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# NYFA Newsletter

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New York Flora Association  
of the New York State Museum Institute

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Richard S. Mitchell, Editor  
New York State Museum

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## Rare Plants of New York's Maritime

### Grasslands-

by Robert E. Zaremba, The Nature Conservancy

If you stood on any of the Montauk hills a hundred years ago, you'd find yourself surrounded by huge pastures grazed by horses, cows and sheep, with sailing ships to be seen far out to sea in almost any direction. Small pockets of shrubland and forest were only to be found in the lee of some of the hills and along the sumpy borders of the largest ponds. The Indians' influence was recently gone, but fires set by farmers, incessant winds laden with salt spray, and grazing animals combined to shape a landscape very different from what we know today.

Norman Taylor, who worked at the Brooklyn Botanic Garden, left us this impression of the vegetation of the Montauk Peninsula in 1923. He marveled at how distinctive Montauk was in relation to the remainder of New York and described in detail the plant communities of Montauk, with extensive lists of plants and their relative abundance. Grasslands called "The Downs" were the prominent feature of these Montauk uplands, where several species occurred that were found nowhere else in New York.

Biologists from the Natural Heritage Program have studied Taylor and other early scientists who worked along the coast in an attempt to develop a picture of the changing coastal landscape. Five grassland remnants totaling fewer than 100 acres have been documented recently on the Montauk Peninsula. Two other maritime grasslands occurrences, both located on the South Fork, at Shinnecock and Conscience Point, have also been identified in New York. Remnant maritime grasslands also occur on Block Island in Rhode Island and on Cape Cod and the offshore islands in Massachusetts. These grasslands are among the most threatened natural communities in the East.

Despite their small size, maritime grasslands in New York still support some of the rarest plants in New York. Thirteen species designated by the Natural Heritage Program as rare in New York have been tracked and documented from the South Fork maritime grasslands over the past fifteen years. The



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*Helianthemum dumosum* (Bickn.) Fern., Bushy Rockrose -- an extremely rare plant of the maritime grassland community.

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rarest of these plants is *Agalinis acuta*, sandplain gerardia, which is New York's only federally-listed endangered plant. Two of New York's six populations *A. acuta* are found on the Montauk Peninsula, associated with grassland remnants, and the populations are extremely small and vulnerable to extirpation. By contrast, Taylor described *A. acuta* historically as one of the eight most common plants of the downs.

Perhaps the signature species of the maritime grassland community is *Helianthemum dumosum*, bushy rockrose, whose entire global distribution range extends only from the Hempstead Plains in on western Long Island to the far eastern hills of Cape Cod in Massachusetts. It has been considered for federal listing because of its restricted range and limited available habitat. Occurring in five of the seven

grasslands known on the South Fork, *H. dumosum* is a low, bushy plant with showy, yellow flowers that are most fully open in the morning. It requires full sun and favors mineral soils exposed after fire. Populations of *H. dumosum* were seen to expand following the extensive 1986 fires at Hither Hills and at recent controlled burn sites at Prospect Hill as well.

Two other Montauk grassland natives have been considered for federal listing: *Liatrix scariosa* var. *borealis* and *Amelanchier nantucketensis*. *Liatrix scariosa* var. *borealis* (New England blazing star) is known from two maritime grassland sites. It too responds well to fire and is also known from other grasslands on Long Island. *Amelanchier nantucketensis* (Nantucket shadbush) is restricted to the South Fork of Long Island and coastal Massachusetts and occurs as a very low shrub in the grasslands as well as thickets along the grassland borders. A member of the often confusing Rose Family, *A. nantucketensis* has not been listed as endangered because of disagreement among taxonomists as to whether it is a well-defined species or just a distinctive hybrid.

