

NYFA Newsletter

New York Flora Association
of the New York State Museum Institute

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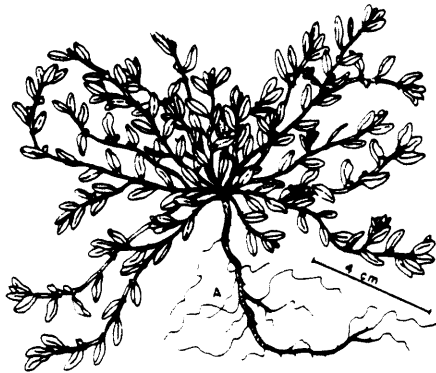
Robert E. Zaremba
The Nature Conservancy

October - 1991

The Two Common Urban Knotweeds --

by Richard S. Mitchell

You're walking down the sidewalk in December, frustrated that the field season is far behind you, but it's a sunny day, and you notice that the occasional soft pad underfoot is a matted plant covered with tiny fruit and even a few open flowers. Your curiosity is aroused, and you stoop to pick a branch, but then your interest is squelched by the memory of a comment made by a fellow plant enthusiast. "Those little knotweeds are impossible. Just call it *Polygonum aviculare* and forget it." Try not to give in to temptation, because what you are seeing is probably not *P. aviculare* L., but a common, widely-misunderstood plant that is not hard to learn.

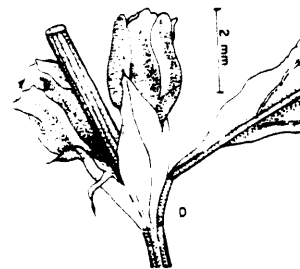


***Polygonum arenastrum* Jordon ex Boreau.** A common weed in the cracks of sidewalks, usually easily distinguished by its mat-forming habit and leaves that are all similar in size (homophyllous).

Although they may grow in close proximity, the two common knotweeds (also called doorweeds) are usually relatively distinctive in appearance, as follows: ***Polygonum arenastrum***: plants are mat-forming, with prostrate primary branches and prostrate to ascending (or short, erect) lateral branches; the leaves may grade in size, being somewhat smaller in the late season, but they are not conspicuously dimorphic.

Polygonum aviculare: plants are not mat-forming, but slender and open with ascending (often sprawling) primary branches and ascending lateral branches; the leaves are dimorphic, being noticeably smaller on the late-season branches and lateral shoots.

The two species are similar in that they are weedy annuals that like full sun; however, the favored habitat of *P. arenastrum* ($2n = 40$) is urban streets and sidewalks where abrasion sometimes wears the plants down to bare stems and grinds the seeds into soils that are developing in the pavement cracks. By contrast, *P. aviculare* ($2n = 60$) is commonest in cultivated or otherwise disturbed ground or roadsides where traffic and mowing are minimal. Its more open branching system makes it vulnerable to mechanical damage, but, when it survives the season, it may break loose and roll away, scattering seeds into new disturbed sites, much like a tumbleweed. There are several less-common *Polygonum* species in New York State that might be confused with the two described here. For a full treatment, see Mitchell & Dean (1978) N.Y.S. Museum Bull. 431.



***Polygonum aviculare* L.** A weed of disturbed soils with an ascending habit and much smaller leaves on the lateral and late-season shoots (heterophyllous).

Sky-blue Aster at Niagara River Gorge

by Clifford W. Lamere

A broken arm can sometimes be a blessing in disguise. Mine, fractured in December of 1990, allowed me time away from my regular teaching job to work closely with Dr. Eugene Ogden, a person best known to most NYFA members as New York State Botanist, Emeritus, and a man whom I've admired for twenty-five years. Having completed a book on fruit identification, he was busy studying asters and goldenrods in order to develop a better understanding of those difficult groups and perhaps to write keys to make species-identifications easier for botany enthusiasts.

Our time was partly spent at the herbarium of the New York State Museum, where the collections were found to house only a single specimen of the rare sky-blue aster, *Aster oolentangiensis* Ridd. (long known as either *Aster azureus* Lindl. or *A. shortii* Lindl.). The museum also had photocopies of early specimens collected by George Clinton that are housed at the Buffalo Museum of Science. Noting that the rare aster had been collected in Niagara Falls, where I sometimes visit relatives, I decided to seek it out the next time it was in bloom.

I contacted Stephen Young of the New York Natural Heritage Program in early September of 1991, and learned that only 20 individuals of sky-blue aster were known to grow in New York State at the time. The rarity rank, G4G5 (globally secure, but rare at the margins of the distribution range) and S1, (New York State Endangered), indicated the highest priority level for protection under state law. Nineteen plants were known from the city of Niagara Falls (at two adjacent locations - Niagara County), and one plant was reported from Livingston County. One of the two Niagara County populations was found at the bottom of the Niagara River Gorge, and a better-known stand was located at the edge of a woods at the top of the gorge. The upper site was said to be separated from the gorge by the highway. Patricia Eckel of BMS suggested to me that there may have been a continuous population at one time, which then became divided by construction of the road.

