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# NYFA Newsletter

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New York Flora Association  
of the New York State Museum Institute

Vol. 5, No. 2

Co-Editors:

Richard S. Mitchell

Robert E. Zaremba

May - 1994

New York State Museum The Nature Conservancy

ADDRESS ALL CORRESPONDENCE TO NYFA, 3132 CEC, ALBANY, NY 12230 - DUES \$10 PER YEAR

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## Discovery of *Utricularia inflata* Walt. -- a New Native Species for New York State by Richard S. Mitchell

Plant exploration continues at a feverish pace in New York, especially downstate. As you will see, in an article by Steve Young to follow, a number of rediscoveries were made across the state, and state records of two new native plants were turned up, both involving Spider Barbour of Saugerties, who would undoubtedly win the NYFA "Intrepid Explorer Award" if there were such a thing.

It was mid-May, 1993. Jack Focht and I had taken a trip to Spruce Pond, a place that has turned out to be one of the more fascinating bodies of water in Harriman State Park. On the lake shore, we were immediately confronted with a stand of bladderworts with many, large butter-colored flowers borne on stalks that floated on rings of inflated "pontoons."

"*Utricularia inflata*," I said, recalling my many encounters with the species in the southeastern United States, "I don't think that's supposed to grow in New York!" Jack enthusiastically preceded me into the shallow water and gathered two specimens, mumbling something about coming back with a canoe, which we did around the first of June. By that time, we had heard that the bladderwort was found independently at Spruce Pond by two other people (Spider Barbour, and Terryanne Maenza-Gmelch) within the same two week period as our visit.

Spider, who was working on the Bear Mountain-Harriman flora project with us, understandably thought he had collected *U. radiata*, a similar, but much smaller plant that ranges from Canada to South America. Terryanne found it while carrying out fossil pollen studies at Spruce Pond in conjunction with her Ph.D. dissertation at New York University. She found the plants a week or so after we were there, just before they began to wilt and sink.

Apparently plants of this southeastern Coastal Plain species don't set fruit so far north; it will be interesting to go back and see if they fruit this year, but it may be that the species has recently immigrated and is not yet adapted to our short season.



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*Utricularia radiata* (left) and *U. inflata* (right), the small and large floating bladderworts. Both are now known to occur in New York State.

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I feel relatively comfortable when speculating about its northward migration, because the species was also found for the first time in New England in 1991 by Bruce Sorrie, who reported it for Massachusetts in the journal, *Torreyia* (1992).

### Question - Why aren't these just large and small varieties, or merely forms of the same species?

*Utricularia inflata*, and *U. radiata* are, indeed, closely related. In fact, *U. radiata* was first described as a diminutive variety of *U. inflata* (var. *minor* Chapm.), but it has later become clear that the two differ in a number of well-defined morphological characteristics, carefully detailed by Reinert and Godfrey (1962). *Utricularia inflata* is larger than *U. radiata* in every respect. While both species bear flowers in a raceme

at the tip of a stipe on a floating whorl of pontoon-like floats, *U. radiata* has only 3-5 (rarely -7) flowers per inflorescence, while *U. inflata* has 5-15 (-19), frequently 9-12. The pedicels of *U. inflata* become strongly reflexed in fruit, whereas those of *U. radiata* are usually ascending or weakly reflexed. Other characters include notching of the corolla in *U. radiata* and differences in shapes of bracts and floats. The floats of *U. inflata* are narrowed at the base, while in *U. radiata* they are thick at the base.

Chromosomes of the two species also differ in a significant way. A polyploid difference might be postulated to explain the differences between the two bladderworts, but three levels of ploidy ( $n = 9, 18 \& 36$ ) occur within the species *U. inflata* itself, while, surprisingly, the chromosome number for *U. radiata* is  $n=14$ , a totally different base-number. So, although they are related, these two bladderworts definitely deserve recognition as separate species.

