Updating of Historical Plant Species Records Contained in the Natural Heritage Database

RE: Project #05-L19W Contract #RC05L19W

## INTRODUCTION

I requested and received all of the element occurrence records in the Illinois Natural Heritage Database that had not been verified at the recorded location for 10 years or more and are designated historical. The purpose of this project is to provide current information and documentation using GPS coordinates wherever possible to justify protecting these areas (Illinois Natural Area Inventory Sites, Endangered Species locations, Nature Preserves and Land and Water Reserves). GPS coordinates, where possible, were recorded for future relocation and accurate spatial representation.

## MATERIALS

I used the 2002 edition of *Vascular Flora of Illinois* by Robert H. Mohlenbrock, the 1991 edition of *Manual of Vascular Plants of Northeastern United States and Adjacent Canada* by Gleason and Conquist and the 1998 edition of *Illustrated Companion to Gleason and Conquist's Manual* by Holmgren as my references for identification of the different species. In addition, I spent several hours in the herbarium of the Illinois State Museum carefully examining preserved specimens of each species I was to look for in the field so as to avoid errors in identification.

## METHODS

I used the existing element occurrence records to locate as accurately as possible the previously recorded locations on various types of maps and aerial photographs before I physically tried to find any of the areas. I then drove to the areas and walked through each designated location and located as many of the plants in question as I could. I also recorded any additional threatened and/or endangered plants that I found growing in the area. I then documented the location with GPS coordinates wherever possible. I was not able document GPS coordinates in three areas with adjacent high cliffs, two areas with heavy tree cover and the meter simply did not work in a couple of other areas. I exceeded 120 hours searching for element occurrences in at least 50 different locations while logging at least a total of 2270 miles on my car and countless miles walking through the different areas.

## RESULTS and DISCUSSION

I was able to verify the present existence of 6 different plants that had not been verified for at least 10 years.

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|---|---|
| *Quercus phellos* | Southeast of Mermet Lake in Massac County |
| *Eupatorium incarnatum* | South of Sandusky in Alexander County |
| *Melothria pendula* | Horseshoe Lake Conservation Area in Alexander County |

| | |
|---|---|
| *Asclepias stenophylla* | Shewhart Hill Prairie in Pike County |
| *Viburnum molle* | Burton Creek Natural Area in Adams County |
| *Hydrocotyle ranunculoides* | West of Centralia in Clinton County |

I was able to verify the existence of the above listed Hydrocotyle that had been listed as extirpated by the previous investigators.

I discovered the following as four new element occurrences, previously unknown element occurrences:

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|---|---|
| *Quercus phellos* | North side of the entrance road into Mermet Lake in Massac County |
| *Heteranthera reniformis* | Horseshoe Lake in Alexander County |
| *Hydrocotyle ranunculoides* | LaRue Swamp in Union County |
| *Agalinus skinneriana* | Shewhart Hill Prairie in Pike County |

I was unable to verify the existence of approximately 40 element occurrences for a variety of reasons. Some of the disappearances of element occurrences were probably due to weather conditions such as a very dry fall this past year, changes in agricultural practices of the area, roadside mowing practices of the county or state, and various other disturbances to the habitats. I am quite confident several of these will reappear in the future under more favorable conditions of the weather; distribution and amount of rainfall is probably a major influence.

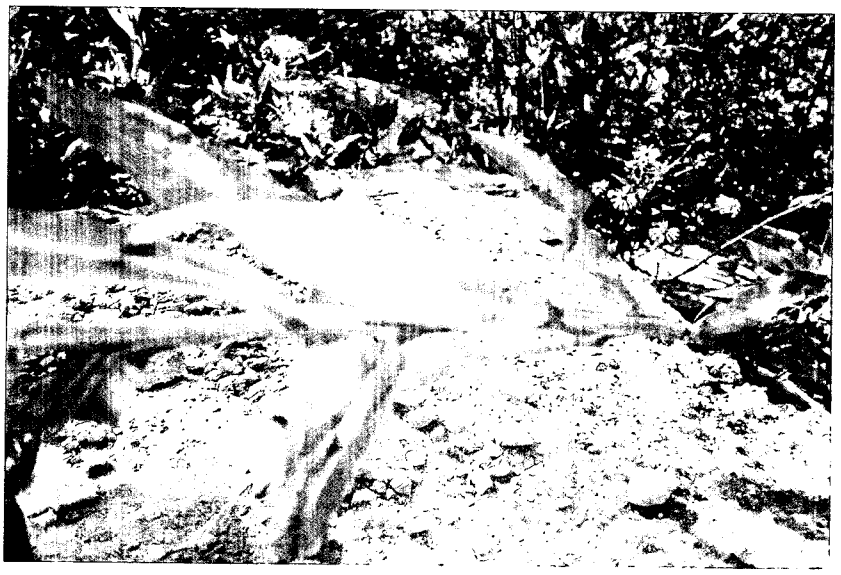
I was able to expand on the size of a couple of element occurrences:

| | |
|---|---|
| *Eupatorium incarnatum* | Alexander County |
| *Hydrocotyle ranunculoides* | Clinton County |

Continuation of this project is extremely important for several reasons in addition to those listed earlier in this report. Many of the element occurrence locations are inaccurate and badly need to be refined. I think some of the element occurrences are also wrong due to misidentification of the plants. I strongly feel that some of the past investigators simply assumed the plant was the threatened or endangered species if they were able to place it in the genus; in other words, I encountered one of the more common species rather than the more rare species in several instances. This type of research, when done right, consumes an immense amount of time and probably, some of the previous investigators were a bit hasty in their identifications and in determining the locations.

PHOTOGRAPHS

Boltonia decurrens - Boat dock area in Havana



Decurrent leaves of Boltonia decurrens

Habitat for Boltonia decurrens

Hydrocotyle in Clinton County

Hydrocotyl in LaRue Swamp