On Friday, Sept. 13, 1991, I arrived at the woods and soon found that it was to be my lucky day. Instead of the 11 plants known to occur there, I was able to count 53 individuals, almost all of which had at least the first few flowering heads open. They were located at the edge of a woodland, peeking out from under shrubs and growing in a few small, weedy areas that the parkway mowers could not reach. Almost all of the plants were arched to the west, as if seeking available afternoon sunlight. Brief searches in the more shaded woods did not uncover additional individuals.

Standing by the woods, I looked across the highway toward the gorge, and remembered the eight plants

reported from the bottom of the cliff. I wondered if there might be any asters between the two spots at the edge of the gorge along the rim path. After crossing the highway, I immediately found a lovely, large and healthy sky-blue aster growing protected by the guard rails. Continuing farther, I could hardly contain my excitement as I found plant after plant, 208 in all, with a total of 87 in bloom.

Fortunately, the mower had been foiled by some limestone boulders and outcrops, so the rare sky-blues survived. They could even be considered the dominant plant in the very thin soil around a few of the boulder-snags. Most of the plants were small, apparently barely holding onto life under difficult circumstances, but several healthier-looking plants basked in the sun on the west side of the fence built to deflect passers-by from a 150 foot drop. Some of the bolder plants had poked their heads through the fence into the pathway, just outside their narrow haven.

It was a memorable day for me, and a good day for the State Museum as well, whose collection now has twice the number of vouchers for sky-blue aster in New York. The experience also reassured me that an amateur botanist can still make contributions to the knowledge of New York State's flora. As Dick Mitchell later said to me, "That's a large part of what NYFA is all about."

When I First Met Merritt Lyndon Fernald

by Eugene C. Ogden

In the summer of 1933 I attended the annual meeting of the Josselyn Botanical Society of Maine. I was then a graduate student at the University of Maine. Professor Fernald, who was one of the founders of that society, was present. He hadn't attended for many years and this was his last time there, so I was very lucky. He was by then a professor at Harvard University and Curator of the Gray Herbarium. His knowledge of vascular plants was phenomenal, so, naturally, we stayed as close to him as possible on the field trips. When he stopped, with a puzzled look at a plant in the genus *Juncus*, I was tempted to show off a bit. As a student at Michigan State College I had fulfilled requirements for a degree before the end of my senior year and begun graduate work. My master's thesis was to be "The Juncaceae of Michigan," thus I knew the genus better than any other. So, with the audacity of a budding botanist, I said, "Could it be *Juncus articulatus* x *canadensis*?" He looked at me for a few moments and said, "You may be right." The next day he invited me to become one of his graduate students at Harvard. Since I needed financial assistance, he agreed to hire me as photographer on the Gray Herbarium staff, and later I became his teaching assistant.

The Long Island Botanical Society --

by Orland J. (Skip) Blanchard, Jr.

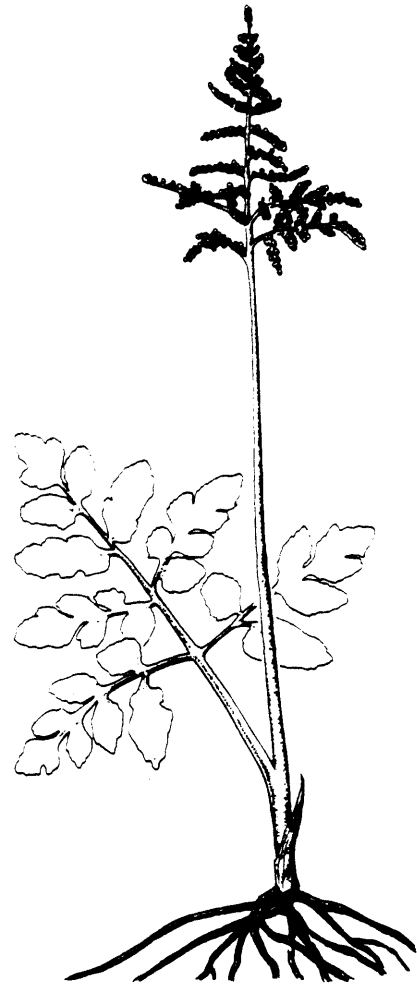
In May of 1992 the Long Island Botanical Society (LIBS) will pass its fifth anniversary milestone going at full speed. With a membership approaching 100, a robust schedule of meetings and field trips and several active committees, the organization has achieved a healthy momentum in a short period of time.

In the winter of 1985-6, Bob Zaremba (then with the NYS Natural Heritage Program on Long Island) and Margaret Conover (then with the Museum of Long Island Natural Sciences) found themselves lamenting the general lack of communication among those with interest and expertise in field botany on Long Island, struck by the fact that many of these people were not even acquainted. After sounding out several of us to gauge our interest in the idea of a botanical society, Bob and Margaret set about organizing the first meetings and field trips of LIBS in May, 1986. Bob served as president of the organization for the first two years; then I took over in 1988-9. Most recently, Vince Puglisi of Nassau Community College assumed leadership of the group.

