Field and Laboratory Guide to harmful Cyanobacteria for Native American Tribes in the United States

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Background

- Presented Harmful Algal Bloom 101 to USET
- Obvious concern about exposure of tribal members to cyanobacteria and their associated cyanotoxins
- After the presentation, one-on-one conversations lead to the vision on this Guide
- Field recognition of a bloom and laboratory identification of key organisms

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Field and Laboratory Guide to Freshwater Cyanobacteria Harmful Algal Blooms for Native American and Alaska Native Communities

Open-File Report 2015–1164

U.S. Department of the Interior
U.S. Geological Survey

brosen@usgs.gov

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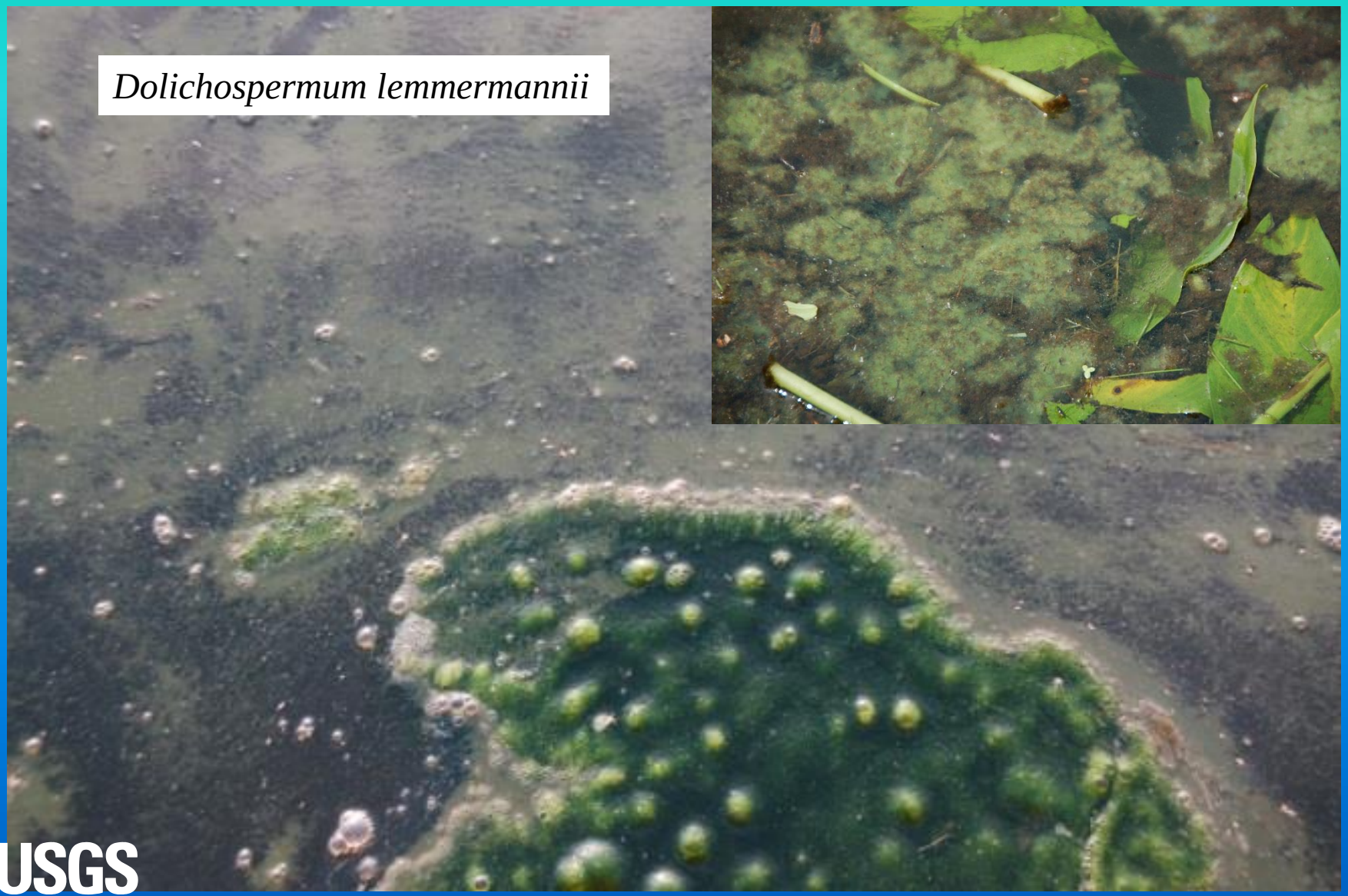
Recognizing a cyanobacteria bloom: field images (blue-green to greenish in color)



