

Illustrating Value Added in Databasing Historical Collections: Entered, (Proofed?), and Done (or Not!)

Tony Reznicek



Research Museums Center
3600 Varsity Drive
Ann Arbor, MI 48108-2228
T: 734 615-6200 F: 734 998-0038
lsa.umich.edu/herbarium

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Collections are a Time Machine to Allow Study of the Past

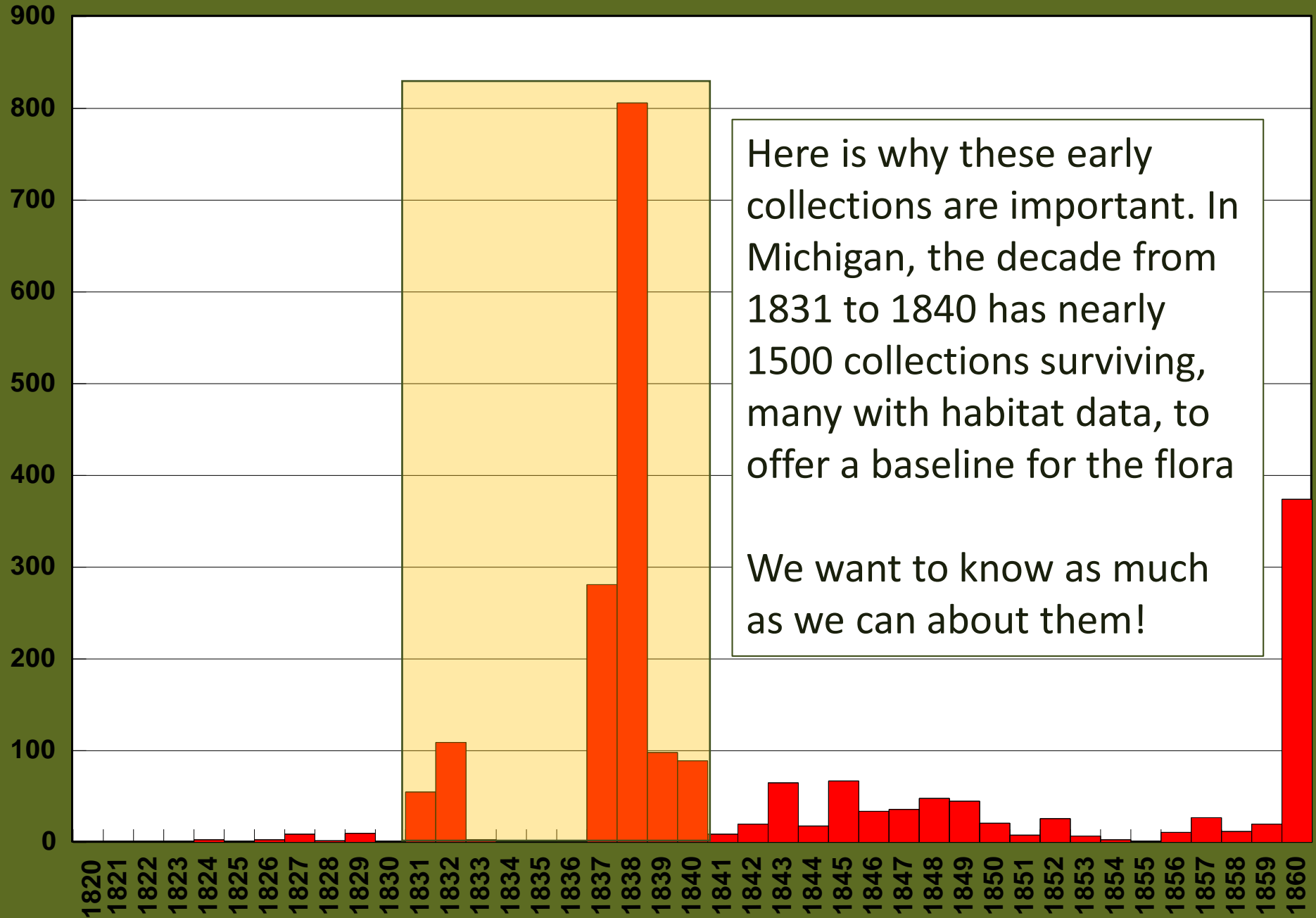
To put “flesh” on the bones of work such as pre-settlement vegetation studies or to help determine the nativity and original distributions of plants means we have to go back as far as possible in time.

The original data:

*Rubus
parviflorus
— (Nutt.)
Michilimackinac
lost all but this fragment*



Surviving Plant Collections from Michigan 1820 – 1860



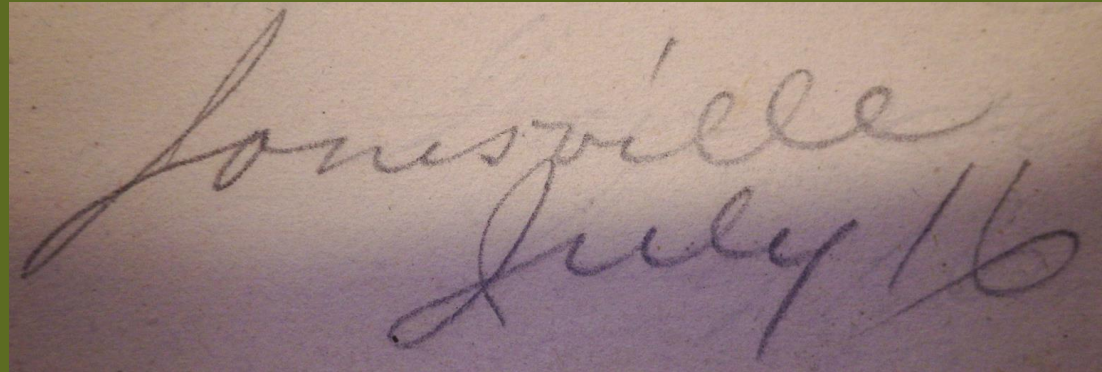
Planning for the Process of Getting Data from Specimen Labels into Digital Form Normally Revolve Around Speed, Efficiency, and Standardization, with some Unease Often Present about the Determinations

These labels are quick and easy!

