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Citizen Science Monitoring of Nuisance Algae Blooms in Lake Superior

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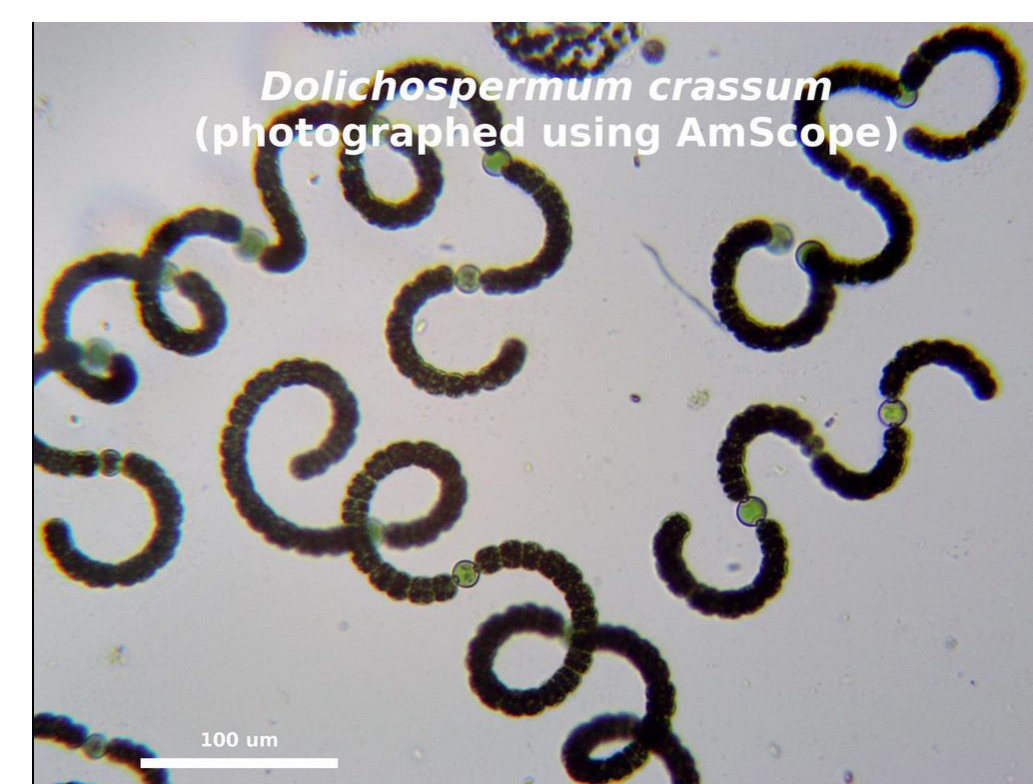
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Algal Blooms in Lake Superior

- Algal blooms have increasingly become an issue in Lake Superior, particularly along the south shore and within the Apostle Islands National Lake shore and in the Thunder Bay area.
- Although these blooms have not yet shown to be toxic, they have drawn nationwide attention of the public and are a concern at multiple levels.
- Here we present a collaborative initiative between the US EPA and Great Lake coastal partners designed to establish a network of citizen scientists who will monitor for nuisance and harmful algal blooms.