In keeping with a constitutionally professed interest in rare plants and communities of Long Island and their conservation, our early field trips and meetings were often related to that theme. Even though our mailing address is Levittown (the archetypal suburban housing tract), we have at our figurative back door some of the more extraordinary, species-rich natural areas in New York State. Our trips have taken us to nearly all of them, including: coastal-plain, pond-shore habitats, some of which are among the richest in state-listed rare plants and animals; the dwarf pine plains, examples of which occur in only two other places in the world; maritime grasslands and heathlands, habitat for sandplain gerardia (*Agalinis acuta*), one of New York's two federally listed Endangered plants; and Atlantic white cedar swamps, near their northern range limits, confined almost entirely to our small corner of the state in New York.

Not only have we learned much as individuals on these trips, but we have also collected significant new data on the local flora in the process. For example, our trips have led to the rediscovery of *Rumex hastatulus*, a southeastern dock not collected in New York State in over 50 years, and we found a second known extant population of the rare Oneida grape fern, *Botrychium oneidense*, in the state.

Our society's interests are by definition somewhat parochial, but we have been known to venture far afield, both geographically and in subject matter. In 1989 we sponsored a five day field trip to the Smoky Mountains in Tennessee and North Carolina, where we participated in the annual Spring Wildflower Pilgrimage. The event was popular enough for another of our tours to be run again in the near future. Later in the same year, we had a very



Botrychium oneidense (Gilb.) House, a species rare on Long Island, but rediscovered there by the L. I. Botanical Society

successful trip to the New Jersey Pine Barrens, despite dreary, rainy weather.

Talks at our monthly meetings have generally treated local flora and conservation, but we departed dramatically from this on "Tropical Botany Night," an evening in the dead of winter when members were invited to show their favorite slides of the tropics, and we also admired and consumed interesting tropical fruits. With the subject of the tropics temporarily exhausted, we had an "Alpine Botany Night" last year and a "Desert Botany" session in 1991. "Wild-man" Steve Brill, of eating-wild-plants-in-Central-Park fame, also spoke to us.

Lest I leave the false impression that we spend our time solely on such light-hearted activities as daring each other to eat durian fruit or debating how close to the fire hydrant dandelion greens may be safely harvested, I should add that we have had a number of workshops on plant identification in large and/or difficult groups, including a two day workshop on ferns at Montauk Point and workshops or field trips concentrating on rushes, sedges, asters and oaks.

The society's Education Committee has assembled a clever, informative travelling exhibit, co-sponsored by the Museum of Long Island Natural Sciences. Under the title "Plant Preserves", the exhibit depicts all possible interpretations of that phrase, including: photographs of some of the natural areas on Long Island in which rare plants and communities are being protected; illustrations of ways in which botanists preserve plants for scientific study; fossil plants, and maybe raspberry jam; I'm not sure. We have had a number of requests for the exhibit for science fairs, environmental fairs, Earth Day events, etc. Its circulation at present seems limited only by the availability of our members to "man" it.

Our major sustained activity at present is centered in the Flora Committee, which meets monthly to work on an atlas of Long Island's vascular plants. The plan is to produce a complete series of maps showing the township distribution of each species, a sort of local, more detailed version of the NYFA atlas. There are six or eight "regulars" at these meetings, who are assembling both documented (vouchered) and anecdotal information, the latter to serve as a basis for further field exploration. For mapping purposes, we are also distinguishing pre-1980 collections from the more recent specimens. In an area that has become developed as rapidly as Long Island, comparisons between "what used to be" and "what is" yield sobering, but particularly useful, contrasts. During our first year of work, we covered about 300 species in 36 families, so we are looking toward several years of compilation before the atlas is complete. In the meantime, our society and other groups with conservation-related missions will be doing what we can to assure that, when the atlas is finished, it does not reflect only "what used to be."

For further information, write: Long Island Botanical Society, P.O. Box 905, Levittown, NY 11756.

Orland J. Blanchard, Jr., Dept. of Biology, Long Island University/C.W. Post Campus, Brookville, NY 11548.

Seaside Goldenrod (*Solidago sempervirens* L.) at Niagara Falls

by Clifford W. Lamere

Imagine my surprise when the plant in my hand keyed to seaside goldenrod, *Solidago sempervirens*. What was it doing in Niagara Falls? It didn't seem likely to me that there had been a sea there for a quite some time. I had read that, in addition to its typical habitat on sandy, brackish or saline shores, this species can also be found around inland salt mining areas, but that didn't seem to be the case on this occasion. On returning to the collection site (a power line cut), I counted 22 clumps and six individual stems, indicating that the species is doing pretty well there. The mystery concerning its presence was soon solved. A roadside sign by the sidewalk said,

"Warning - Brine Pipeline - Do Not Dig." Wouldn't it be nice if more environmental features were labelled for us like that? Another sign mentioned a 10-inch sodium chloride pipe line, which made me wonder if the pipe might have sprung a leak.