But completely different considerations take hold with older collections, especially those with scanty data and lacking original labels

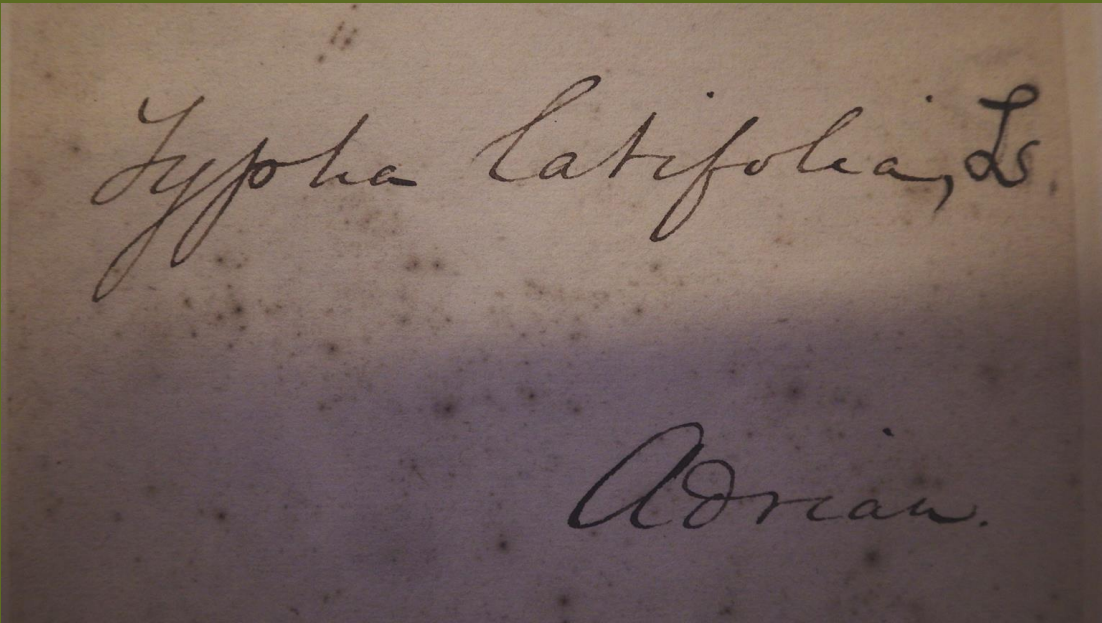
Can we even do anything with these scanty labels?

Adrian???



Jonesville
July 16

Jonesville???



Typha latifolia, L.
Adrian.

Upgrading Labels...

Label of sheet in Torrey's Herbarium (NY) of the first known collection of *Adenocaulon bicolor*

Cacalia ? *Adenocaulon bicolor*

Nat. ord. Compos.

Hort. miscell. bot. t.
ines.

Stem. 6-7-leaved, 9-flowered, leaflets in a
single series, lanceolate -

Cor. tubul.-infundib., 5-cleft,

Stig. included

Allied to

Lake Superior

Dr. Pitcher

This
label is
basically
useless

“Lake Superior” “Dr. Pitcher”

The easiest way to augment and upgrade these data and the greatest safeguard in the long run against data loss in these historical collections has been the existence of duplicates in other herbaria