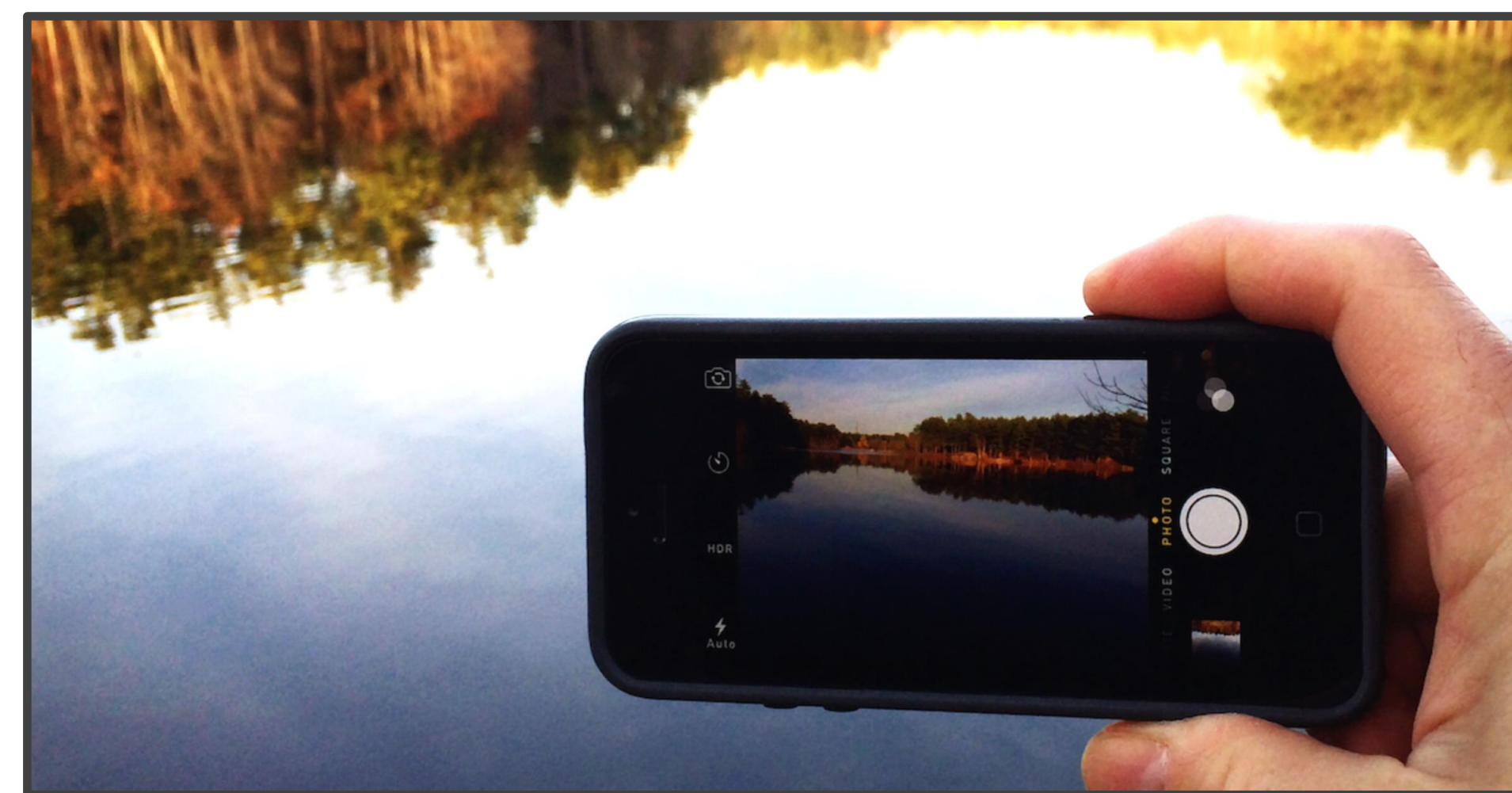
A bloom stretched roughly 50 miles along Superior's south shore in 2018. Photo by Brenda Lafrancois/National Park Service