Three other notable rare species found in maritime grasslands are *Aster concolor*, *Plantago pusilla*, and *Carex mesochorea*. *Aster concolor* (eastern silvery aster) was known from more than 30 sites in New York in the early part of this century. Recent field searches have confirmed its presence at only one site in the state, a grassland on the South Fork. It may have been previously associated with disturbance related to agricultural impacts that are no longer present. *Plantago pusilla* (dwarf plantain) is known in New York from about half a dozen weedy sites and one maritime grassland on a bluff overlooking the sea. This site is similar to others for the species in Southern New England and may represent a natural occurrence of this plant in the state. *Carex mesochorea* (midland sedge) was thought to have been extirpated from New York before surveys in the 1980's located it at Montauk and on the Hempstead Plains.

Other New York rarities to be found in maritime grasslands are: *Desmodium ciliare* (little-leaf tick-trefoil), *Eupatorium hyssopifolium* var. *laciniatum* (fringed boneset), *Agalinis virgata* (pine barrens gerardia), *Spiranthes vernalis* (grassleaf ladies'-tresses), *Linum intercursum* (sandplain wildflax), and *Carex albicans* var. *emmonsii* (Emmon's sedge).

During the past ten years, significant efforts have been made to protect remnant grassland sites in New York. Suffolk County, New York State Parks and Historic Preservation and the town of East Hampton have combined their efforts to purchase remaining grasslands at Ram Level in Hither Hills. The Nature Conservancy has expanded the Montauk Mountain Preserve and purchased the remaining natural open areas at Shinnecock Hills. TNC has also initiated a fire management program in cooperation with Suffolk

County Parks.

Active management of the remaining maritime grassland communities is being considered at most sites. Hopefully, populations of some of the rare species will expand with effective management. In addition, as efforts continue to clear back shrubs encroaching into open areas, some native species thought to have been lost from the maritime grasslands may reappear from small unnoticed populations or from long dormant seedbanks.

## New, Totally Revised Checklist of New York State Vascular Plants to be Published -

In the decade since the publication of *A Checklist of New York State Plants* (Mitchell, 1986), much has happened to increase knowledge of the State's green plant resources, and many necessary modifications have been made in the realm of plant nomenclature.

Times have changed since the mid-1980s, when the New York Natural Heritage Program was in its infancy, and the New York Flora Association had not yet been established. Such important works as the second edition of Cronquist's manual (Gleason & Cronquist, 1991), a new Pennsylvania atlas (Rhoads & Klein, 1993), two volumes from the Flora North America project (FNA Editorial Committee, 1993), and a two-volume North American checklist by Kartesz (1994), had not yet been published.

The new and greatly revised New York checklist has been expanded to include extensive synonymy pertinent to New York State, and to **completely cross-reference**, not only with Kartesz' most recent (1994) North American volumes, but with House's (1924) annotated New York checklist. Generic synonyms are given whenever they apply specifically to uses in literature treating New York State. The Cronquist System of classification is used again -- now expanded to include all categories below phylum. Rarity codes follow the most recent Heritage Program listings (Young, 1996).

The main body of the work is based on continuing updates by Mitchell, but the treatments of grasses and sedges have been extensively revised by co-author, Gordon Tucker, based on the most recent revisions of each group.

This new hard-cover checklist will treat over 3,500 species, while specifically excluding some 200 species (Appendix 1) that were either reported for New York in the former checklist, suggested since that time by personal communication or listed in recent literature. Such excluded taxa have been found to be based on incorrect identifications, outdated taxonomic concepts and unvouchered reports.

The date of publication of the new checklist is not

firm yet, but it will be available well in advance of the 1997 field season from New York State Museum Publications in Albany. This newsletter will notify you when the presses roll. Barring unforeseen revisions, the citation for the book will be:

Mitchell, R. S. & G. C. Tucker. 1996? Revised Checklist of New York State Plants. New York State Mus. Bull. 490. 416 pp.

**Pertinent Literature:**

Cronquist, A. 1981. An Integrated System of Classification of Flowering Plants. New York. 1262 pp.

Flora North America Committee (ed.). 1993. Flora of North America North of Mexico. Vol. II. Oxford University Press. New York, Oxford. xvi + 475 pp.