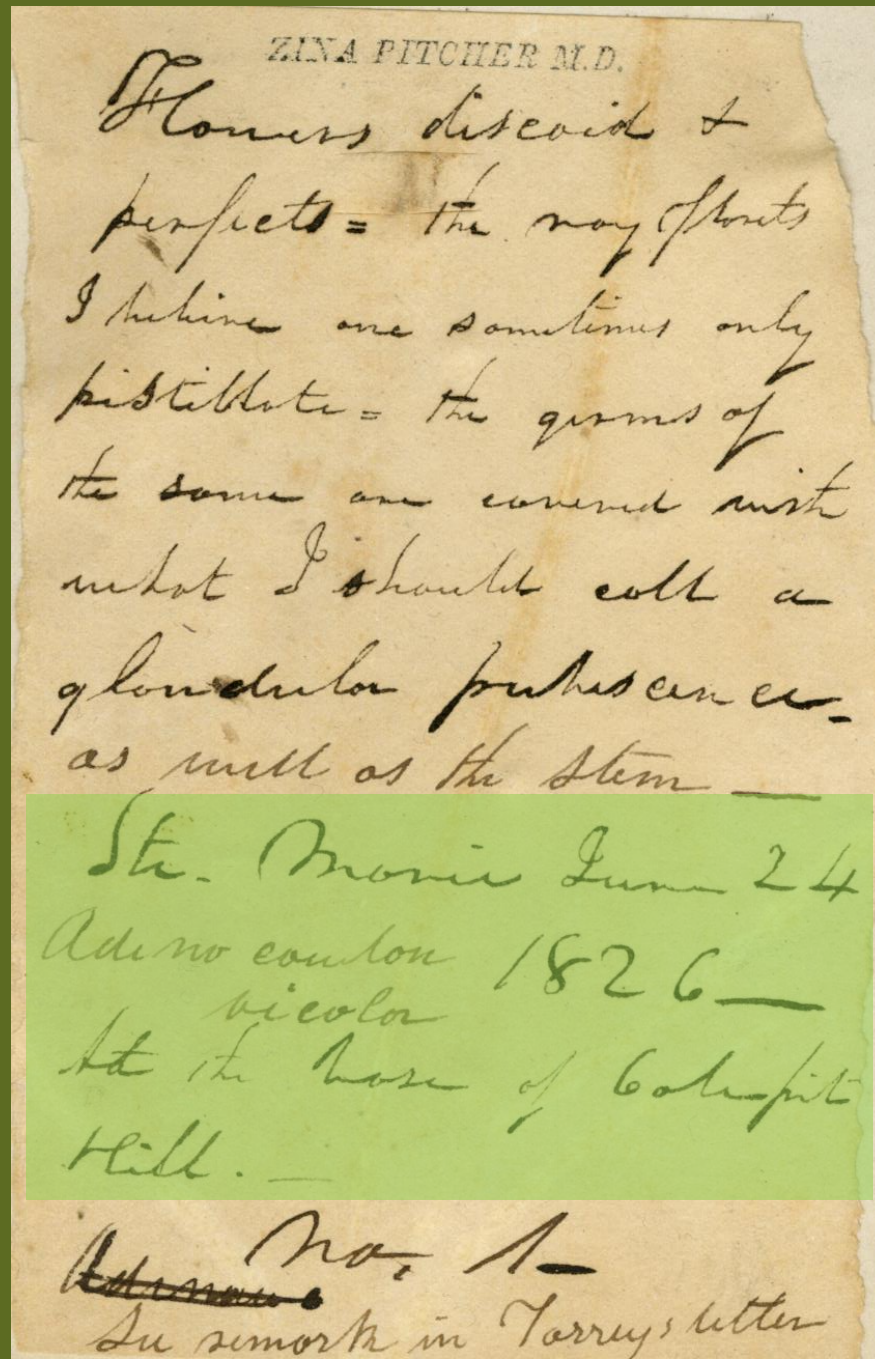
Now we are getting somewhere:

[Sault] Ste. Marie

At the base of Colepit Hill

June 24, 1826

But still, no Country or State, and where on earth is Colepit Hill??



The MICH Sheet of *Adenocaulon bicolor*



"Coal-Pit Hill" was apparently on the west side of Sault Ste. Marie, Michigan, at or near the present site of Lake Superior State University. See information from Dr. Bernard Arbic of LSSU to E.G.V., February 1995.



E.G. Voss, 1993

HERBARIUM OF THE UNIVERSITY OF MICHIGAN

Adenocaulon bicolor Hook.
At the base of Coalpit Hill,
Sault Ste. Marie, Chippewa
Co., Michigan. June 24, 1826

No. Tina Pitcher

TINA PITCHER M.D.
Flowers discoid &
perfect. The rays white
I believe are sometimes only
pubescent. The germen of
the ovary are curved most
which I should call a
glomerata pubescens as
well as the stem —
Sta. Marie June 24
Adenocaulon 1826
bicolor
At the base of Coalpit
Hill.

Noted, 1995
Michigan Flora Project
University of Michigan



RECORDED, MICHIGAN NATURAL
FEATURES INVENTORY, 1980

Herb. of E. O. ARMBRISTERS
ANN ARBOR, MICH.
1900



Labels from the 1831 Schoolcraft Expedition, by Bela Hubbard (except below)

Echinops
Coccinea
St Marys
June 1831 40



The only apparently original field label by Douglass Houghton I have seen from 1831 – pretty hard to place!

DOUGLASS HOUGHTON
Coralorhiza multiflora
Marquette Co., Michigan
Granite pt.
L. Superior
July 2. 1831 (Dry woods)