In early June, Terryanne, Jack and I returned to Spruce Pond with a canoe. Inspection of the pond from that point of view gave us not only a good look at the vegetative growth of *U. inflata*, but allowed us to investigate the mucky margins of what historically must have been a magnificent bog mat. We don't know what caused the bog mat to recede and disintegrate to deep muck, but we have historical evidence that it was present from a century-old publication in the *Bulletin of the Torrey Botanical Club* (Millspaugh, 1884). Millspaugh's article is wonderful, recounting his "heavenward" ascent to the pond (it is on a hilltop). He listed many orchids, including the very rare white lady's-slipper (*Cypripedium candidum*) growing on or near a significant mat with bog bean and sundews. Of course, we had no hope of finding such a scene, but we did see both *Drosera intermedia* and *D. rotundifolia*; also *Xyris montana* (yellow-eyed grass) and *Sarracenia purpurea* (pitcher-plant), relicts of some of Spruce Pond's apparent better days. We also found the tiny, naked gentian, *Bartonia virginica* along the banks, and we look forward to going back for further searches, hoping to find *Tipularia* and other elusive orchids.

The floating bladderwort at Spruce Pond is not a waif. Although fewer than 40 flowering stalks were produced at the site in 1993, our survey by canoe revealed hundreds of well-established plants along every shore of the pond (ca. 4 ha., or 10 acres), in water from one inch to four feet deep. It may be that the plants have remained vegetative for a number of years and gone unnoticed for that reason. Also, they may not flower every year, but only under certain seasonal conditions in this location at the northern limits of their distribution range. We think that it's unlikely that such a showy plant went unnoticed in New England and New York for the past 150 years, considering the many hundreds of enthusiastic

botanists who have explored these regions. Then, to have three people all find it in the same month? Not likely, we think.

Although *U. inflata* has apparently been in Spruce Pond long enough to become well-established, it is almost certainly a recent, natural immigrant into the state. Plant fragments or seeds might have been brought into Spruce Pond by sportsmen or boaters, but this is unlikely, since the pond is on an obscure hilltop, up a steep road protected by a locked gate. Although it was once a recreation site for boy scouts, and is now used occasionally by state park employees and picnickers, there is little reason to suspect that Spruce Pond has had much interstate visitation from the south.

If a northward migration of this species is taking place, it will be interesting to note its progress. It is too early to speculate on climatic warming or other trends, but recent northern occurrences of *U. inflata* and other Coastal Plain species should now be sought, in hopes of shedding light on the interesting phenomenon of range expansion.

#### Literature:

Millspaugh, C. F. 1884. Droseraceae and Orchidaceae of Spruce Pond, N. Y. Bull. Torrey Bot. Club 11: 133-134.

Mitchell, R. S., T. E. Maenza-Gmelch & J. G. Barbour. 1994. *Utricularia inflata* Walt. (Lentibulariaceae), new to New York State. Bull. Torrey Bot. Club (in press).

Reinert, G. W. & R. K. Godfrey. 1962. Reappraisal of *Utricularia inflata* and *U. radiata* (Lentibulariaceae). Am. Jour. Bot. 49: 213-220.

Sorrie, B. A. 1992. *Utricularia inflata* Walter (Lentibulariaceae) in Massachusetts. Rhodora 94:391-392.

#### Off to Russia --

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Chuck Sheviak of the State Museum has been invited by the Komarov Botanical Institute of the Russian Academy of Sciences to participate in joint field work on *Cypripedium* this June. He will join three Russian orchidologists and two Germans for three weeks in the field in the vicinity of Vladivostok and on Sachalin Island. In this area, some Asiatic plants show certain features of American species, apparently as a result of hybridization and parallel responses to severe environments. Chuck hopes that information on the evolutionary trends in that area may provide a basis for interpreting some of the variation in North American plants. He also expects to take advantage of the opportunity to collect specimens of a wide range of plants that belong to groups that are problematic in the Northeast. He will also make a two-week stop-over in Alaska on his way back, focusing there on some members of the

also make a two-week stop-over in Alaska on his way back, focusing there on some members of the *Platanthera hyperborea* complex.

We wish Chuck a safe trip, and all the joyful adventure that northern exposure can bring. Go forth and prosper, and may you be safe from ticks. (Ed.)