House, H. D. 1924. Annotated List of the Ferns and Flowering Plants of New York State. New York State Mus. Bull. 254. 759 pp.

Kartesz, J. T. 1994. A Synonymized Checklist of the Vascular Flora of the United States, Canada and Greenland. 2nd Ed. Timber Press, Portland Oregon. 2 Vols. 1438 pp.

Miller, N. G. & R. S. Mitchell. 1995. Tracking the mosses and vascular plants of New York (1836-1994). pp. 209-210. In: LaRoe, E. T., G. S. Farris, C. E. Puckett, P. D. Doran & M. J. Mac (eds.) Our Living Resources: A Report to the Nation on the Distribution, Abundance and Health of U. S. Plants, Animals and Ecosystems. U. S. Dept. Interior, National Biological Service, Washington, DC., 530 pp.

Mitchell, R. S. 1986. A Checklist of New York State Plants. New York State Mus. Bull. 458. 272 pp.

Rhoads, A. F. & W. M. Klein Jr. 1993. The Vascular Flora Pennsylvania Annotated Checklist and Atlas. American Philosophical Society, Philadelphia. 636 pp.

Young, S. M. (ed.) 1996. New York Natural Heritage Program, Rare Plant Status List. (xerographic) New York Nat. Heritage Prog. 72 pp.

***Aster ontarionis* - a Rare Plant New to the Niagara Region -**

by P. M. Eckel, Buffalo Museum of Science

While routinely processing collections made on Goat Island in the Niagara River (Erie County), I discovered a small white aster with puberulent stems that was new to my experience. It was later identified by Dr. Almut Jones as *Aster ontarionis* Wieg., the Ontario aster. According to records kept at BUF [and NYS, ed.], no similar plant had been collected in the region before. It was fortunate that characteristic and diagnostic rhizomes were present on the specimen, without which the plant would have been easily confused with *A. lateriflorus* (L.) Britt., calico aster.

The plants were collected in the "weedy" fringe along the circumference of the island -- one of the



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*Aster ontarionis* Wieg., a plant of the prairie provinces, is typically found on moist, calcareous soils. It is now known from both the St. Lawrence Valley and Niagara Frontier in New York.

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only remaining habitats there that escapes the lawn mower. Another specimen was collected on dolomitic scree at the base of the island on the banks of the Niagara River. Both specimens are on deposit at BUF.

This species is associated with moist ground: at the upper station, on the southwest island margin, the plants grew in wet soil, and at the base of the island they were in the spray zone of Horseshoe Falls.

This discovery in the Niagara Gorge reinforces, once more, the well-known reputation of the area as an environmentally complex refugium and haven for rare species, as well as an area of diverse habitats that also harbor an ever-increasing number of rare non-native introductions.

*Aster ontarionis* was listed as rare by Mitchell (1986), and placed on the active rare plant inventory by the New York Natural Heritage Program. In the most recent Heritage list, however (Young, 1996), it has been relegated to the "watch list" -- taken from active status because of increasing numbers of populations found in the St. Lawrence Valley. Although Ontario aster is turning out to be relatively frequent there, the St. Lawrence Lowlands remain the only New York region where the species was known prior to this report.

Semple & Heard (1987) report *Aster ontarionis* as "rare, along streams and in wet woods in southwestern Ontario," but locally more common to the west and north. They report no populations for the Niagara peninsular region of Ontario opposite the New York stations. The Canadian authors (*ibid.*) noted characteristics of the species that are intermediate between *A. lateriflorus* and *A. intermedius*, but mention

that it differs in leaf pubescence. Jones (1989) notes its frequent confusion with *A. lateriflorus* in herbaria.

Another notable rare species, *Gentianopsis procera*, shares calico aster's identical disjunct distribution in New York State. This is indicative of a suite of rare plants that occur as outliers of the prairie flora, extending from Ontario eastward, especially on calcareous substrates in what is called the "Prairie Peninsula."