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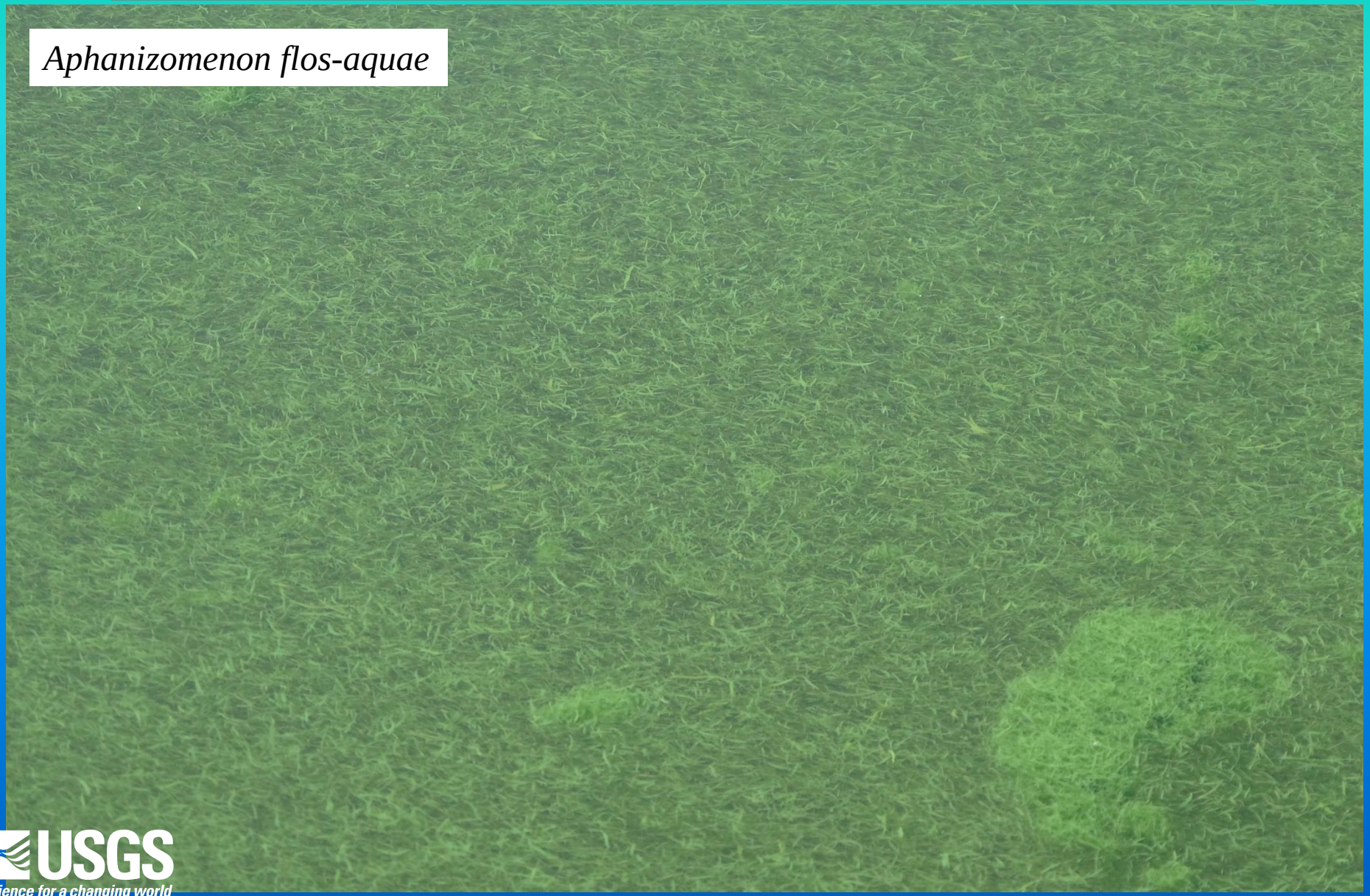

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Recognizing a cyanobacteria bloom: field images (blue-green to greenish in color)

Aphanizomenon flos-aquae, etc.