## A New Look At The Taxonomy of our Yellow Lady's-slippers --

by Chuck Sheviak

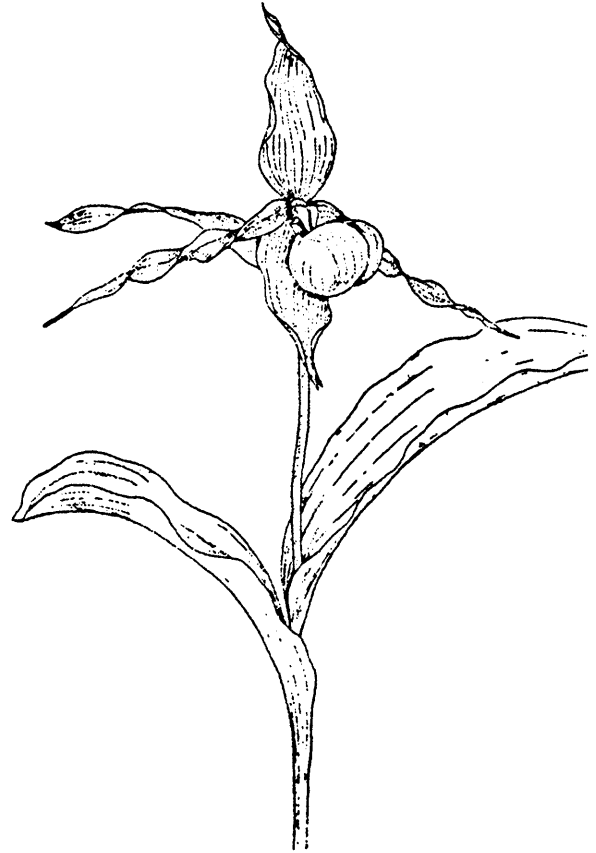
Yellow lady's-slippers rank highly among our more popular and universally recognized native plants; nonetheless, they have been the subjects of persistent taxonomic controversy over the years. Both splitters and lumpers have had their say, deriving their own interpretations from a wealth of conflicting evidence. Over a period of about thirty years, I've gained field experience with these plants across most of their nearly continent-wide range, and studied countless herbarium specimens. Individual plants collected and chosen to represent certain regions, habitats, populations, or phenotypes have been cultivated for extended periods, in some cases exceeding twenty years. By studying variation within populations in the field and comparing year-to-year variation of individuals under cultivation, it has been possible to obtain a more complete picture of the morphological and ecological dynamics of these plants than has been previously used in their taxonomy. This new information indicates that some taxonomic changes are necessary.

Over 50 years ago, D. S. Correll accommodated all North American yellow-lipped plants by including them within a single, highly variable variety of the Eurasian *Cypripedium calceolus* L. Subsequently, M. L. Fernald adopted Correll's *C. calceolus* var. *pubescens* (Willd.) Correll, but proposed recognition of the small-flowered plant of northern fens as *C. calceolus* var. *parviflorum* (Salisb.) Fern. His earlier *C. parviflorum* Salisb. var. *planipetalum* Fern. had already been transferred to *C. calceolus* var. *planipetalum* (Fern.) Vict. & Rouss. These contributions have provided virtually all North American workers with names that could be applied to their plants, but the names have been applied inconsistently by different authors. In part, this situation resulted from the inadequacy of the existing taxonomic treatments.

Although Correll's broad geographic perspective was an improvement over narrow, provincial approaches that had come before (and have begun to reappear), he was unaware of certain differences and patterns of occurrence that clearly show North American and Eurasian plants to comprise different species.

Each continent supports its own complex of related species, with American species more similar to each

other than to any Eurasian species, and vice-versa. This is most readily apparent in the 3-dimensional shape of the staminode. In all North American species it is conduplicate (i.e., folded like an open book, with the two halves flat), whereas in Eurasian



species it is canaliculate (trough-like, U-shaped in cross section). In addition, staminodia of North American plants are yellow and broadest toward the base or middle, while those of Eurasian *C. calceolus* are white and broadest near the apex. In other related Eurasian species the staminode may be differently colored and broadest near the base, but the canaliculate form is maintained. So far as I am aware, the only exceptions to this pattern are a single, possibly distantly related Chinese species and a complex of problematical plants along the central Pacific Coast of Asia that exhibit combined characteristics of *C. calceolus*, the Eurasian *C. macranthum* complex, and North American species.

When North American plants are recognized as distinct at the specific level, *Cypripedium parviflorum* Salisb. is the name with priority. Three varieties seem at present to be recognizable, but these do not correspond to the three of earlier treatments. I currently recognize: *C. parviflorum* Salisb. var. *parviflorum*, var. *pubescens* (Willd.) Knight, and var. *makasin* (Farwell) Sheviak.