<https://www.inaturalist.org/guides/6092>

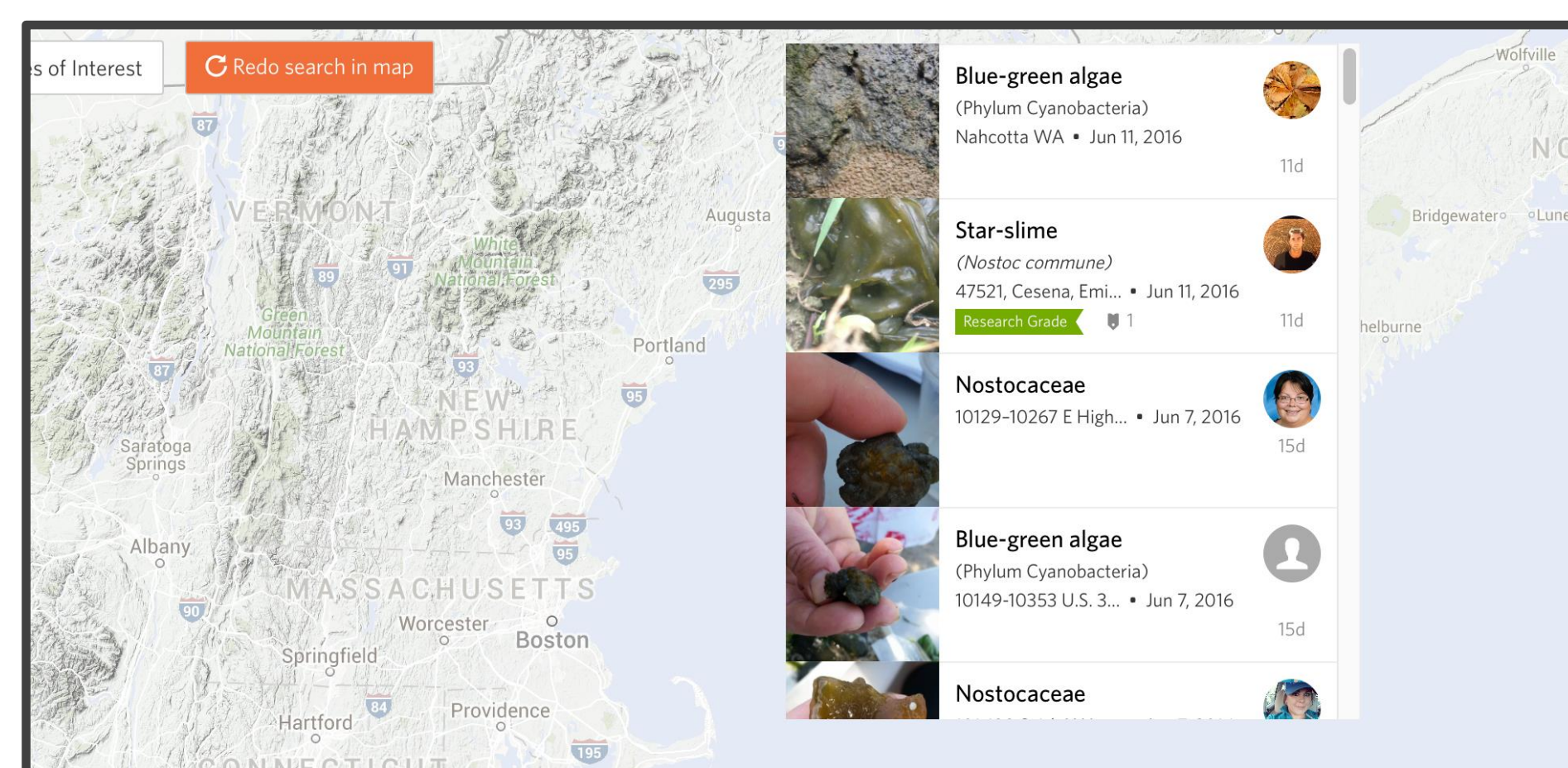
Bloomwatch App

the BloomWatch App is used to photograph blooms and lake conditions



additional info is documented

<https://cyanos.org/bloomwatch/>