Lake water subsample containing colonies of Aphanizomenon flos-aquae (A), Microcystis (B), and Gloeotrichia (C). Magnification = 3×. Photograph by Sara Eldridge, U.S. Geological Survey

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Recognizing a cyanobacteria bloom: field images (blue-green to greenish in color)

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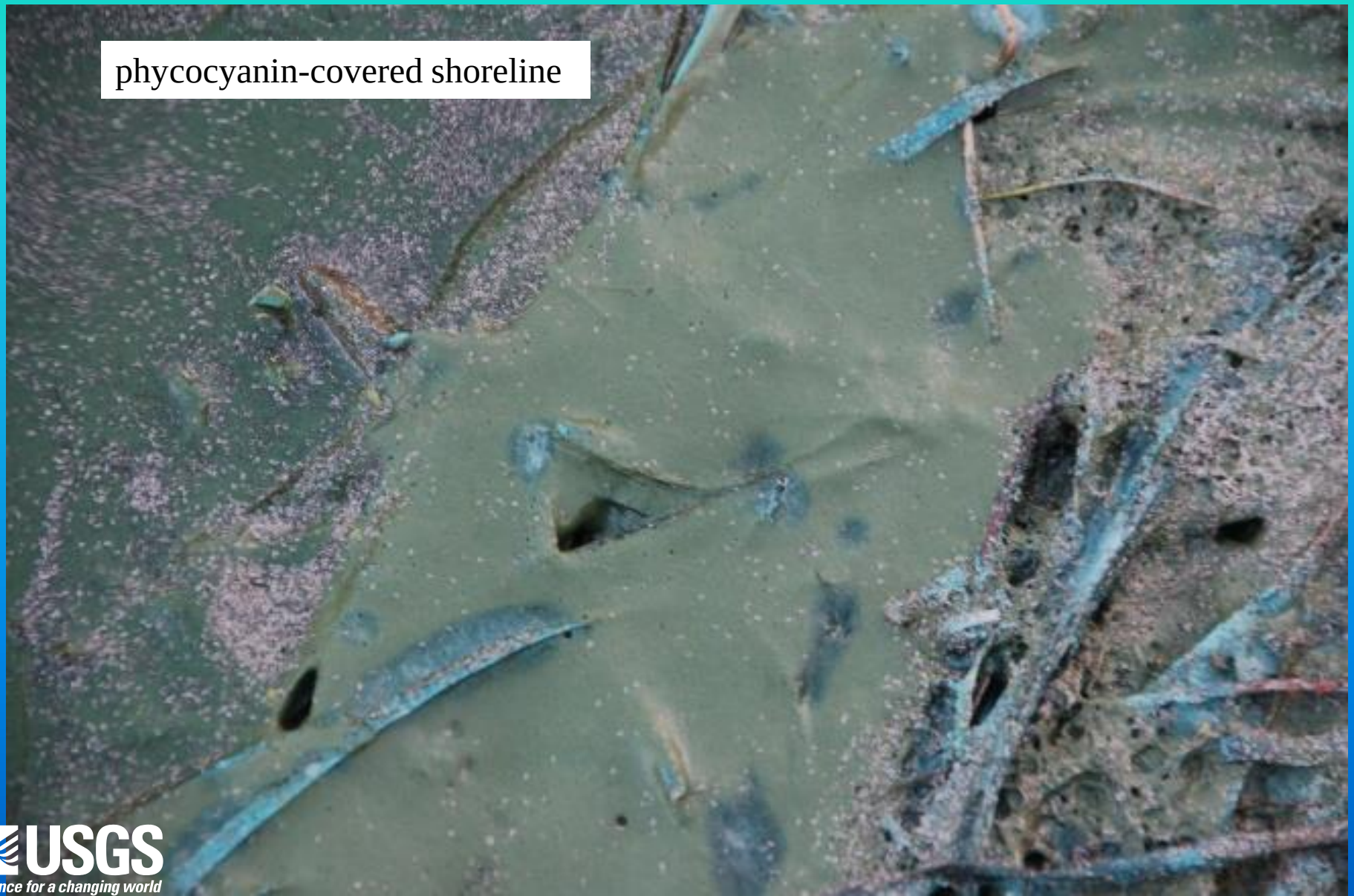