**Key to Yellow *Cypripedium* Varieties in New York:**

1) Abaxial (outer) surface of uppermost sheathing bract glabrous to sparsely and inconspicuously pubescent when young; flowers small, lip 15 -- 29 mm long; sepals and petals usually suffused with dark reddish brown or madder, or in the West often spotted and blotched; scent intense, sweet..... var. *makasin*

1) Abaxial (outer) surface of uppermost sheathing bract densely and conspicuously silvery-pubescent when young (later sometimes glabrescent); flowers large to small, lip 20 -- 54 mm long; sepals and petals variably spotted, striped, blotched, and reticulately marked with reddish brown or madder (rarely unmarked); scent moderate to faint, rose or pungent-musty.....2

2) Flowers commonly large, lip to 54 mm long, but very small in some boreal and northern cordilleran plants, (as small as 20 mm); sepals and petals unmarked to commonly spotted, striped, and reticulately marked with reddish brown or madder, rarely extensively blotched; throughout the range of the species .....var. *pubescens*

2) Flowers small, lip 22 -- 34 mm long; sepals and petals usually densely and minutely spotted with dark reddish brown or madder and appearing uniformly dark (rarely coarsely spotted and blotched); southern New England to Kansas and southward.....var. *parviflorum*

This species is extremely variable, reflecting individual phenotypic plasticity, infraspecific differentiation, and hybridization with related species. In particular, var. *pubescens* is difficult to delimit. In exposed situations, especially in calcareous soils, plants are low-growing with ascending, often narrow leaves and rather small flowers; in exposed boreal and arctic sites, plants and flowers may be very small with weakly spiralled to flat petals. Such plants from Newfoundland were originally described as *C. parviflorum* var. *planipetalum*. When grown under less severe conditions, these often develop into larger plants with larger flowers of a more common shape; indeed, the holotype sheet of var. *planipetalum* includes a range in habit and floral morphology and includes a plant rather typical of boreal var. *pubescens*. The lips of smaller flowers often are markedly compressed laterally, with parallel sides, but when larger flowers are produced by the same plant, the proportions of the lip often change, the lip then being very broad below and tapering toward the adaxial surface (trapezoidal in cross-section) or sometimes dorsoventrally compressed and broader than high.

The southeastern var. *parviflorum* differs from var. *pubescens* primarily in flower size and color, and the two might be merely forms. Most works dealing with this species have treated the primarily boreal var.

*makasin* as var. *parviflorum*, either including all small-lipped plants within var. *parviflorum*, or in some cases restricting the name to the northern variety and excluding the southeastern plants described by Salisbury as *C. parviflorum*. Fernald's original publication on *C. calceolus* var. *parviflorum* actually treated var. *makasin*, citing a description of this variety, and clearly discussing the northern plant. Additionally, although geographically accommodating Salisbury's plant, Fernald excluded most of the range of the southeastern var. *parviflorum*, thereby referring most plants of var. *parviflorum* to var. *pubescens*, and further restricted var. *pubescens* to the East, thereby assigning most plants of this variety to his northern var. *parviflorum*, i.e., var. *makasin*. Consequently, most published illustrations of var. *parviflorum* are in fact var. *makasin*. Variety *parviflorum* has been dealt with primarily in publications on the southeastern flora. In the East, var. *makasin* is quite distinct, but in the West it becomes difficult to separate from very small plants of var. *pubescens* that are common there; in that area, fragrance is often the least equivocal character.

So, what do we have in New York? Our yellow cyps are all *C. parviflorum*, and all three varieties occur here. The variable var. *pubescens* occurs in sites throughout the state, wherever suitable calcareous substrates occur. It is the commonest variety in rich, deciduous woods on limestone, and extensive populations occur on some open, limestone barrens; rarely this plant occurs in calcareous fens. Fens are also a typical habitat for var. *makasin*, although this is a characteristic plant of open *Thuja* swamp forests throughout the central and northern portions of the state. The southeastern var. *parviflorum* reaches the state in the Southern Tier and extends northward up the Hudson Valley at least as far as Albany. It is an upland, deciduous forest plant that can occur in sites much drier and more acidic than those of var. *pubescens*. This variety seems to have largely disappeared in New York and should be sought.

The interpretation presented here is hardly the last word on this bewildering group. A number of additional problems persist, and other workers are applying a variety of approaches to the problems. I hope that the information that underlies my interpretation will be a useful step toward a more complete and lasting treatment of the group.

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

THANK YOU FOR SENDING THE NEWSLETTER YOUR ARTICLES AND EXPERIENCES; WE'D LIKE EVEN MORE NEWS AND COMMENTS FROM YOU...