DOUGLASS HOUGHTON
Betula papyracea
pt. Inguis
L. Superior
June 1831

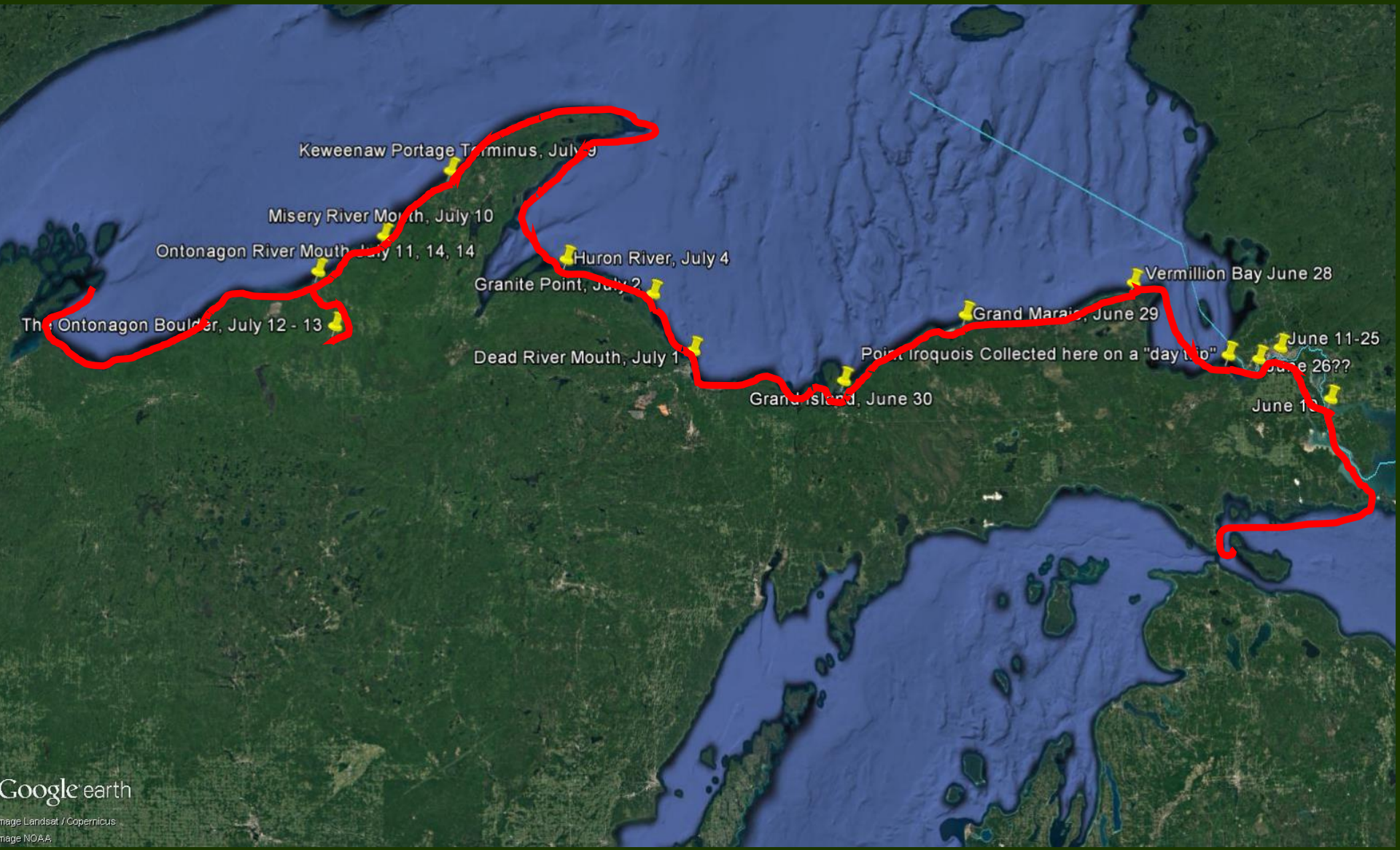
Bela Hubbard, Houghton's geology assistant had very neat and precise writing. These labels, however, were written after 1837 and are not original – these two are in fact from Michigan

Fixing Missing Data/Errors on Specimens

1. Intrinsically correctable errors – identifications, synonymy, upper level geography, etc. – minor (though sometimes time consuming!)
2. Errors that need correcting with extrinsic material – need ing information external to the label to correct/augment the data – diaries, field books, re-constructed itineraries, labels of duplicates, comparison with known collections and labels, etc. – much more difficult!

There is one other issue here – people are often willing to augment labels, but are much more nervous when apparently correct data contradicts what is on the label

1831 Schoolcraft Expedition Itinerary



The First Geological Survey, 1837-1840

14

LAWS OF MICHIGAN.

[No. XIX.]

AN ACT appointing commissioners to lay out and establish a state road from Dexter, in the county of Washtenaw, to Lyons, at the mouth of the Maple, in the county of Ionia.

Route of road.

Commissioners.

Expenses.

Limitation.

Sec. 1. *Be it enacted by the Senate and House of Representatives of the State of Michigan*, That there shall be a state road laid out and established from Dexter, in the county of Washtenaw to the county seat of Ingham county, and from thence by the most direct and eligible route to the village of Lyons, at the mouth of the Maple. And that Solomon Southerland, of Unadilla, Edward Lyon and A. Crossman, of Dexter, be, and they are hereby appointed commissioners for that purpose.

Sec. 2. That in laying and establishing said road, the state shall not be liable for the expenses or damages incurred thereby.

Sec. 3. That if the commissioners shall not have performed the duty imposed upon them by the first section of this act, before the first day of January, eighteen hundred and thirty-nine, and all other things required by the existing laws, in relation to the laying out of state roads, then this act shall be void and of none effect.

Approved February 16, 1837.

[No. XX.]

AN ACT to provide for a geological survey of the state.

Appointment

Duties.

Sec. 1. *Be it enacted by the Senate and House of Representatives of the State of Michigan*, That the governor is hereby authorized and directed to nominate, and by and with the advice and consent of the senate, to appoint a competent person, whose duty it shall be to make an accurate and complete geological survey of this state, which shall be accompanied with proper maps and diagrams, and furnish a full and scientific description of its rocks, soils and minerals, and of its botanical and geological productions, together with specimens of the same; which maps, diagrams and specimens shall be deposited in the state library, and similar specimens shall be deposited in such literary and scientific institutions as the governor shall direct; and the governor is fur-