Richard Zander of the Buffalo Museum of Science indicated to me that this is the first record of *S. sempervirens* for Niagara County known to him. The State Museum in Albany and the Buffalo Museum both record an occurrence of seaside goldenrod near railroad tracks in Buffalo (Erie County), but that population, the new Niagara Falls population and a few scattered sites around the old Syracuse salt mines in Onondaga County are the only New York State locations recorded for the species northward and inland from Westchester and Rockland Counties.

Significant Botanical Discoveries of 1991; Preliminary Report from the Natural Heritage Program -

by Stephen Young

Information continues to pour in to the Natural Heritage program from field scientists across the state. I have a large file drawer containing plant forms that will be transcribed for the computer this winter so I will not be able to publish a complete list of discoveries until next Spring. Until then, here are a few finds that have been made so far this year:

Carex styloflexa - G4G5 SH - A 1986 Rensselaer

County specimen collected by Gordon Tucker was identified as this species. The most recent record was a 1935 collection by Homer House from Madison County.

Carex tenuiflora - G5 SH - Documented by Anne Johnson in Bonaparte Swamp, Lewis County. Last seen here in 1920 by Homer House and the first state record since the 30s.

Erigenia bulbosa - G5 SH - Found by Pat Martin in Monroe County and documented in April. Last documented sighting in 1972.

Hypericum dissimulatum - G5Q SH - Identification confirmed of Bob Zaremba specimens collected from five or six sites in Suffolk County in 1985. H.K. Svenson last collected it in 1941 north of Babylon.

Panicum scoparium - G5 SH - Identification confirmed this year of a Bob Zaremba collection made in 1984 from Staten Island. Roy Latham last collected this species in 1959 from Suffolk Co.

Paspalum setaceum var. *setaceum* - G5T5 SH - Found this year by Bob Zaremba on Long Island. Last seen in 1941 by Roy Latham in Riverhead.

Ranunculus micranthus - G5? SH - Discovered this year by David Hunt while botanizing in Columbia County. Last seen in 1924 by Roy Latham on Fisher's Island.

Stephen M. Young, New York Natural Heritage Program, Latham NY

Report on the NYFA Council Meeting:

by Eric Lamont (Secretary, NYFA)

The Council met on September 21, 1991. Dick Mitchell, Bob Zaremba, Skip Blanchard, Eric Lamont, and Steve Clemants were in attendance. Six other members of the council gave their proxy to either Dick Mitchell or Steve Clemants. There were three items on the agenda: passing the guidelines, creating an elections framework, and starting a small grants program.

The NYFA Guidelines were passed as published in the last Newsletter with the following three amendments:

At the request of a New York State Museum Institute representative, **Article 4, Section 1** was changed to read: "The NYFA council shall recommend allocation of resources and have full power to manage the association, to assign duties, create committees, appoint a Field Trip Coordinator, Newsletter Editor, and Corresponding Secretary, and to further delegate authority as needed."

Article 6, Section 1. was changed to read: "Elections shall be held every fall by mail ballot (sent out before the fall meeting). Four council seats shall be up for election each year. The council shall resolve all ties by a vote."

Article 8, Section 1. was changed to read: "Membership shall be open to anyone, and may be obtained by writing the corresponding secretary and including the initial membership dues. Annual dues must be received by Oct. 1 to retain membership. Members not sending dues by Oct 1. will be considered inactive and excluded from voting. Dues received after Oct. 1 shall be applied to the following year."

At the Sept. 21 meeting names were selected randomly to decide which year each council members seat will be up for election. In 1992 the seats of Steve Clemants, Les Mehrhoff, Breta Sisson, and Bob Smith will be up for election; in 1993 Skip Blanchard, Eric Lamont, Gordon Tucker, and Bob Zaremba are up for election and in 1994 Knowlton Foote, Ripley Gollovin, Paul Huth, and Anne Johnson are up for election. A nominating committee consisting of Dick Mitchell, Bob Zaremba, and Doug Schmid was appointed to draw up a ballot.

The council also approved a small grants program, announced elsewhere in this newsletter.

Report on the 5th NYFA Field Trip: Central Long Island Pine Barrens -

by Robert E. Zaremba.

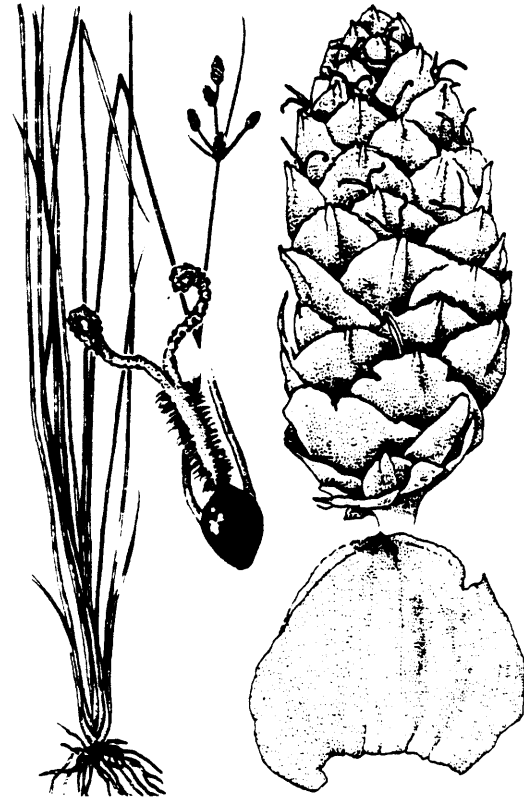
Eighteen members of NYFA met in Riverhead, New York on September 22 for a hike through several exemplary Long Island plant communities. The weather was sunny and warm. The first stop was the pine barrens and associated ponds in the headwaters of the Peconic River. We walked through the woods