## Significant Botanical Discoveries of 1993 -

Compiled from information received at the New York Natural Heritage Program

by Steve Young

The past year was not a record year in terms of numbers of rarities discovered, but some very interesting finds were reported, including two new species for the state. A significant number of historical (SH) taxa remain to be found, but many of these were at only a few sites the state, making them tougher to find. Only 12 of these species had 10 or more historical occurrences. These would be the best candidates for future finds. If you would like a list of historical taxa and their sites, call me at (518) 783-3932. Congratulations to all the successful plant explorers and good luck this field season.

### *Ammophila champlainensis* Seym. G1Q S1

A second population of this extremely rare grass was documented in detail by Jerry Jenkins near Plattsburgh. (see also E. Cope, this issue)

### *Chelone glabra* L. var. *dilatata* Fern. & Wieg. G5T SH

Documentation was received from Pat Eckel of the Buffalo Museum who collected a specimen in 1986 at Niagara Falls. It was also seen on the 1993 NYFA field trip to the falls. Previously seen in 1977 in the town of Newcomb, Essex County.

### *Cyperus retrorsus* Chapm. G5 SH

Information was received from Gordon Tucker about a specimen collected by Richard Stalter at the Jamaica Wildlife Refuge in September of 1992. Last seen on Fire Island in 1976.

### *Diarrhena obovata* (Gleason) Brandenb. G5

Spider Barbour found this grass while exploring the Shawangunk Kill in Sept. 1993. Disjunct from southern PA, it turned out to be new to the state!

### *Elatine americana* (Pursh) Arn. G4 SH

Documentation received from Gordon Tucker of an occurrence at West Point in 1992 and Harriman State Park, 1993. Last seen in the Connetquot River Watershed in 1974 and Stockport in 1959. Most records were from the 1930s and earlier.

### *Hackelia deflexa* (Wahl.) Opiz var. *americana* (Gray) Fern. & Johnst. G5TU SH

Documentation received from Jerry Jenkins on an occurrence along the shore of Lake Champlain in Clinton County (1992). Last seen in 1956 along the Schoharie Creek.

### *Leucospora multifida* (Michx.) Nutt. G5 SH

Discovered by Bob Ingalls on a roadside in Schenectady. Last observed 1934 (Oneida Lake).

### *Utricularia inflata* Walter G5

Another new species for the state! This one discovered independently by Dick Mitchell and Jack Focht, Spider Barbour and Terryanne Maenza-Gmelch during the State Museum's survey of Harriman State Park.



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*Diarrhena obovata* (Gleason) Brandenb. BEAKGRAIN  
Added to the native New York flora by Spider Barbour  
in 1993.

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## Further Notes on Beachgrasses (*Ammophila*) in Northeastern North America -

by Edward A. Cope

An interesting article by Gordon Tucker appeared in a recent issue of this newsletter (Vol.3, No.1) dealing with two species of *Ammophila*: *A. breviligulata* Fern. and *A. champlainensis* Seym., that are native to New York State. This prompted me to examine herbarium specimens at the Bailey Hortorium, Cornell University (BH). Two new localities for *A. champlainensis* can now be reported from historical collections, extending the range to the eastern shores of Lake Ontario in Oswego County, NY (Town of Sandy Creek) and to northeastern Quebec (Ile aux Basques, on the St. Lawrence River, about 250 km northeast of Quebec

City). I have not seen any New York specimens of a third species, *A. arenaria* (L.) Link, which is abundantly naturalized on the Pacific coast and sometimes planted in New Jersey, Massachusetts and other Atlantic seaboard states.

In the Cornell (BH) herbarium I selected 22 specimens from among 60 specimens of *A. breviligulata* from northeastern North America that I initially thought might be champlain dunegrass. Using just two macroscopic characters, inflorescence length and flag (uppermost) leaf blade length, I was able to separate the two groups easily as follows, with Tucker's (1992) limits for these characters from NYS material in brackets: *A. breviligulata* - inflorescence 23-30 [20-35] cm long, flag leaf blade (17-) 30-34 (39) [25-40] cm long; *A. champlainensis* - inflorescence (9.5) 13-21 [12-16] cm long, flag leaf blade (5) 9-21 (-26) [10-25] cm long.

If the same two characters are used, retaining the shorter inflorescence length (13-16 cm) mentioned in the type description of *A. champlainensis* (Seymour, 1966) and the longer flag leaf length (10-25 cm) described by Tucker (1992) and Stern (1983), the BH Herbarium has only four specimens of *A. champlainensis*.