#### Pertinent Literature:

Jones, A. G. 1989. *Aster* and *Brachyactis* in Illinois. Ill. Nat. Hist. Surv. Bull. Vol. 34.

Mitchell, R. S. 1986. A Checklist of New York State Plants. New York State Mus. Bull. 458. 272 pp.

Sample, J. C. & S. B. Heard. 1987. The Asters of Ontario: *Aster* L. and *Virgulus* Raf. (Compositae: Asteraceae). Univ. Waterloo Biol. Series. Vol. 30.

Young, S. M. (ed.) 1996. N. Y. Natural Heritage Program Rare Plant Status List. (xerographic), 74 pp.

**Editor's Note:** The preceding article by Patricia Eckel is just the sort of thing we need to keep the Newsletter interesting. Members, please send more! (RSM)

### Best Wishes to Gordon Tucker in His New Career -

by Dick Mitchell

We at the New York State Museum are sorry to see Gordon Tucker leave us, and I'm sure I can speak for the NYFA membership in wishing him the very best as he takes an academic job in the Midwest. For those of you in the membership who didn't get to know Gordon personally, you will remember his excellent preliminary key to New York *Carex* species that appeared in an earlier volume of the NYFA Newsletter, or you may recall some fine book reviews written by him as well. At the museum, he has been a prolific publisher of scientific articles, and a strong participant in the Hudson Highlands flora projects. His expertise and good company will be missed by all.

Earlier this year, Gordon accepted an Associate Professorship at Eastern Illinois University, where he is already hard at work teaching botany and plant taxonomy. It should be an excellent place for his family to thrive, and what state could be better for an agrostologist, so, Gordon -- enjoy!

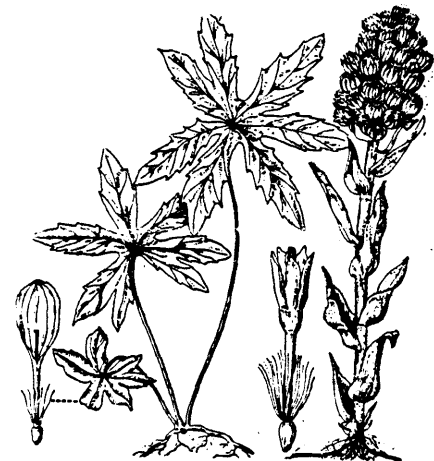
If you who would like to contact him, his current address is:

Dr. Gordon C. Tucker  
Department of Botany  
Eastern Illinois University  
Charleston, IL 61920

### Plant Discoveries: Seventh Straight Year of Finding Plants Ranked "State Historical" - by Steve Young, N. Y. Natural Heritage Program, and Richard Mitchell, N. Y. State Museum

This field season marked the seventh year in a row that at least one plant ranked as state-historical (not seen in the state for over 15 years) was found in New York. The latest find was a population of sweet colt's-foot, *Petasites frigidus* (L.) Fries. var. *palmatius* (Ait.) Cronq. Botanist, Patricia Martin, under contract to the New York Natural Heritage Program, discovered the plants while conducting a plant inventory of a wildlife management area near Corning, NY, Tioga County. The last specimen of this species collected in the state was found near Albany in 1949. Seventy-six species remain on the historical list, only twelve of which have been found at more than 10 locations in the state.

*Petasites* is a genus of about 15 relatively conspicuous plants of the Asteraceae. There are two species reported for New York. Both are rare, but one is introduced, and the native species found by Pat Martin is an extensive creeper that can go for years without flowering. The other, *Petasites hybridus* (L.) Gaertn., or butterbur, is a large perennial herb introduced from Europe.



Sweet Colt's-foot *Petasites frigidus* (L.) Fries. var. *palmatius* (Ait. Cronq.), found in New York for the first time since 1949.