from Rte 25 to the northern end of Peasy's Pond and then walked through Peasy's as far as Sandy Pond. The water level was nearly at its highest with only small areas of exposed margin. Although many of the species seen during low water years were not present, we recorded many bladderwort species and 14 species that are listed as rare in New York by the New York Natural Heritage Program.

The second stop was along the southeast side of Hubbard Creek Marsh in Flanders to visit one of Long Island's best salt marshes. *Phragmites* occurs only locally at this site which has both high productivity stands of low marsh cordgrass and large patches of high-salinity upper marsh.

The final stop was at the Dwarf pine barrens in the area southwest of Interchange 63 on the Sunrise Highway. We walked an old cinder road into a characteristic site with stunted pitch pine.

Base species lists were compiled from Heritage work over several years. The following lists were made from additions by Betty Lotowycy, Barbara Conolly, Chris Mangels, Steve Clements, and David Hunt.



Fimbristylis castanea (Michx.) Vahl, a very rare sedge in New York state, seen on the NYFA Long Island trip at Flanders Marsh.

Species Lists:

Peconic River Headwaters Uplands

Acer rubrum
Achillea millefolium
Agrostis perennans

Ambrosia artemisiifolia
Amelanchier canadensis
Amelanchier arborea var. *laevis*
Aralia nudicaulis
Aristida dichotoma
Aronia prunifolia
Aronia melanocarpa
Betula populifera
Carex pensylvanica
Cassia nictitans
Cenchrus longispinus
Centaurea maculosa
Chamaedaphne calyculata
Clethra alnifolia
Comptonia peregrina
Conyza canadensis var. *pusilla*
Cyperus dentatus
Cypripedium acaule
Daucus carota
Dennstaedtia punctilobula
Deschampsia flexuosa
Digitaria sanguinalis
Digitaria ischaemum
Diodia teres
Eragrostis spectabilis
Eragrostis pectinacea
Erechtites hieracifolia
Eupatorium hyssopifolium
Euphorbia cyparissias
Euthamia graminifolia
Euthamia tenuifolia
Galium mollugo
Gaultheria procumbens
Gaylussacia baccata
Gaylussacia frondosa
Gnaphalium obtusifolium
Helianthemum canadense
Hypericum gentianoides
Hypericum dissimulatum
Hypericum canadense
Ilex glabra
Juncus dichotomus
Juncus tenuis
Kalmia angustifolia
Lechea maritima
Lechea villosa
Lechea racemulosa
Leucanthemum vulgare
Leucothoe racemosa
Lyonia mariana
Lyonia ligustrina
Mollugo verticillata
Monotropa uniflora
Myrica gale
Myrica pensylvanica
Osmunda cinnamomea
Osmunda regalis
Panicum depauperatum

Panicum oligosanthes
Panicum dichotomiflorum
Panicum dichotomum
Panicum linearifolium
Panicum acuminatum
Pinus rigida
Plantago aristata
Poa compressa
Polygonella articulata
Polygonum arenastrum
Prunus serotina
Pteridium aquilinum
Quercus velutina
Quercus prinoides
Quercus alba
Quercus ilicifolia
Quercus coccinea
Rhynchospora capitellata
Rubus flagellaris
Rubus hispidus
Salix bebbiana
Sassafras albidum
Schizachyrium scoparium
Smilax glauca
Smilax rotundifolia
Solidago puberula
Spiraea latifolia
Spiraea tomentosa
Thelypteris palustris
Toxicodendron radicans
Tridens flavus
Vaccinium pallidum
Viburnum cassinoides

Peconic River Headwaters Pondshores

Acer rubrum
Agalinis virgata
Agrostis scabra
Anchistea virginica
Andropogon virginicus
Aster novi-belgii
Bidens cernua
Calamagrostis canadensis
Carex walteriana var. *brevis*
Chamaedaphne calyculata
Cladium mariscoides
Coreopsis rosea
Cyperus dentatus
Decodon verticillata
Drosera filiformis
Drosera rotundifolia
Drosera intermedia
Dulichium arundinaceum
Eleocharis equisetoides
Eleocharis robbinsii
Eleocharis olivacea
Eriocaulon aquaticum
Eupatorium rotundifolium var. *saundersii*