I find the glume characters from the type description (Seymour, 1966) to be unworkable. The glume tips are somewhere between acute and acuminate, their lengths vary between 8 and 12 mm in both species, and I am unable to distinguish "curved" versus "straight" keels. The "abrupt versus tapering of both ends of the inflorescence" character (Seymour, 1966) can occasionally be helpful, as some specimens of *A. champlainensis* show a tendency to be more truncate at the base of the inflorescence. Anther length differences tentatively suggested by Tucker (1992) were not consistent in BH specimens. Anthers were 4-5 (6) mm long where I could find them in both species. I did not find many mature grains (caryopses) in our material, but most were 3.5-4.5 mm for both species.

Differing flowering periods between *Ammophila breviligulata* and *A. champlainensis* have been suggested as supporting the delineation of these species (Stern, 1983; Tucker, 1992). At first, this seemed unlikely to me, since nearly all BH specimens were collected in late summer or fall. However, upon dissection of some flowers I discovered that BH material, in fact, supported this distinction. Empty florets, both mature and withered, aborted caryopses, or old, dried-up anthers can be observed in the three late-summer and fall-collected *A. champlainensis* specimens (Muenscher 219, Dirig 1663, Clinton Co., NY; Marie-Victorin et al. 33041, Co. de Temiscouata, Quebec). The champlain dunegrass specimen collected June 25 (Needham 1314, Oswego Co., NY) has ripe exerted open and unopened anthers and

immature fruits. *Ammophila breviligulata* specimens collected in August and September have caryopses in various stages of development, and both undeveloped and mature, open anthers. The 18 remaining specimens (after removal of the four *A. champlainensis* specimens) were also flowering in late August and September, and were therefore retained in *A. breviligulata*, despite their generally shorter inflorescence and rather short flag leaves.

A summary of data follows, in which each measurement outside the typical range is listed in parentheses. Often only one or a few measurements from each plant part were recorded from a specimen. A more thorough examination may yield slightly different results.

(A) My initial concept of champlain dunegrass (N = 22):

flag leaf (5) 8-20.5 (22, 24.5, 26) cm long  
infl. (9.5) 13-21 cm long  
lower glume (8, 8.5, 9.9) 10-11.5 mm long  
upper glume (8, 9, 9.5, 10) 11-12 mm long  
lemma (8, 8, 9, 9, 9) 10-11.5 (12) mm long  
anther (3.5) 4-6 (7) mm long

(B) *A. breviligulata* (N = 8):

flag leaf (17, 24.5) 30-24 (39) cm long  
infl. 23-30 cm long  
lower glume (9,9) 10-12 mm long  
upper glume (8,10), 11- 12 mm long

(C) True *A. champlainensis* (N = 4):

flag leaf (8, 9, 14-cut off, 22) cm long  
infl. (9.5, 13, 15-cut off, 17) cm long  
lower glume (8, 10, 10, 11.5) mm long  
upper glume (8, 11, 11, 11.5) mm long  
lemma (8, 9, 10, 10) mm long  
anther (3.0 3.5, 4.5) mm long

Specimens examined:

*Ammophila breviligulata* specimens (from group A above) with flag leaf and inflorescence characteristics closer to *A. champlainensis*, but with flowering season of *A. breviligulata*. NEW YORK: Oswego Co. (Fernald 14167, Wiegand 13379, Needham 11314, Rowlee s.n. 22 Aug 1902, Clausen 4280); Clinton Co. (Dirig 1663, Muenscher 219); Jefferson Co. (Dirig 1651); Suffolk Co. (Schrenk s.n. 19 Sept 1894). MICHIGAN: Keenawa Co. (Bailey 775); Emmet Co. (Gates 11034). CONNECTICUT: Milford (Bissell s.n. 12 Sept 1900). MASSACHUSETTS: Manchester (Hubbard 127). ONTARIO: Algoma (Reznicek 5165). QUEBEC: (Lewis s.n. 5 Aug 1927, Marie-Victorin et al. 33041, 44633). NEW BRUNSWICK: Northumberland Co. (Blake 5612). NOVA SCOTIA: Sable Island (St. John 1137). NEWFOUNDLAND: St. Georges (Fernald 2563). *Ammophila breviligulata* (group B above) typical. NEW YORK: Oswego Co. (Eames & Laubengayer 20491); Jefferson Co. (Sheviak 1945, Muenscher & Maguire 1889); Erie Co. (Perkins s.n., 10 Sept 1927);

Suffolk Co. (St. John 2554, Muenscher & Curtis 6940); Richmond Co. (Burnham 744, Buchheister 24/999).