picture & details sent to database and relevant state authorities



cyanoScope

iNaturalist

ADD OBSERVATIONS

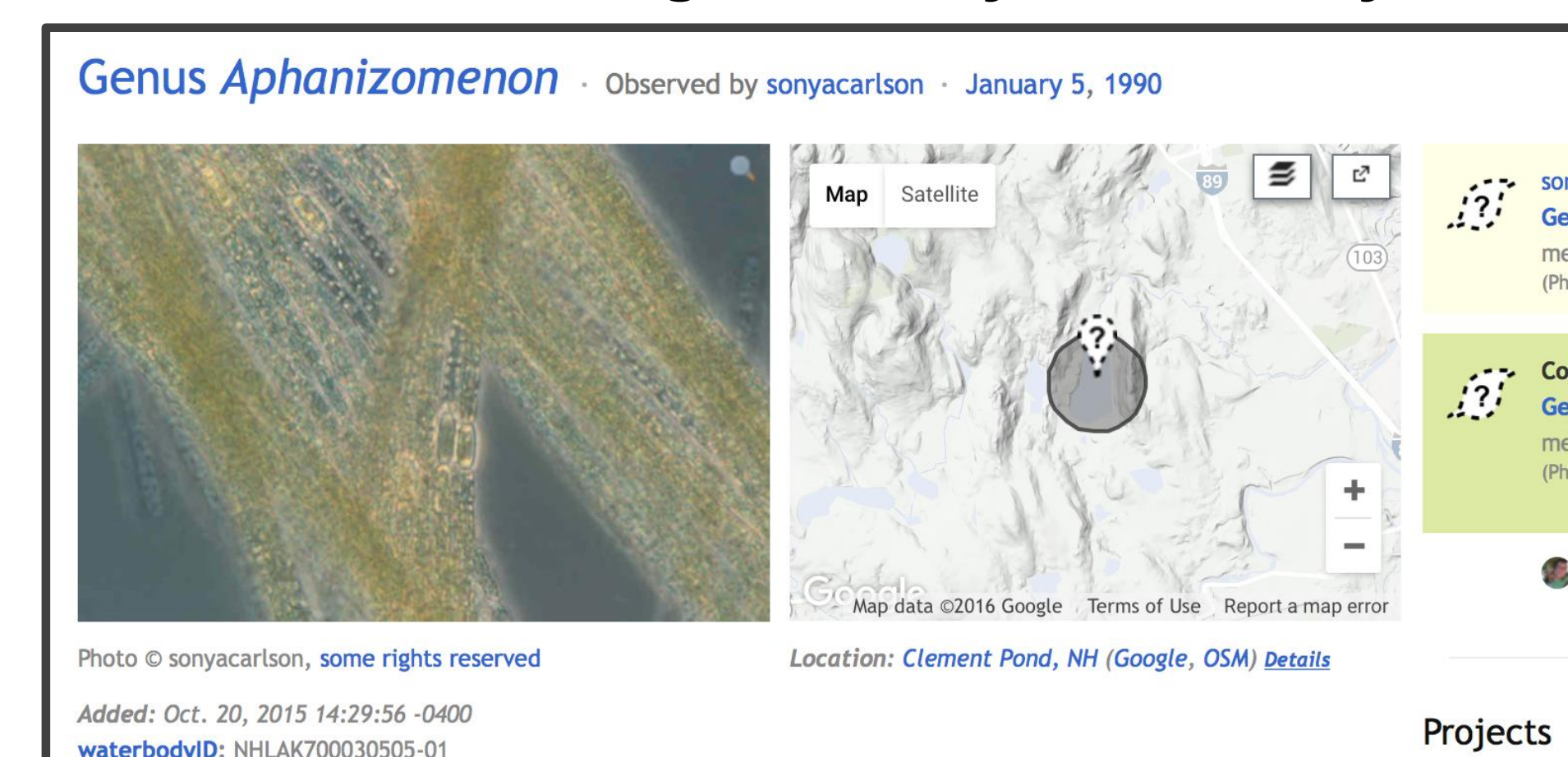
cyanoScope

Mapping cyanobacteria one slide at a Time

Cyanobacteria are collected, concentrated and viewed under a microscope...