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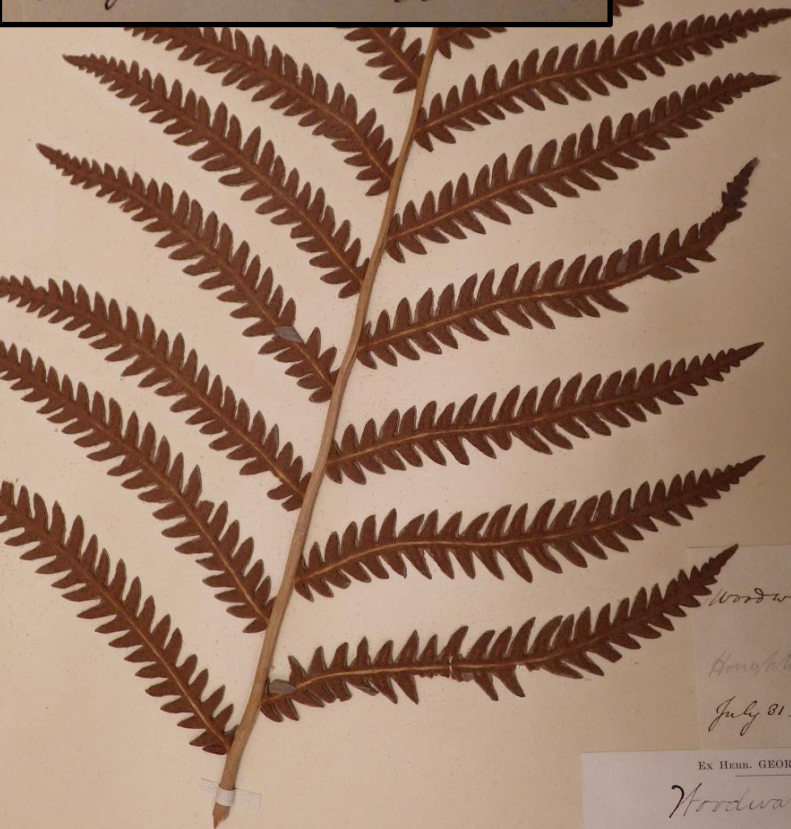
The Act was approved February 23, 1837, only 28 days after Michigan achieved statehood on January 26!

But the labels are challenging!

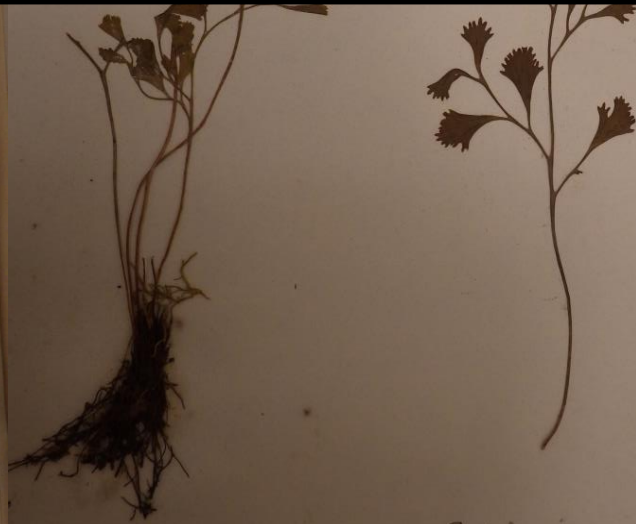
Woodwardia
nigrica?
Houghton coll.
July 31.
Mason
Mich.
Marsh.

In what year was this collected and, leaving from consideration that somebody later penciled in "Mich," where was Mason?

Asplenium Ruta-muraria
Michigan State Collection



183 64
Woodwardia
nigrica?
Houghton coll.
July 31.
Mason
Mich.
Marsh.
Ex Herb. GEORGE THURBER.
Woodwardia virginica, Smith
Coll. by Houghton
Mason
Michigan



At least we know this is from Michigan!

Asplenium Ruta-muraria
Michigan State Collection

So here is the situation...

No original label exists for this collection; the label here was written by Bela Hubbard, Douglass Houghton's assistant.

Woodwardia
virginica?
Houghton coll.
July 31.
Mason
Mich
Marsh.

Despite the attribution to Douglass Houghton, this collection was made July 31, 1837 by Abram Sager, then Botanist and Zoologist to the First Survey, near present day Coldwater, the former town of Mason (or Masonville) being along Hwy 12 near the Coldwater River, just W of present day Coldwater, ca. 41.9454° N, 85.0305° W.

Asplenium Ruta-muraria
Michigan State Collection

163
Woodwardia
virginica
Houghton coll.
July 31.
Mason
Mich
Marsh.

Ex Herb. GEORGE THURBER.
Woodwardia virginica, Smith
Coll. by Houghton
Mason
Michigan

Asplenium Ruta-muraria, L.
Drummond's coll. Aug 3, 1839

Scripts M. W. Harrington

Asplenium Ruta-muraria
Michigan State Collection

More labels by Bela Hubbard – no year, but luckily, he only did the 1837 First Survey labels at MICH, not 1838, so anything with his label is from 1837 (or from earlier Houghton collections)

