreale*
W D *Hypericum canadense*
W *Juncus brevicaudata*
W *Juncus effusus*
P *Juncus tenuis*
P *Juncus trifidus*
P W *Kalmia angustifolia*
W D *Lindernia dubia*
W *Lycopodium inundatum*
P *Lycopodium obscurum*
P *Lysimachia quadrifolia*
D *Matricaria matricarioides*
P *Melampyrum lineare*
P *Minuartia glabra*
P *Minuartia groenlandica*
P *Nemopanthus mucronatus*
D *Oxalis* sp.
P *Pinus rigida*
P D *Populus tremuloides*
P *Potentilla simplex*
P *Potentilla tridentata*
P *Quercus ilicifolia*
P *Rhododendron canadense*
W *Rhynchospora alba*
P W *Rubus hispidus*
W *Scirpus atrocinctus*
P *Solidago bicolor*
P *Solidago puberula*
P *Spiraea latifolia*
P *Spiraea tomentosa*
P *Vaccinium angustifolium*
W *Vaccinium macrocarpon*
P *Vaccinium vacillans*
P *Viburnum cassinoides*
W *Viola lanceolata*
W *Xyris* sp.

Robert E. Zaremba, The Nature Conservancy, 1736 Western Ave., Albany, NY 12203

Upcoming Field Trips:

Great Swamp, Pawling, New York
Saturday, June 23, 1990, 10 a.m.

New York Botanists are invited to attend a field trip sponsored by the Connecticut Botanical Society, Inc.

Field Trip Directions:

Follow I-84 eastward from I-87. Take Exit 20 for Route 22. Go north on Route 22 for 11 miles, at which point Route 55 joins from west. Pass the stoplight (do not turn left into village of Pawling) and continue north on Route 22-55 for 2.4 miles, passing Texaco station on left; additional 0.6 miles, and meet at large, paved pull-out on the right just past the point where the Appalachian Trail crosses. Leader: Dr. Gordon C. Tucker (Botanist), New York State Museum. **Phone 518-486-2027.**

1st 1990 NYFA Field Trip --
Chaumont Barrens & Limerick Cedars
Saturday June 9, 10:30 a.m.

The New York Flora Association will conduct its first major field trip of the year, visiting the Chaumont Barrens and Limerick Cedars, located between Watertown and Cape Vincent in Jefferson County. Unusual plant communities and several rare species occur in the vicinity of Chaumont, where bedrock is at or near the surface. In such areas, the exposed rock supports a number of calciphiles, and the community is dominated by *Thuja occidentalis, Solidago ptarmicoides,* and *Senecio paupercula*; several New York State rare species are also found there, including *Draba reptans, Corydalis aurea, Arabis divaricarpa* and *Zigadenus elegans.* In other areas, shallow soils have developed on limestone where water collects over large areas during early spring but dries by early summer. The shallow soils support a grassland community called "alvar vegetation" whose occurrence in New York state was not recognized until about a decade ago. The alvar is dominated by *Sporobolis heterolepis.* There are local concentrations of *Geum triflorum* (prairie smoke), thought to be extirpated from New York for over 160 years, *Carex crawei* (Crawe's sedge) and *Castilleja coccinea* (Indian paintbrush). Some areas abound in quite variable yellow ladyslippers. **Note:** General collecting is not be allowed on TNC preserves. Bring your camera.

We will be visiting two preserves owned by The Nature Conservancy, Chaumont Barrens and Limerick Cedars, which collectively protect over 1000 acres of unusual flatrock communities. Carol Reschke and Peter Zika, both from the New York Natural Heritage Program, and Dick Mitchell from the State Museum will join us. We will meet at Limerick Cedars Preserve at 10:30 a.m.

Instructions: From Watertown take Rte. 12E west to Limerick (about 7 mi.). Turn north on Perch River Road (Rte. 180). Go about 1.25 mi. Turn left (west) onto Ransome Road. We will meet along Ransome Road. Look for the TNC posting signs. Please call Bob Zaremba at 518-869-6959, if you plan to attend. We will be trying to car pool as much as possible and may consider staying overnight and visiting additional sites if there is interest and the weather is good.

