

ILLINOIS



DEPARTMENT OF

Natural Resources

DIVISION OF NATURAL HERITAGE - REGION II

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To: Linda Williams
From: Brad Semel
Date: 27 February 1996
Subject: Wildlife Preservation Fund

Enclosed please find what I hope to be the necessary materials to complete my FY96 Wildlife Preservation Fund small grant project with Margo Milde: a letter requesting payment for services rendered, an invoice voucher, and five (5) copies of her report. Her final report actually consists of several hundred pages of transect information, maps, slides, and other detailed data, but as we discussed, I am providing only summary results of her work; material that should prove most useful for other staff to access. Please let me know if anything else is required. Thank you.

Summary Reports-1995 Pistakee Bog Nature Preserve
Permit Holder: Margo Milde
1206 Raleigh Road
Glenview, IL 60025
(708) 724-4716

February 8, 1996

Enclosed please find the following reports/photos that summarize my botanical inventory at Pistakee Bog Nature Preserve, as well as some related information for Volo Bog State Natural Area as a whole, based upon my 1994 findings:

- 1) Summary Report for Pistakee Bog Nature Preserve for IL T & E species
- 2) Summary Report for Volo Bog Nature Preserve for IL T & E species
- 3) Documenting slide photos of all Pistakee Bog Nature Preserve IL T & E species located by me in 1994
- 4) Illinois Natural Heritage Database Reports for my 1994 Pistakee Bog Nature Preserve findings for IL T & E species, including mapped locations.
- 5) Four current inventories as run on computer software provided by the Morton Arboretum for the following sites:
 - A) Pistakee Bog Nature Preserve
 - B) Volo Bog Nature Preserve
 - C) Buffer zones - Volo Bog State Natural Area
 - D) Total - Volo Bog State Natural Area

These inventories contain the following information:

a) The first section contains the floristic quality data for each site. The number of native species and the number of total species (including adventives) is shown. The Native Mean C (coefficient of conservatism, with 0 being the lowest conservatism value, and 10 the highest) and the Mean C with adventives is calculated. The native FQI (Floristic Quality Index) and the FQI with adventives is then calculated by multiplying the square root of the number of species by their mean coefficient of conservatism. It is significant to note the relatively high FQI values for these four sites; to quote from the 1994 Plants of the Chicago Region by Dr. Gerould Wilhelm and Floyd Swink (page 18): "Areas registering in the 50's and higher are extremely rare and of paramount importance; they represent less than 0.5% of the land area in the Chicago region." The native FQI of Volo Bog was calculated at 102.28! Also included in this list are the native mean wetness coefficient, ranging from "-5" which is Obligate Wetland to "0" which is Facultative (equally likely to occur in wetlands or non-wetlands) to "5" which is Upland. The Average for each site is then shown. Physiognomic data for natives and adventives is then shown on the right.

b) The second section contains the actual inventory for each site. This section includes the six-letter acronym (used in making the computer reports), the coefficient of conservatism for each species, the Latin name, the wetness coefficient, physiognomic classification, and the

common name of each. These plants have all been observed by me within the last four years (1992 through 1995), with the following exceptions from Volo Bog Nature Preserve only:

Ranunculus flabellaris: Reported by Linda Curtis in standing water in tall shrub zone in mid-May, 1994.

Aster borealis (*Aster junciformis*): Specimen collected by Linda Curtis in the Volo Bog Herbarium, collection date 9-22-88. (I do know this species from Pistakee Bog Nature Preserve, where it is local and infrequent, and I have photographed it there.)

Impatiens pallida: Specimen collected by Linda Curtis in the Volo Bog Herbarium, collection date 6-15-90.

Utricularia gibba: Specimen collected by Linda Curtis in the Volo Bog Herbarium, collection date 7-26-91.

Lactuca biennis: Specimen collected by Linda Curtis in the Volo Bog Herbarium, collection date 11-1-90. (I do know this species from Pistakee Bog Nature Preserve, where it is relatively common throughout both forested bogs, as well as aspen groves and *Rhus vernix* parkland, and I have photographed it there.)

Solidago uliginosa: This species appears on Stacy Miller's current VBNP plant list. I have not seen this plant yet in VBNP, although I have found it locally abundant in Pistakee Bog Nature Preserve. There is no specimen currently in the Volo Bog herbarium. If I cannot confirm its presence myself here in VBNP in 1995, and if Linda Curtis has never recorded it on a definite date as being here, I will remove it from this list when I re-do it this Winter.