Hydrophyllum
virginicum
(Burr-flower)
Monroe

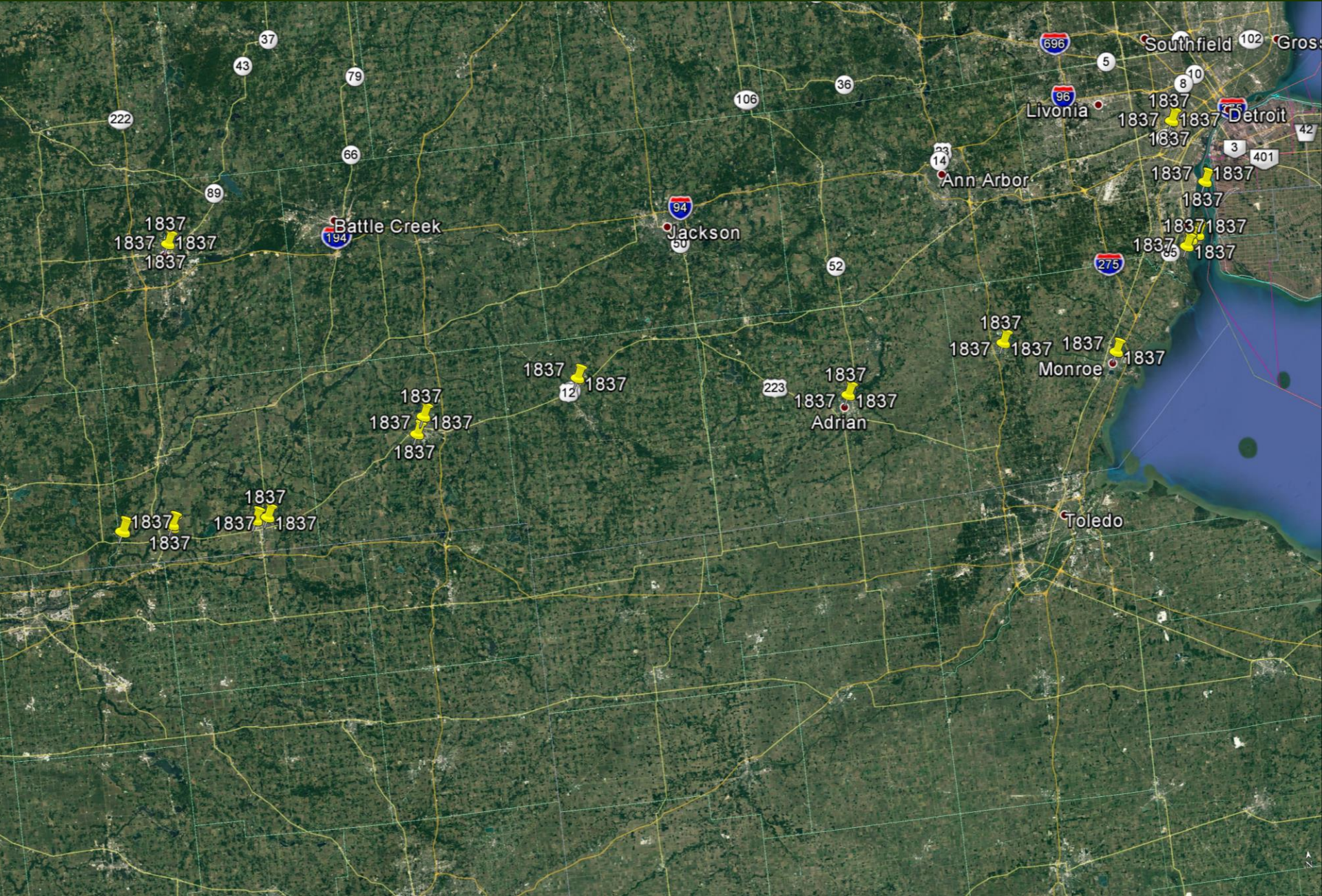
Lysimachia
thyrsofolia
naumburgica Thyrso, Reichenb.
June 16. Squaw Island
Detroit Riv.

DOUGLASS HOUGHTON
Aletris farinosa
(Unicorn root)
Detroit
July 1833
(Dry oak openings)

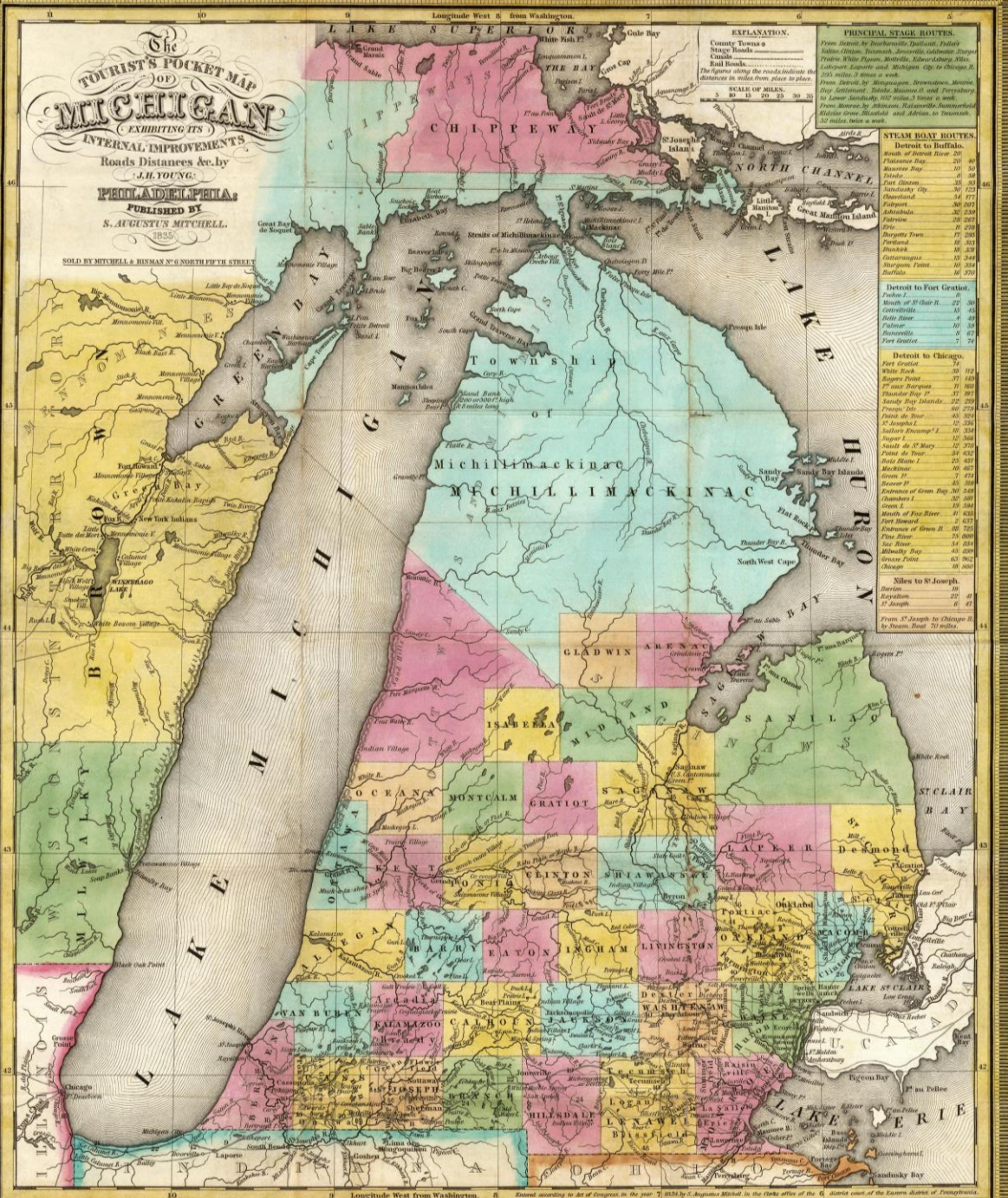
Veronica
scutellata
(Scull-cap speedwell).
Adrian
July 7. Oct