Euthamia tenuifolium
Fimbristylis autumnalis
Fuirena squarrosa
Glyceria canadensis
Gratiola aurea
Hypericum canadense
Ilex glabra
Juncus brevicaudatus
Juncus dichotomus
Juncus militaris
Juncus effusus var. *solutus*
Juncus canadensis
Juncus pelocarpus
Leucothoe racemosa
Lobelia nuttallii
Ludwigia sphaerocarpa
Lycopodium alopecuroides
Lycopus amplexans
Muhlenbergia uniflora
Myrica gale
Nymphaea odorata
Nyssa sylvatica
Osmunda cinnamomea
Panicum verricosum
Panicum longifolium
Panicum meridionale
Phragmites australis
Polygala cruciata
Polygonum hydropiperoides
Potamogeton sp.
Proserpinaca pectinata
Psilocarya scirpoides
Rhexia virginica
Rhododendron viscosum
Rhynchospora alba
Rhynchospora capitellata
Rhynchospora fusca
Rhynchospora macrostachya
Rosa palustris
Sagittaria engelmanniana
Sagittaria latifolia
Sagittaria teres
Salix sp.
Spiraea tomentosa
Spiranthes cernua
Thelypteris palustris
Triadenum virginicum
Utricularia geminiscapa
Utricularia gibba
Utricularia cornuta
Utricularia purpurea
Utricularia fibrosa
Utricularia juncea
Utricularia subulata
Utricularia vulgaris
Utricularia biflora
Vaccinium corymbosum
Vaccinium macrocarpon

Viola lanceolata
Xyris smalliana
Xyris difformis
Xyris torta

Flanders Marsh and Adjacent Woods

Achillea millefolium
Agalinis maritima
Agalinis purpurea
Agrostis scabra
Amelanchier canadensis
Andropogon virginicus
Arctostaphylos uva-ursi
Aristida sp.
Asparagus officinalis
Aster subulata
Aster tenuifolia
Aster novi-belgii
Atriplex prostrata
Baccharis halimifolia
Carex pensylvanica
Carya tomentosa
Chimaphila maculata
Cirsium horridulum
Cladium mariscoides
Conyza canadensis var. *pusilla*
Cyperus lupulinus
Digitaria sanguinalis
Digitaria ischaemum
Distichlis spicata
Eleocharis rostellata
Elymus virginicus
Eupatorium hyssopifolium
Euthamia graminifolium
Fimbristylis castanea
Gaylussacia baccata
Gaylussacia frondosa
Gnaphalium obtusifolium
Helianthemum canadense
Hudsonia ericoides
Iva frutescens
Jasione montana
Juncus gerardii
Juncus tenuis
Juniperus virginiana
Lechea maritima
Leptoloma cognatum
Limonium carolinianum
Linaria canadensis
Lythrum lineare
Malus pumila
Myrica pensylvanica
Oxalis stricta
Panicum oligosanthos
Panicum virgatum
Parthenocissus sp.
Phragmites australis
Pinus strobus

Pinus rigida
Pityopsis falcata
Plantago maritima
Pluchea odorata
Poa compressa
Polygonella articulata
Prunus serotina
Quercus alba
Quercus velutina
Rosa carolina
Rumex acetosella
Sabatia stellaris
Salicornia europaea
Salicornia virginica
Sanguisorba canadensis
Sassafras albidum
Schizachyrium scoparium
Scirpus robustus
Scirpus americanus
Setaria viridis
Smilax rotundifolia
Solidago sempervirens
Spartina patens
Spartina alterniflora
Teucrium canadense
Toxicodendron radicans
Tridens flavus
Triglochin maritimum
Vaccinium pallidum
Vaccinium corymbosum
Verbascum thapsus

Dwarf Pine Barrens

Acalypha gracilens
Achillea millefolium
Amaranthus retroflexus
Apocynum androsaemifolium
Arctostaphylos uva-ursi
Aristida dichotoma
Aristida longispica
Aristida tuberculosa
Aster linariifolius
Baptisia tinctoria
Bulbostylis capillaris
Carex pensylvanica
Celastrus orbiculata
Chamaesyce maculata
Comptonia peregrina
Conyza canadensis var. pusilla
Cyperus lupulinus
Cyperus houghtonii
Desmodium sp.
Diodia teres
Eragrostis pectinacea
Eragrostis minor
Eragrostis spectabilis
Erechtites hieracifolia
Eupatorium hyssopifolium

Euthamia tenuifolia
Gaylussacia baccata
Gnaphalium obtusifolium
Helianthemum canadense
Hudsonia tomentosa
Hudsonia ericoides
Hypericum perforatum
Hypericum gentianoides
Jasione montana
Juniperus virginiana
Lechea maritima
Lepidium virginicum
Lespedeza hirta
Mollugo verticillata
Myrica pensylvanica
Panicum dichotomum
Panicum implicatum
Paspalum sp.
Pinus rigida
Pityopsis falcata
Plantago aristata
Polygonella articulata
Portulaca oleracea
Prunus pumila var. susquehanae
Prunus serotina
Quercus ilicifolia
Rubus flagellaris
Rumex acetosella
Schizachyrium scoparium
Setaria arenaria
Sporobolus vaginiflorus
Tephrosia virginiana
Trichostema dichotomum
Vaccinium pallidum

Call for Research Proposals

The Council of the New York Flora Association has voted to start a small grants program to foster field botany in New York State. We will be accepting proposals for floristic studies and specific taxonomic problems that pertain to New York vascular plants.