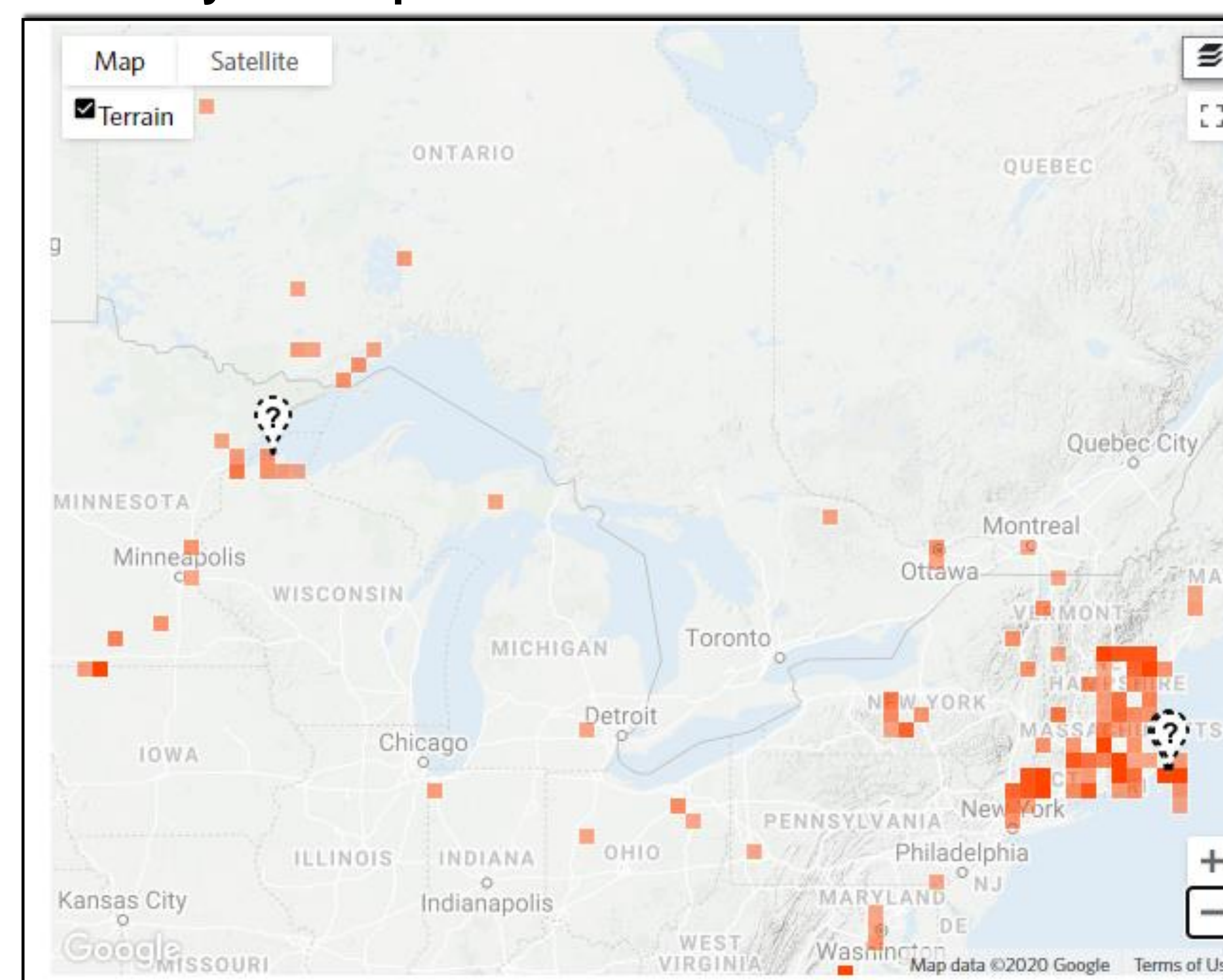


... then ID using the "Dirty Dozen" key:

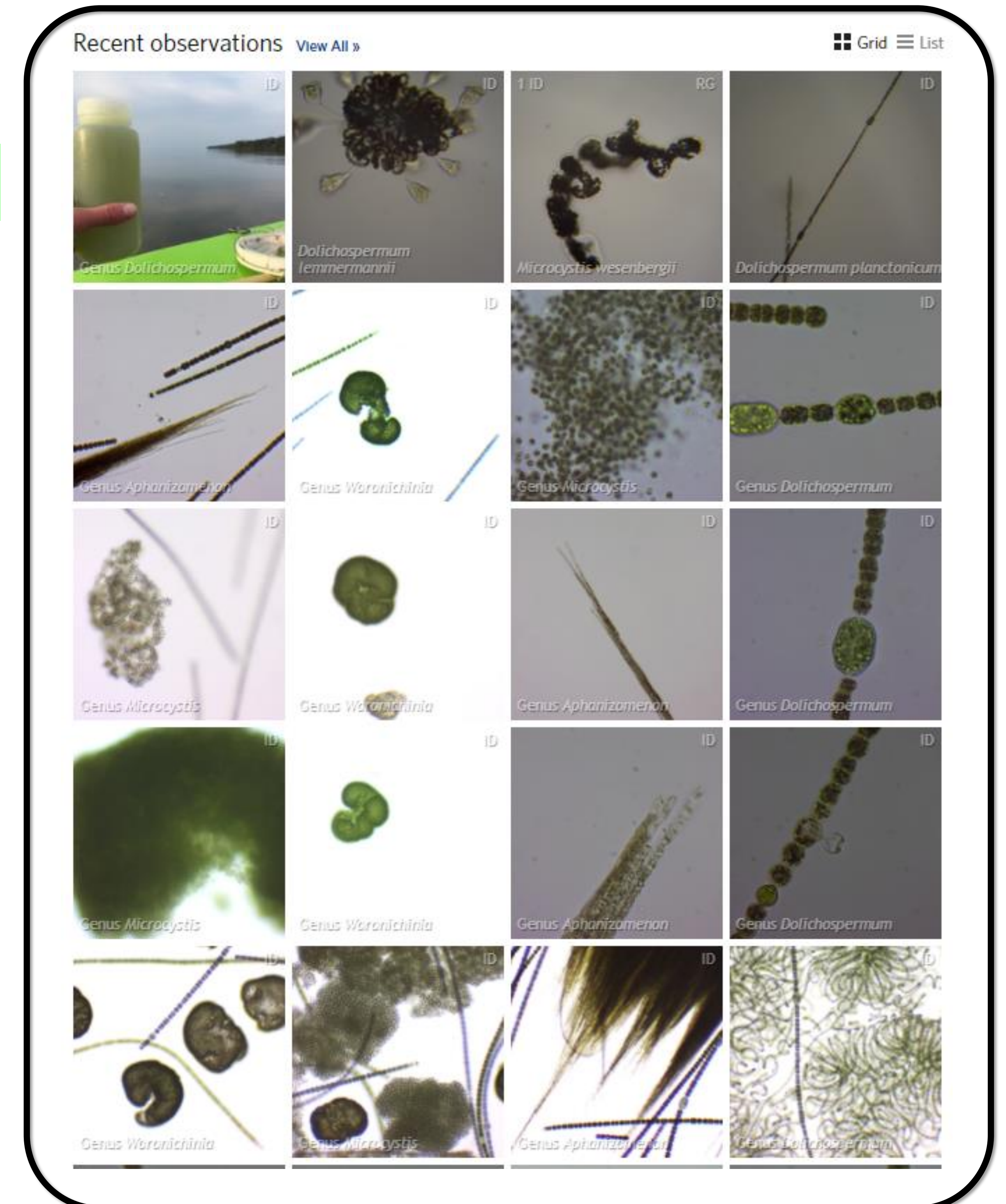


(pictures and identification submitted and shared for confirmation and analysis)

CyanoScope Observations in the Great Lakes



Recent cyanoScope Observations



- cyanoScope now has its own guide to the cyanobacteria:

<https://www.inaturalist.org/guides/6092>

How to get Started

1

Join the cyanoScope project on iNaturalist.org

Create an account and join the project at: www.inaturalist.org/projects/cyanoscope

2

Purchase the collection and microscopy kit on www.cyanoScope.org

The kit includes: Portable microscope and supplies, an adapter to connect a smartphone or PC to the microscope, plankton net, and a cyanobacteria concentrator.

3

Get Training

Check our website, www.cyanoscope.org, for training materials and information on upcoming sessions.