We still don't know where Squaw Island is exactly!

The First Survey Parties collecting in 1837



The Map that All Well - Equipped Travelers Used...

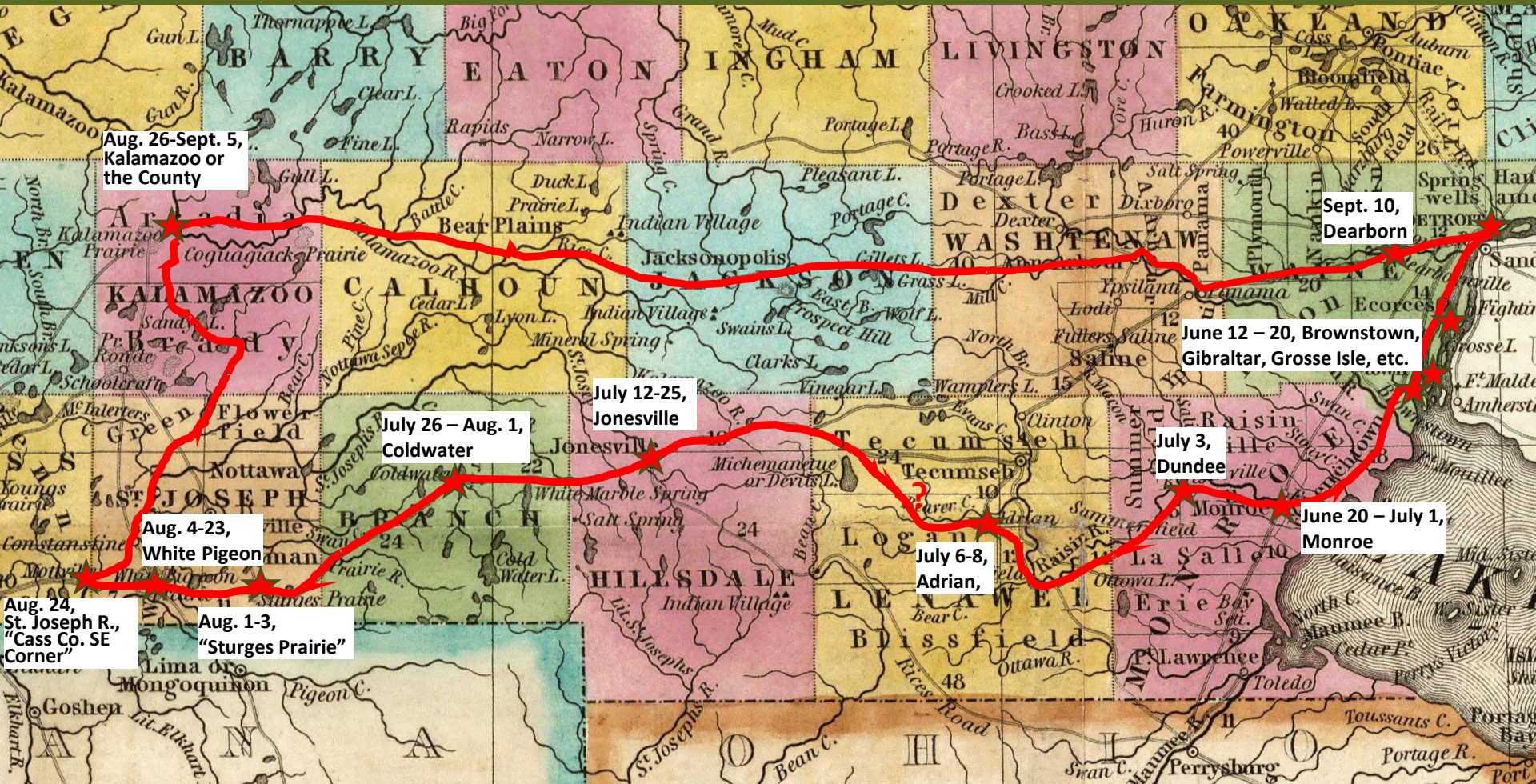


The
TOURIST'S POCKET MAP
 (OF)
MICHIGAN
 (EXHIBITING ITS)
INTERNAL IMPROVEMENTS
 Roads Distances &c. by
J.H. YOUNG,
PHILADELPHIA;
 PUBLISHED BY
S. AUGUSTUS MITCHELL.
 1835