Proposals should be less than two pages long and include: a statement of problem, methods to be used, a schedule, budget, statement of goals, and expected products of the research. Grants will be in the amounts of \$100 to \$500, but proposals of \$250 or less will be given stronger consideration. Requirements are that the researcher be a member of the New York Flora Association and **not** a member of the NYFA Council. Award winners are expected to write a report for publication in the NYFA Newsletter and supply duplicates of all specimens collected to the State Herbarium (NYS).

Send proposals to Steven Clemants, Brooklyn Botanic Garden, 1000 Washington Ave., Brooklyn, NY 11225 (718) 832-0994. The deadline is March 1

CALL FOR 1992 DUES

Our membership stands at around 280, with many new members this year. Some of you have paid your 1992 dues already, but for the rest of you, we'd appreciate early payment, so we can do more to promote field botany in the state -- things like giving those small grants for field work, and we're always open to suggestions on other services we can perform. Those of you who didn't pay in 1991: We don't want to lose you as members, but this will be your last issue of the NYFA Newsletter, so please rejoin.

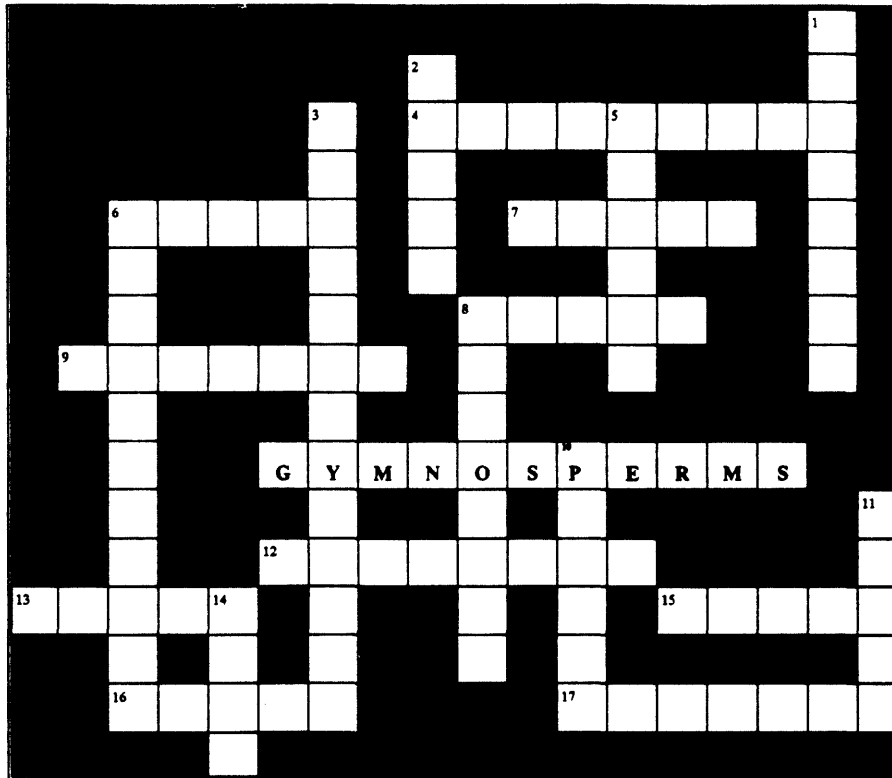
Thanks to all the members who sent us specimens this year.

-Andrew Nelson of Mexico, New York, is to be especially thanked for his gift of 200 fine specimens from two areas that he has been studying botanically. His donation even included two specimens of *Wolffia*, the tiny watermeal, preserved in isopropyl alcohol.

Check Your Envelope - If the number 91 appears to the upper left of your name, it's time to pay dues, but a 92 means you're paid up.

GYMNOSPERM CROSSWORD

by Clifford Lamere



If a clue below is followed by an asterisk (*), the solution is the genus name of the gymnosperm described.

DOWN

- 1 Collectively, those gymnosperms that produce cones are called ___?
- 2 Junipers bear their seed in a fleshy structure that resembles a ___?
- 3 Atlantic white-cedar *
- 5 Called a "living fossil", this cultivated tree has bilobed leaves and pulpy, malodorous seed covering*
- 6 Douglas-fir, a rare escape native to the west *
- 8 Bald-cypress, a rare escape native to the south *
- 10 Some people are allergic to these pine gametophytes
- 11 American yew *
- 14 The red, juicy jacket that covers all but the tip of the yew seed is an ___?