A new introduced species found escaping in New York State is *Spiraea thunbergii* Sieb. ex Blume. This unusual garden spiraea has very narrow blades and a fruit much like a saxifrage. It was found spreading in the woods not too far from old house places near Cornwall on the Hudson (Orange County). Spider Barbour got it in Storm King State Park, while continuing to explore for the Hudson Highlands flora project of the State Museum.

### Would You Like to See a Pocket Checklist?

When we're in the field working on a floristic project, we keep an alphabetical list of what's been found so far. It saves a lot of time and repetitive collection. But, the lists are bulky, hard to carry, easily soiled, and they have to be continually updated. With the new 400+ page checklist coming out, it will be impractical to bring the thing along on tough hikes and climbs, and I don't relish the idea of seeing it floating belly-up in a swamp, as has been the fate of some of my previous lists.

So, I've stripped down the state checklist to bare-bones scientific names, listed under plant families, and alphabetized the whole thing. Like a life-list for birders, it would cover NY plants instead. It would fit in your pocket (3.5 x 5 in., about 70 pp.), and give you a working list with a place to check each species off. It could be put in a water-resistant cover (spiral-bound at the top?) and made inexpensive enough (I hope) that you could use a new book for each major project you undertake (like local floras, habitat surveys, etc.). **I need to know what you think...**

- Is there a need for a pocket checklist?
- Shouldn't synonyms and common names be left out? (I say yes)
- Should it include bryophytes?
- Should NYFA produce it, or would you prefer to buy it from the State Museum?
- If NYFA produces it, should we give a copy to new members and all old members who pay a year's dues in advance?
- What would you pay for one of these (or three)?

If a pocket checklist interests you, please drop me a line and give me your answers and any additional ideas you have. Thanks. **Richard S. Mitchell, N. Y. State Biological Survey, 3140 CEC, Albany, NY 12230.**

### Another Rare Native *Carex* Added to the State Flora List -

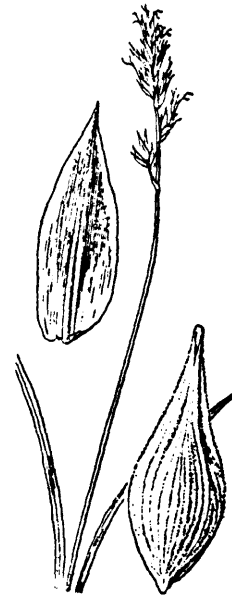
by Richard Mitchell

Dr. David deLaubenfels, now an *emeritus* professor at SUNY, Syracuse, has been busy looking at the sedges of Onondaga County with good results. He has recently turned up a rare *Carex* species in the limy woodlands that had only recently been added to the state checklist. He found *Carex striatula* Michx. at its

northern limits, in open-canopy, calcareous woods near Syracuse. It is the first site from central New York, and the nearest previously-known location for this southern species is in Pennsylvania, south of Binghamton, NY.

This Onondaga County find was not a new state record, however. We had also recently collected the species at both Harriman State Park and West Point Military Reservation in Orange County. The reason for its absence from the checklist (Mitchell, 1986) is complicated. It was collected in Connecticut and on Staten Island, NY, in the 19th century, but reported incorrectly as *C. laxiflora* Lam. var. *latifolia* Boott. Since that name is now considered a synonym of *C. albursina* Sheldon, *C. striatula* somehow slipped through the cracks. If this sounds confusing, it had me scratching my head too, and it's typical of the kind of problem that comes up constantly as we all work together to revise and update the state checklist.

Thanks to you, botanists, for help with the many thousands of corrections made to the new edition coming out. NYFA members have played a significant role in adding to our knowledge of the flora. In addition, I'm sure we will all find plenty more mistakes and corrections the minute we have the book in hand.