SOLD BY MITCHELL & HINMAN N° 6 NORTH FIFTH STREET

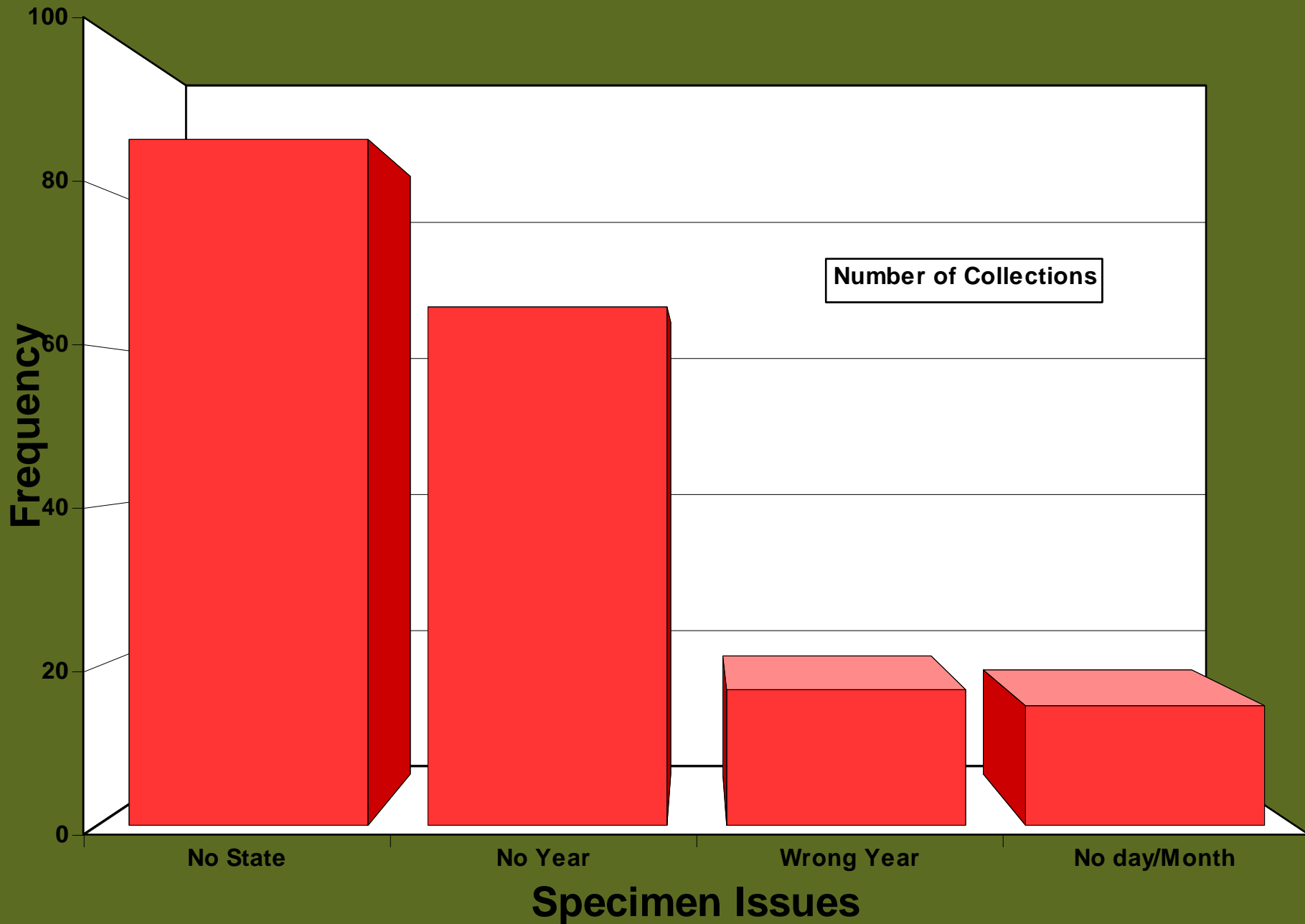
PRINCIPAL STAGE ROUTES.
 From Detroit, by Dearbornville, Ypsilanti, Fuller's Saline, Clinton, Tecumseh, Jonesville, Coldwater, Sturges Prairie, White Pigeon, Mottville, Edwardsburg, Niles, Lakeport, Laporte and Michigan City, to Chicago, &c. 295 miles, 3 times a week.
 From Detroit, by Monguagon, Brownstown, Monroe, Bay Settlement, Toledo, Maumee, O. and Perrysburg, to Lower Sandusky, 102 miles, 3 times a week.
 From Monroe, by Atkinson, Raisinville, Summerfield, Kidzies Grove, Blissfield and Adrian, to Tecumseh, 52 miles, twice a week.

The 1837 Survey Party Itinerary



Derived from integrating dates and locations from specimen labels and Abram Sager's brief report with the known routes, towns, and other features existing in 1837 (the 1835 Augustus Mitchell map used as a backdrop)

Arbitrary Sample of 100 First Survey Collections from 1837



This is a Huge Amount of Work!

All this work makes sense only in the context of these valuable historic baseline collections, so:

Don't bother when:

1. Such errors/problems occur with recent collections – just throw them out!
2. The historical collections are sparsely represented among the holdings [GH First Survey sheets]
3. Collections not part of a set and have ultra-vague localities, e.g., “southern Michigan”
4. Collections represent common plants, unless part of a more comprehensive set

Do take the trouble:

1. For historical collections with abundant representation
2. For collections where you have the first set and can know hard-to-discover things like the handwriting involved, etc.
3. For the very earliest collection from the region of interest
4. For rare or extirpated plants of the local region

Thank You!



163-94

Woodwardia
virginica?
Houghton coll.
July 31. Mason
Marsh

EX HERB. GEORGE THURBER.

Woodwardia virginica, Sm.
Coll. by Houghton Mason
Michigan



E. flumatile L.