Small Field Botany Grants Available from NYNHP --

The New York Natural Heritage Program is soliciting help to determine if more than 150 of New York's plants are still present in the state. These "missing" plants are ranked historical (SH), and currently do not receive protection under law, since they have not been reported in over a decade. Limited funds have become available, for botanists who wish to assist in locating and documenting these rarities. The funds are available now, so apply immediately to be considered. Typical grants will be for $100 to $500.

Some of the species sought are: *Aplectrum hyemale, Aristolochia serpentaria, Asclepias rubra, Buchnera americana, Chaerophyllum procumbens, Isotria medeoloides, Oxypolis rigidior, Salix pellita, Strophostyles umbellata, Stylosanthes biflora* and *Triphora trianthophora.*

For more information contact: Peter Zika, New York Natural Heritage Program, Wildlife Resources Center, Delmar, NY 12054. (518) 439-7488.

NYFA Wants Your Input --

If you have an article you would like to submit or an opinion about any issue pertinent to the organization: field studies, amendments to the flora, phytogeography, ecology, conservation or related topics, please submit your thoughts to us. We can't guarantee that all materials sent in will be published right away, but we will do our best to give your contributions a place in the newsletter. The best written and most informative articles will be considered first, and there will also be a column on ideas and opinions of the membership.

Also, if your botany club is planning a field trip or other activity that is of statewide interest, let us advertise it for you (no charge of course).

We are also interested in helping field oriented biologists find employment. If you are offering a job or know of a job opening, let us know and we'll try to help find the best person to fill it.

1990 NYFA and State Flora Committee Meetings --

Joint meetings of the NYFA and Flora Steering Council are in the planning stages for Albany in the last week in August or early September. Please let us know which would be better for you, if you plan to attend, and if you prefer that the meetings be held on a Friday evening or late on a Saturday morning. Friday would facilitate an early start on a field trip the next day, but I know it might be an imposition to ask a number of you to stay over. Let me have your ideas on the subject or give me a call. [Dick Mitchell (518) 486-2027.]

Call for Short Presentations: If you would like to give a short (15 minute or less) talk on a field trip, interesting plant community, new introduced species for the state, etc., send us a quick description of what you want to do. We'll try to give everyone who wants to talk to the group some time at the fall meeting unless **everybody** wants to do it.

State Botanist's Progress Report on the Flora -- April 1990

by Richard Mitchell

Flora Contributions Currently in Progress:

Clemants. S. E. 1990. Juncaceae (Rush Family) of New York State. Contr. to a Flora of New York State VII. New York State Mus. Bull. 475. 68 pp. (in press)

Furlow, J. J., & R. S. Mitchell. 1990. Betulaceae through Cactaceae of New York State. Contr. to a Flora of New York State VIII. New York State Mus. Bull. 476. 94 pp. (in press)

Nixon, K. 199-. Fagaceae (Beech Family) of New York State. Contr. to a Flora of New York State ---. New York State Mus. Bull. (manuscript nearing completion)

Clemants, S. E. 199-. Chenopodiaceae and Amaranthaceae of New York State. Contr. to a Flora of New York State ---. New York State Mus. Bull. (in progress)

Barringer, K. A. 199-. Plumbaginaceae through Cistaceae of New York State. Contr. to a Flora of New York State ---.New York State Mus. Bull. (in progress)

Cope, E. A. 199-. Gymnosperms of New York State. Contr. to a Flora of New York State ---. New York State Mus. Bull. (in progress)

Mickel, J., W. Wagner, J. Beitel and N. Taylor. 199-. Pteridophytes of New York State. Contr. to a Flora of New York State ---. New York State Mus. Bull. (in progress)

Al-Shehbaz, I. 199-. Capparidaceae and Brassicaceae of New York State. Contr. to a Flora of New York State ---. New York State Mus. Bull. (in progress)

Sheviak, C. J. 199-. Orchidaceae (Orchid Family) of New York State. Contr. to a Flora of New York State ---. New York State Mus. Bull. (in progress)

Haines, J. H. 199-. Hyaloscyphaceae (Ascomycotina) of New York State. Contr. to a Flora of New York State ---. New York State Mus. Bull. (in progress)

Flora Contributions Issued by the Botany Office (1978-1989):

Mitchell, R. S. & J. K. Dean. 1978. Polygonaceae (Buckwheat Family) of New York State. Contr. to a Flora of New York State I. New York State Mus. Bull. 431. 81 pp.