Dryopteris intermedia: This species appears on Stacy Miller's current plant list. I have not yet seen this species yet at VBNP, nor have I found it at Pistakee Bog Nature Preserve (although I looked for it there.) There is no specimen currently in the Volo Bog herbarium. If I cannot confirm its presence myself here in VBNP in 1995, and if Linda Curtis has never recorded it on a definite date as being here, I will remove it from this list when I re-do it this Winter.

Please note that ALL species that I have recorded in the Buffer Zone and in Pistakee Bog Nature Preserve were observed by me (and the most important ones photographed) in 1994. These were not a compilation of older lists.

- 6) Thirteen transects completed by me in Pistakee Bog Nature Preserve and also run on computer software provided by the Morton Arboretum for the following areas:
 - A) Pistakee Bog SE to NW, 7/94 and 10/94
 - B) Pistakee Bog SE Shrub Zone, 7/94
 - C) Brandenburg Bog, S to N, 7/94 and 10/94
 - D) Brandenburg Bog SW Shrub Zone and Shrub-Carr, 7/94 and 10/94
 - E) Prairie SW of Pistakee Bog, 6/94 and 10/94

- F) Sedge Meadow/Marsh SE of Bat Barn, 6/94 and 10/94
G) IDOT Right-of-Way in Marshes S of Brandenburg Bog, 7/94
and 9/94

These reports as presented give the following data:

a) Summary of the transect quadrats, showing for each their mean coefficient of conservatism for native taxa (MC) and with adventives (W/AD); floristic quality index for each with native taxa only (FQI) and with adventives (W/Ad); mean wetness for native species (MW) and with adventives (W/Ad); total number of native species per quadrat (NS) and total number of species per quadrat (TS). The two columns to the far right are sequential averages of the wetness coefficient that would be useful in graphing the hydric vegetation along the transect. The column average and standard deviation are shown below for the first eight columns.

b) The second table summarizes the entire transect. It includes a tabulation of each conservatism category (ranked 0 to 10), and the percentage of species in the three conservatism classes (0 to 3, 4 to 6, and 7 to 10). To the right are shown the number of native species, the total number of species (including adventives); native mean coefficient of conservatism for natives only, and with adventives; the native floristic quality index for natives only, with adventives; and the mean wetness coefficient for natives only and also with adventives.

c) The third section shows the number and percentage of species in each physiognomic group for both native species and with adventives as follows: W = woody, H = herbaceous, A = annual, B = biennial, and P = perennial. To the right is shown the relative importance values (RIV) which is the sum, divided by two, of the frequency (FQ) and cover class (COV) of each group found in the transect.

d) The fourth section shows a relative importance table for individual species, including its wetness coefficient. The RIV for each is calculated as in the third section.

e) The fifth section includes a list of acronyms, Latin names, and common names for each species found in the transect.

f) The sixth (and concluding) section shows data for each quadrat, showing the acronym of each and its relative coverage in the quadrat.

It may be important to note that due to the length and number of these transects, I chose to use a quarter-meter quadrat instead of the full squared meter quadrat more commonly used. This may have lowered the values slightly, but I've been told the difference should not be significant. A map showing approximate transect locations is included.

I have documented nearly every important wetland species (including all IL T & E species) in Pistakee Bog Nature Preserve by slide photographs; these will be duplicated and housed permanently at the Volo Bog Visitor Center.

For your amusement (if not edification!) I'm also including a copy of an article that I wrote for the general public that appeared in the Winter issue of the Bog Log, the quarterly periodical published by the Friends of Volo Bog and Volo Bog State Natural Area.

This year, although I have permits for both preserves, I will concentrate my time and efforts on Volo Bog Nature Preserve, as Brad Semel is hoping to commence management activities here at Volo Bog possibly as early as this Winter, so floristic studies will be most important to him.

I apologize for the lateness of this complete report, but illness laid me low this Spring. I'm most pleased to say that I'm well on the road to a recovery, and in recent months have been able to resume my botanical explorations at Volo and elsewhere. I hope to again make a useful contribution to the overall floristic knowledge of Volo Bog State Natural Area this year, as well.

Should you have any question, please do not hesitate to call or write (either at my home address/phone or c/o Volo Bog).

