

**PLANTS of Powderhorn**  
and the Vegetation  
of the Calumet Region

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# Calumet at time of Land Survey

- Only natural lakes in Cook Co IL
  - Lake Calumet & Wolf Lake
- Surveyed in May 1834
  - Timber or Prairie on ridges separated by marshy swales
  - Ridges running NW to SE broken in places by meandering Calumet river
  - Burr, White and Black oaks were the witness trees
  - Briars and thorns infrequently undergrowth

# Bur oak grove in wet prairie



# Abandoned channel of Calumet in Winter



# Calumet of Pepon (1927)

- Pepon (Flora of the Chicago Region, 1927) had an affection for the Clark & Pine section of Gary IN (as well as dunes east of Miller).
- Pepon describes the Lake Calumet and Wolf Lake areas as already significantly altered, and it seems likely he spent little time east of Gary.
- *Thismia americana* was collected only in Calumet in 1912.

# Changing notions of PLACE

- People want to know where to find useful plants
  - Place names and narratives of where the plants are within that place.
- The natural world does not generally have boundaries and is comfortable with talking about a region without specifying boundaries.
- The human world, including science, is very concerned with boundary lines.
- Now, with **GPS**, place can be specified very precisely.

# A list of plants at a place, FLORA

- What can one do with a FLORA?
  - Decide where to go for a plant you want
  - Compare areas: which place has more species
  - Measure dynamics of local extinction and colonization
  - Use as the basis of an ecological restoration
- Floral list makes equivalent species with a single individual to others which are **uncommon, common or abundant**. This is a problem for each of above uses.

# Evolving Documentation

- Naming types of plants began with descriptions of the features of the species, replaced by scientific names by Linnaeus.
- Storage of pressed specimens preserved shape (morphological) features for future comparison.
- Today taxonomy is being revised to conform closer to **phylogeny** with DNA sequence studies.
- Capacity to store and transmit huge amounts of information make pictures the way to document vegetation.

# SAAD, a species plus list

- **SA** = specific areas, within the legal boundaries of the preserve subunits are mapped to make location information more specific.
- **A** = Abundances of species are noted, with a minimum of 3 classes –common, uncommon and rare and a narrative of what each term means.
- **D** = Dates of the inventory are necessary because plants vary seasonally and year to year.

# Powder



# Temporal Aspects of Study

- While I had been to Powderhorn many times, this study included:
- 14 visits in 2007 between 1 April and 3 October.
- 12 visits in 2008 between 20 April and 27 Sept.
- 12 visits in 2009 between 25 April and 24 Sept.

# PWH at Solstice



# PWH at the equinox



# Blitz compared to SAAD

- 195 plant species on both lists
- 222 species on the BioBlitz list not seen by me (+9 aquatic species which I did not inventory).
- 126 species seen by me not on the BioBlitz list, including:
  - *Oenothera pilosella*, seen only in 2009
  - *Habenaria lacera*, very rare – blink
  - *Gentiana crinita*, out of season

# Prairie Sundrops



# Ragged Fringed Orchid



# Fringed Gentian



# CONCLUSIONS

- The most literal interpretation is that 222 terrestrial plants species **have gone extinct** at PWH between the Blitz and my inventory.
- Without information on the abundance of the species and how widely dispersed it is on the site, it is **impossible** to separate the diverse types of changes/mistakes that could have occurred.
- SAAD inventories emerge from **stewardship**, a continuous presence and growing knowledge over a period of time.