Mitchell, R. S. & E. O. Beal. 1979. Magnoliaceae through Ceratophyllaceae of New York State. Contr. to a Flora of New York State II. New York State Mus. Bull. 435. 62 pp.

Ketchledge, E. H. 1980. Revised Checklist of the Mosses of New York State. Contr. to a Flora of New York State, Checklist I. New York State Mus. Bull. 440. 20 pp.

Andrus, R. E. 1980. Sphagnaceae (Peat Moss Family) of New York State. Contr. to a Flora of New York State III. New York State Mus. Bull. 442. 90 pp.

Mitchell, R. S. & J. K. Dean. 1982. Ranunculaceae (Crowfoot Family) of New York State. Contr. to a Flora of New York State IV. New York State Mus. Bull. 446. 100 pp.

Mitchell, R. S. 1983. Berberidaceae through Fumariaceae of New York State. Contr. to a Flora of New York State V. New York State Mus. Bull. 451. 66 pp.

Mitchell, R. S. 1984. Atlas of New York State Ferns. Contr. to a Flora of New York State, Checklist II. New York State Mus. Bull. 456. 28 pp.

Mitchell, R. S. 1986. A Checklist of New York State Plants. Contr. to a Flora of New York State, Checklist III. New York State Mus. Bull. 458. 272 pp. (hard cover)

Mitchell, R. S. 1987. Pteridophyte Checklist and Index to Synonymy for New York State. Computer generated. Distributed via modem by TAXACOM, Buffalo Mus. Sci. 41 pp. (or floppy disk)

Mitchell, R. S. 1988. Platanaceae through Myricaceae of New York State. Contr. to a Flora of New York State VI. New York State Mus. Bull. 464. 98 pp.

Other Botany Office Publications from the State Museum:

Ogden, E. C. & R. S. Mitchell. 1990. Identification of Plants with Fleshy Fruits. New York State Mus. Bull. 467. 98 pp. + 360K floppy disk.

Mitchell, R. S., C. J. Sheviak & D. J. Leopold (eds.). 1990. Ecosystem Management: Rare Species and Significant Habitats. Proc. 15th Ann. Natural Areas Conference. New York State Mus. Bull. 471. 314 pp.

Barr, M. E., C. T. Rogerson, S. J. Smith & J. H. Haines. 1986. An Annotated Catalog of Pyrenomycetes Described by Charles H. Peck. New York State Mus. Bull. 459. 74 pp.

Brooks, K. L. 1984. A Catskill Flora and Economic Botany. IV. (Part 2). Polypetalae. New York State Mus. Bull. 454. 283 pp.
Brooks, K. L. 1983. A Catskill Flora and Economic Botany. IV. (Part 1.) Polypetalae. New York State Mus. Bull. 453. 358 pp.
Sheviak, C. J. 1982. Biosystematic Study of the *Spiranthes cernua* Complex. New York State Mus. Bull. 448. 73 pp.
Ogden, E. C. 1981. Field Guide to Northeastern Ferns. New York State Mus. Bull. 444. 122 pp.
Mitchell, R. S. & C. J. Sheviak. 1981. Rare Plants of New York State. New York State Mus. Bull. 445. 96 pp.
Brooks, K. L. 1980. A Catskill Flora and Economic Botany. III. Apetalae. New York State Mus. Bull. 443. 374 pp.
Brooks, K. L. 1980. A Catskill Flora and Economic Botany. II. The Conifers. New York State Mus. Bull. 441. 116 pp.
Brooks, K. L. 1979. A Catskill Flora and Economic Botany. I. Pteridophyta. New York State Mus. Bull. 438. 276 pp.

The Intrepids