True *Ammophila champlainensis* (group C above).  
NEW YORK: Clinton Co. (Muenscher 219 and Dirig 1663); Oswego Co. (Needham 11314).  
QUEBEC: Co. de. Temiscouata (Marie-Victorin et al. 33041).

A few *Ammophila* specimens from northern Michigan and Long Island have earlier flowering seasons, shorter inflorescences and shorter flag leaf blades than what would be expected of *A. breviligulata*. Examination of more material from these and other dune area populations in the Northeast may further extend the range of *A. champlainensis*.

#### References:

- Seymour, F. C. 1966. *Ammophila champlainensis* (Gramineae), a new species in New York and Vermont. Sida Contr. Bot. 2: 349-351.
- Stern, Roger J. 1983. Morphometric and phenologic variability in *Ammophila breviligulata*. M.S. Thesis, Univ. of Vermont, Burlington. 29 pp.
- Tucker, Gordon C. 1992. Our beachgrasses (*Ammophila*), including the rare Champlain beachgrass. NYFA Newsletter 3(1): 4.
- Edward A. Cope, L. H. Bailey Hortorium, 467 Mann Library, Cornell University, Ithaca, NY 14853

## NYFA June Field Trip - 1994

### Field Trip to Letchworth and Clark Reservation State Parks

Saturday, June 11th -

Letchworth, SW of Mount Morris

We will begin our trip from the Glen Iris Inn parking lot at the lower end of the Park at 9 a.m. sharp, led by park naturalist Doug Bassett. From there we will be proceeding north along the main park road with stops at the upper and middle falls, council grounds, Inspiration Point, lower falls cabin B, archery field overlook, great bend overlook, Wolf Creek and Tea Table where we will eat lunch around 1 p.m. (please pack your own). After lunch we will proceed to the Gardeau overlook, Cabin C area, Hogsback, Dam overlook, and Squakie Hill overlook before ending the tour at a small fen around 5 p.m. There will be 4 short hikes that involve some muddy and wet spots and some walking off trails through brush, so bring proper attire and footwear. Some parts of the hikes will be over steep terrain. Be prepared to see champion trees, rare plants, inspiring waterfalls and incredible views (rainbows) weather permitting. Don't forget your binoculars.

Contact numbers: Doug Bassett 716-493-3625

State Park 716-493-3600

### Sunday, June 12th - Clark Reservation

We will meet in the parking lot of Clark Reservation State Park at 1:30PM. From there we will spend about 2 hours hiking around the perimeter of the plunge basin, home to the world's largest concentration of Hart's tongue fern. The geology and vegetation make it one of the most interesting natural areas in the state. Our leaders will be Bernie Carr and Diane Wheelock.

Contact numbers: Bernie Carr 315 695-7228

State Park 315-492-1590

**Directions to Clark Reservation:** Going south on I-81 from Syracuse between I-690 and I-481, get off at the Brighton Ave exit then left at the first light. Go about 200 yards to the next light and make a left on to Brighton Ave. Stay on Brighton going south until it joins Rt. 173, the Seneca Turnpike. Go east on 173 about a mile and a half to the park entrance on your left.

#### Accommodations:

##### At Letchworth State Park

Pinewood Lodge - 716-493-2622

Glen Iris Inn - 716-493-2622

Campground and Cabins - Mistix 1-800-456-CAMP

##### In the area:

Motels - Colonial Motel, Portageville, 716-493-5700

Park Lake Motel, Perry, 716-237-3654

Campgrounds - Four Winds, Portageville, 716-493-2794

Woodstream Campsite, Gainesville, 716-493-5643

Bed and Breakfast - The Eastwood House, Castile, 716-493-2335

Inns - Genesee Falls Inn, Portageville, 716-493-2484

### QUESTIONS ABOUT THE TRIP?

Call Steve Young: 518-464-1158 (evenings)

518-783-3932 (day)

## August 20, 1994 Field Trip

Field Trip to Staten Island, Saturday, August 20th.