Sincerely yours,



Margo R. Milde

Summary
Volo Bog Nature Preserve
Volo Bog State Natural Area
Endangered and Threatened Plant Species
Located by Margo Milde in 1992-1995

ENDANGERED:

Calapogon tuberosus (Lake) (Note: Last observed by boardwalk in 1992)
Carex canescens var. *disjuncta* (Lake)
Carex chordorrhiza (Lake)
Carex disperma (Lake)
Eriophorum trisperma (Lake)
Eriophorum virginicum (Lake)
Pogonia ophioglossoides (Lake)
Sarracenia purpurea (Lake)
Vaccinium corymbosum (Lake)
Vaccinium macrocarpon (Lake)

THREATENED

Chamaedaphne calyculata (Lake)
Trientalis borealis (Lake)

Other, comments: (VBNP) *Calla palustris* was relocated by me in June 1995. Photos and Database report will be included in the 1995 reports.

Scirpus smithii was just discovered by me on the floating mat surrounding the open pond center on August 25, 1995, from a kayak. This may be the only extant population in Illinois. I observed several dozen plants. Photos and Database report will be included in the 1995 reports.

COMMON NAME:..... SCI. NAME:..... SITENAME:.. QUADNAME:.. TRS.....

	POND (N)	VOLO BOG	WAUCONDA	045N009E28
ALDER BUCKTHORN	RHAMNUS ALNIFOLIA	VOLO BOG	WAUCONDA	045N009E28
AUTUMN WILLOW	SALIX SERISSIMA	VOLO BOG	WAUCONDA	045N009E28
CORD ROOT SEDGE	CAREX CHORDORRHIZA	VOLO BOG	WAUCONDA	045N009E28
DWARF RASPBERRY	RUBUS PUBESCENS	VOLO BOG	WAUCONDA	045N009E28
FEW-SEED SEDGE	CAREX OLIGOSPERMA	VOLO BOG	WAUCONDA	045N009E28
FORESTED BOG, CENTRAL MID	FORESTED BOG	VOLO BOG	WAUCONDA	045N009E28
GRASS PINK ORCHID	CALOPOGON TUBEROSUS	VOLO BOG	WAUCONDA	045N009E28
HIGHBUSH BLUEBERRY	VACCINIUM CORYMBOSUM	VOLO BOG	WAUCONDA	045N009E28
LARGE CRANBERRY	VACCINIUM MACROCARPON	VOLO BOG	WAUCONDA	045N009E28
LEATHERLEAF	CHAMAEDAPHNE CALYCVLATA	VOLO BOG	WAUCONDA	045N009E28
PITCHER PLANT	SARRACENIA PURPUREA	VOLO BOG	WAUCONDA	045N009E28
ROUND-LEAVED SUNDEW	DROSERA ROTUNDIFOLIA	VOLO BOG	WAUCONDA	045N009E28
RUSTY COTTON GRASS	ERIOPHORUM VIRGINICUM	VOLO BOG	WAUCONDA	045N009E28
SANDHILL CRANE	GRUS CANADENSIS	VOLO BOG	WAUCONDA	045N009E27
SCRUB BOG, CENTRAL MIDWES	TALL SHRUB BOG	VOLO BOG	WAUCONDA	045N009E28
SEDGE	CAREX CANESCENS VAR DISJU	VOLO BOG	WAUCONDA	045N009E28
SHORTLEAF SEDGE	CAREX DISPERMA	VOLO BOG	WAUCONDA	045N009E28
SHRUB/HERB BOG, CENTRAL M	GRAMINOID BOG	VOLO BOG	WAUCONDA	045N009E28
SNAKE-MOUTH	POGONIA OPHIOGLOSSOIDES	VOLO BOG	WAUCONDA	045N009E28
STAR-FLOWER	TRIENTALIS BOREALIS	VOLO BOG	WAUCONDA	045N009E28
TAMARACK	LARIX LARICINA	VOLO BOG	WAUCONDA	045N009E28
THREE-SEED SEDGE	CAREX TRISPERMA	VOLO BOG	WAUCONDA	045N009E28
VEERY	CATHARUS FUSCESCENS	VOLO BOG	WAUCONDA	045N009E28
WATER ARUM	CALLA PALUSTRIS	VOLO BOG	WAUCONDA	045N009E28
YELLOW BIRCH	BETULA ALLEGHANIENSIS	VOLO BOG	WAUCONDA	045N009E28

26 Records Processed

New plant species records in Volo Bog verified by Margo Milde during the summer of 1995.

BULRUSH

SCRIPUS SMITHII (perhaps only extant IL population)