ACROSS

- 4 Maidenhair tree, unlike most gymnosperms, is not ___?
- 6 Spruce *
- 7 Pine *
- 8 Hemlock *
- 9 Red-cedar
- 12 A cluster of pine leaves on a spur-shoot
- 13 Arbor-vitae *
- 15 This native gymnosperm has deciduous leaves *
- 16 Balsam-fir *
- 17 The thin linear leaves of pines and spruces

A Key to Bedstraws (*Galium*, Rubiaceae) in New York State

by Gordon C. Tucker, N. Y. State Museum

During the past few months, I became exasperated on several occasions when attempting to identify a bedstraw using the keys in existing manuals. In particular, I was perplexed by a specimen from (where else) Fishers Island that I thought might be *Galium sylvaticum*, but turned out to be merely a shade form of *G. mollugo*. To aid my learning process of *Galium* species of New York, I decided to try to prepare a key to them. I'd like to share it with the NYFA membership and get your suggestions and comments. I leave it up to you to decide if it is of use. Let me point out that each species keys out in only one place, independent of whether the specimens are flowering or fruiting, and specimens without underground parts can now be accommodated, which I hope will be helpful.

1. Principal stem leaves 3 (-5) veined, in whorls of 4.....(2)
1. Principal leaves 1 veined, in whorls of 4, 6, or 8.....(6).
 2. Stems pilose; fruits smooth.....*G. cruciata* (*Cruciata laevipes*)
 2. Stems not pilose; fruits with uncinatate or straight hairs or prickles (rarely smooth).....(3)
3. Leaves with stiff prickly-like hairs beneath.....*G. boreale*
3. Leaves without prickly-like hairs beneath.....(4)
 4. Leaves lanceolate, with acute apices.....*G. lanceolatum*
 4. Leaves ovate, with rounded to obtuse apices.....(5)
5. Corolla greenish to purplish; fruits 3 mm long [widespread].....*G. circaezans*
5. Corolla yellowish-white; fruits 1-1.5 mm long [Adirondack High Peaks only].....*G. kamschaticum*
 6. Fruits and ovaries bristly or hairy, the hairs straight or uncinatate.....(7)
 6. Fruits and ovaries neither bristly nor hairy, though sometimes roughened.....(10)
7. Leaves in whorls of 6 or 8; stems weakly erect, glabrous or retrorsely scabrid on one or more angles, especially apically.....(9)
7. Leaves in whorls of 4; stems erect, not scabrid but pilose.....*G. pilosum*
 8. Plants annual; leaves mostly in whorls of 8, linear to narrowly lanceolate, entire.....*G. aparine*
 8. Plants perennial; leaves mostly in whorls of 6, narrowly elliptic, mucronate.....*G. triflorum*
9. Stems pilose, basally or throughout; [rare adventives].....*G. tricornum*
9. Stems smooth, finely pubescent, or retrorsely scabrous on angles.....(10)
 10. Leaves in whorls of 4.....(11)
 10. Leaves in whorls of 6 (-8).....(13)
11. Leaves hispid on margin; corolla 4-lobed.....*G. labradoricum*
11. Leaves not hispid but often retrorsely scabrous on margin; corolla 3-lobed.....(12)
 12. Pedicels straight, glabrous.....*G. trifidum* (*G. brandegei*; *G. brevipes*)
 12. Pedicels slender, arcuate, scabridulous.....*G. tinctorium* (*G. trifidum* var. *tinctorium*)
13. Leaves retrorsely scabrous on the margins.....*G. asprellum*
13. Leaves extrorsely scabrous, ciliate, or smooth on the margins.....(14)
 14. Stems retrorsely scabrid on the angles.....(15)
 14. Stems not retrorsely scabrid.....(16)
15. Flowers 3 mm wide [rare, southwestern New York only].....*G. concinnum*
15. Flowers 4 mm wide [widespread].....*G. palustre*
 16. Corollas yellow.....*G. verum* (*G. wirtgenii*)
 16. Corollas white to creamy white.....(17)
17. Principal leaves of the main stem 25-35 mm long, 5-9 mm wide, with flat margins [rare adventive].....*G. sylvaticum*
17. Principal leaves of the main stem 10-20 mm long, 2-5 mm wide, with revolute margins when dried [widespread].....(18)
 18. Leaf tips blunt to slightly emarginate; anthers 0.2-0.3 mm long.....*G. obtusum*
 18. Leaf tips mucronate with an awn ca. 0.5 mm long; anthers 0.10-0.25 mm long.....*G. mollugo* (*G. album*).

Excluded Species:

- G. aristatum* -- Reports of this species from Albany, Madison, and Chemung Counties appear to have been based on mis-identifications of somewhat larger than usual (shade?) plants of *G. mollugo*.
- G. odoratum* -- A rare introduced species, reported from Erie, Cattaraugus, Livingston, Onondaga, and Ulster Counties. It is sometimes included in the genus *Asperula*. The corolla tubes are about as long as the lobes, while in other *Galium* species the tube is so short that lobes appear to be sessile on the ovary apex.