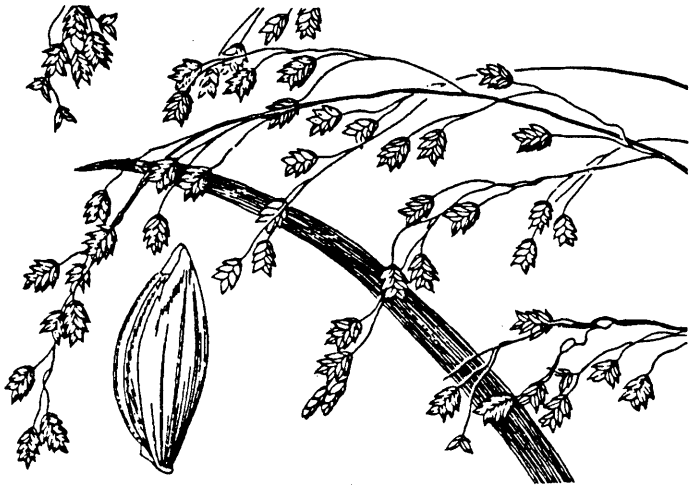
Set aside this date and join us for a look at Staten Island's summer flora in a variety of habitats. Details will be given in the next NYFA newsletter.

## Special Field Trip to Bash Bish Falls - Sept. 26th

Try to set aside this date and watch for instructions in the next Newsletter, which should come out early August.

## Dues?

Don't forget to check the number above your name on the envelope to see the year you last paid. Please don't drop your membership. We don't want to lose you! P.S. YOU'LL GET 4 NEWSLETTERS IN '94!



### Book Review

John Greenlee and Derek Fell. 1992.

*The Encyclopedia of Ornamental Grasses*. 186 pp. (Rodale Press, Emmaus, PA, hard-cover, \$29.95).

Many of us think of grasses as components of lawns, pastures or hayfields, but grasses can offer an interesting dimension to gardening, whether you like wildflowers, ornamentals, or both (as I do).

This encyclopedia is an appealing book with excellent photographs, which are probably its strongest feature. By grasses, the author means grasses and grass-like plants. A brief discussion (p. 6) explains some differences between grasses, sedges, rushes and lilies. Spikelet structures are also mentioned and illustrated, but there is really scant mention of how sedges differ from grasses, e.g. nothing about triangular culms and closed leaf sheaths in grasses. The text is also peppered with a number of amusing mis-spellings, like "*Schoenplectus tabernaemontana*" and "*Orysopsis milliacea*." A quick look at *Hortus Third* (cited in the bibliography) by the editors could have cleared this up.

These few quibbles aside, this is a fine book that many of us will want, even if we aren't going to try to grow any of the many plants covered (more than 250 species and cultivars). The main body of the book is

an alphabetical compendium of grasses. For each entry, the following information is provided: scientific name, pronunciation (usually quite reasonable), common names, USDA hardiness zones, origin, and preferred sites for cultivation (wet, sunny, dry, etc.). There is a large color photograph and a paragraph or two listing further information about the plant. For many species, several cultivars are included and illustrated. For example, *Phalaris arundinacea*, Reed Canary-grass, has four varieties, including dwarf forms and golden striped, as well as the old familiar white variegated 'Gardener's Garters.'

Adequate warning is given on such aggressive species as *Phragmites australis*, that ecological Visigoth that has taken over many northeastern wetlands, and *Glyceria maxima*, a European grass that has done the same to many floodplains and marshes in southern Ontario.

Only a few photographs are mislabelled (the picture of "*Carex pseudocyperus*" is actually *Cyperus erythrorhizos* and *Typha* sp. 'Miniature' looks like it might really be *Eleocharis palustris*). There are 30 entries under *Carex*, including species native to eastern North America, as well as many unfamiliar ones from Europe, Asia and New Zealand. The overall coverage is very good, but I could think of a few species of both natives and exotics that might be added. *Cinna arundinacea* and *Cinna latifolia*, our two native species of wood reed, should be good for shaded areas. *Ammophila breviligulata*, dune grass, would do well in some sunny, well drained situations; *Carex tuckermanii*, with its whitish, plump perigynia, and *Scirpus microcarpus*, with its red stem nodes, might also prosper in wet places.

The book concludes with sections on garden design with grass-like plants, followed by a glossary and bibliography. Helpful mail-order and nursery sources are also listed.

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IN THE NEXT NYFA NEWSLETTER:

-- Unrecorded Exotic Species Growing Wild in a Park on Long Island.

-- Rare Plant Sleuthing in the Bronx