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# Leveraging Citizen Science for Assessing Biodiversity, While Increasing our Appreciation of (and Sense of) Place:

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## Developing a Saint Louis River Sense of Place

### The one River Many Stories Community Map

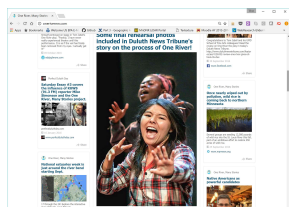


#### The Vision:

- What happens when all the storytellers in one region turn their attention to one topic, the St. Louis River?
- Newspapers, television and radio stations, citizen storytellers all agree to publish news articles, documentaries, podcasts and other media that tell stories somehow related to the St. Louis River.
  - The project produces a diverse collection of stories.
  - The project engages citizens and invites them to tell their own stories.
  - The efforts build an alliance among the region's professional journalists, educators and citizen storytellers.

#### The Public Request:

- Agree to tell at least one story about some topic connected with the St. Louis River and its neighboring communities. Publish it sometime during April 2016.
- Use our [project logo](#) with your story.
- Consider letting us add your story to the One River, Many Stories collection, and website.
- Use [#OneRiverMN](#) on any social media you do related to this project.



### Participatory Mapping



### Lake Superior Day!

## Citizen Science for Assessing Biodiversity

### A Wealth of Resources for Citizen Science

- Open Science and Innovation: Of the People, By the People, For the People," a live-webcast White House forum on citizen science (2015)
- Federal Crowdsourcing and Citizen Science Toolkit ([www.citizenscience.gov](http://www.citizenscience.gov))
- Federal Community of Practice for Crowdsourcing and Citizen Science and GSA's Open Opportunities Program
- New digital platforms (iNaturalist, eBird, [www.scistarter.org](http://www.scistarter.org), etc.)
- Newly digitized museum collections



Report urges massive digitization of museum collections

By Elizabeth Pennell | Apr. 4, 2019, 9:00 AM

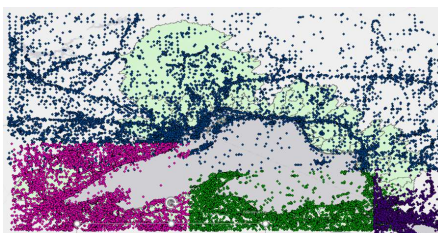
<https://www.sciencemag.org/news/2019/04/report-urges-massive-digitization-museum-collections>

### The Global Biodiversity Information Framework ([www.gbif.org](http://www.gbif.org))



#### Occurrence records

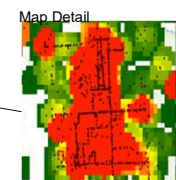
- Occurrence records 1,579,393,575
- Datasets 53,865
- Publishing institutions 1,629
- Peer-reviewed papers using data 4,609



1,138,331 Occurrences !!!



Heatmap of occurrences in Western Lake Superior



## Citizen Science can Connect Us to Our Past



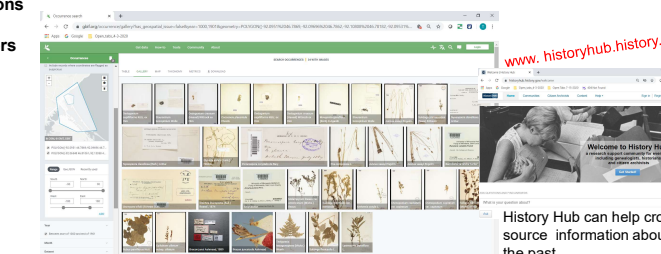
Smooth sumac collected by J.H. Sandberg in 1891, in Carlton Minnesota ([www.gbif.org](http://www.gbif.org)).



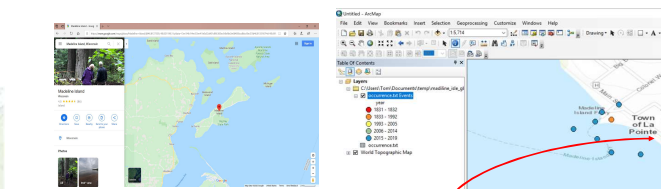
J.H. Sandberg's field notebook preservation at the Smithsonian Museum of Natural History.

TABLE	GALLERY	MAP	TOOLKIT	METHODS	8. DOWNLOADS	ABOUT
Scientific name	Country or area	Coordinates	Month & year	Base of record	Dataset	Kingdom
<i>Chamaecyparis thyoides</i> (Mill.) B.S.P.	United States of America	48.75 N 92.10 W	1901 August	Presented specimen	The New York Botanical Garden Archives	Plantae
<i>Chamaecyparis thyoides</i> (Mill.) B.S.P.	United States of America	48.75 N 92.10 W	1901 August	Presented specimen	The New York Botanical Garden Archives	Plantae
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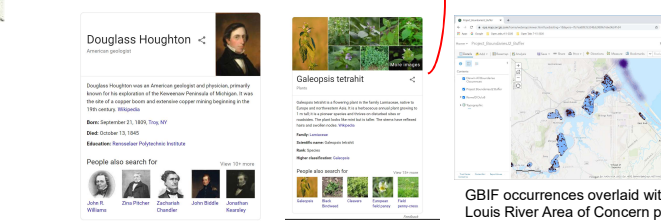
More than 400 GBIF occurrences in the St. Louis River, Duluth, MN from 1901



History Hub can help crowd source information about the past



Oldest GBIF occurrence in Lapointe, WI, from 1831 collected by Douglass Houghton



GBIF occurrences overlaid with St. Louis River Area of Concern project boundaries.