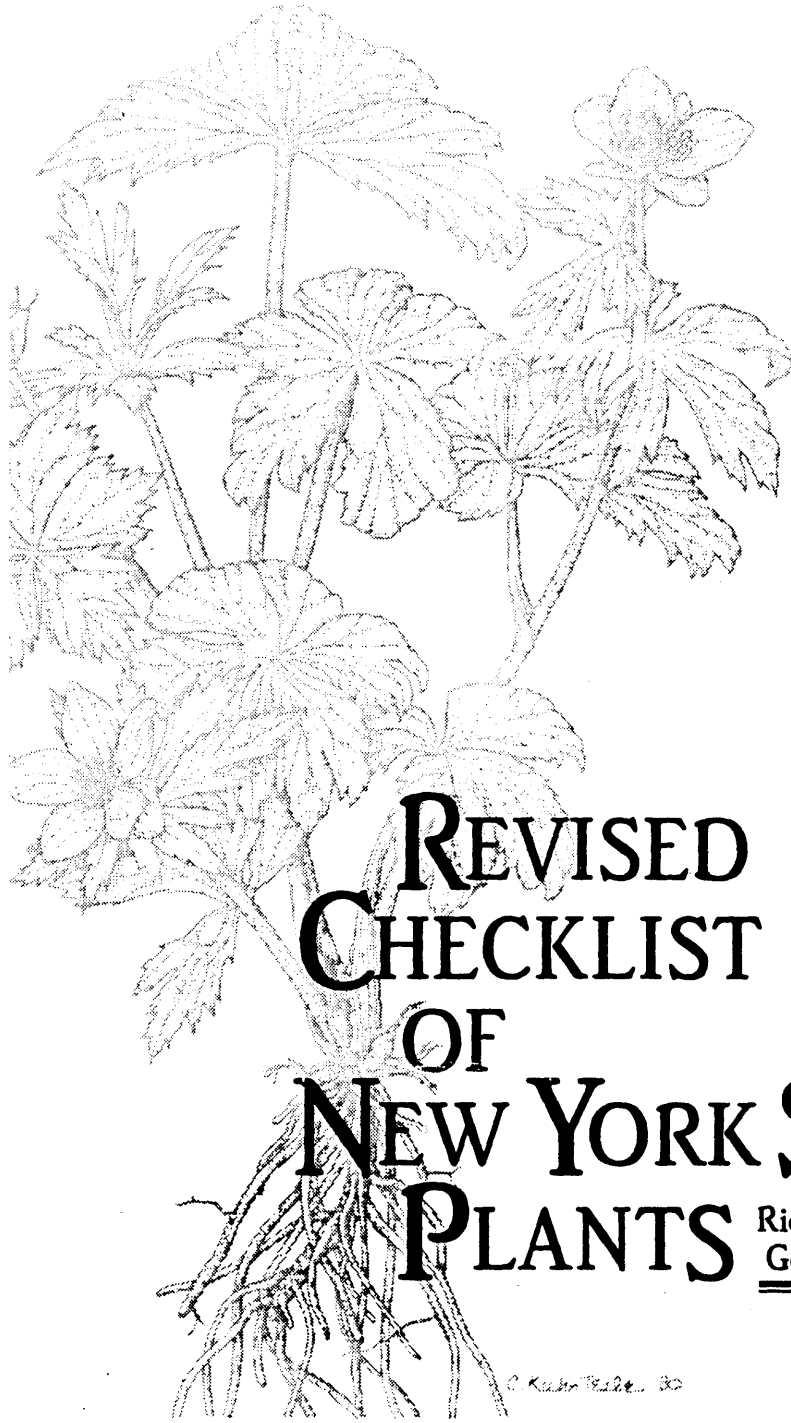



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*Carex striatula* Michx., a new addition to New York's list of 220 species of the genus. Once confused with *C. albursina* Sheldon, it was reported from Staten Island and Connecticut in the 19th century, and is now known from three recently-discovered sites in Orange and Onondaga Counties.

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Coming Soon...



REVISED  
CHECKLIST  
OF  
NEW YORK STATE  
PLANTS

Richard S. Mitchell  
Gordon C. Tucker

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NEW YORK STATE MUSEUM