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Recognizing a cyanobacteria bloom: field images (brown in color)

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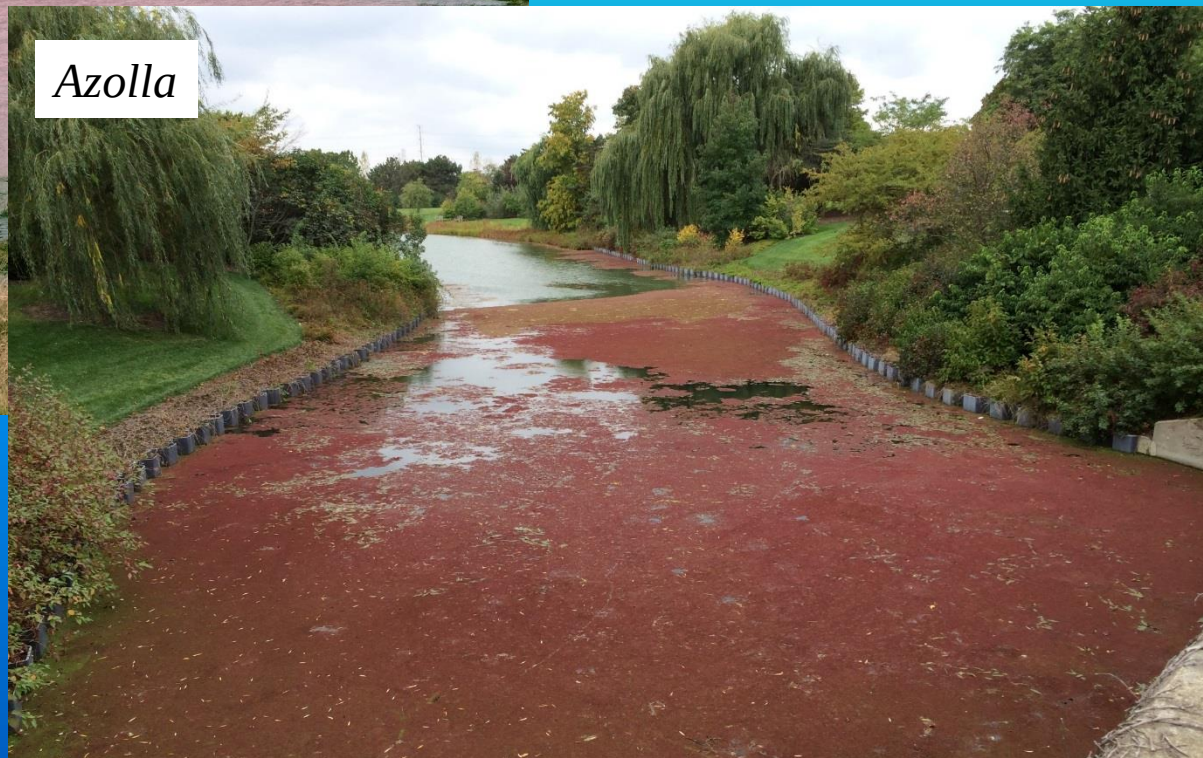
Recognizing a cyanobacteria bloom: field images (reddish/pink color)



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Not Cyanobacteria

Not Cyanobacteria

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Not Cyanobacteria

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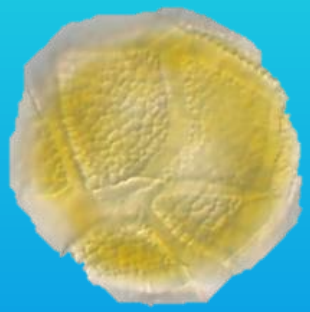
Prokaryotes (Bacteria)

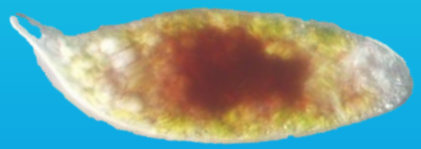
Cyanobacteria

Eukaryotes

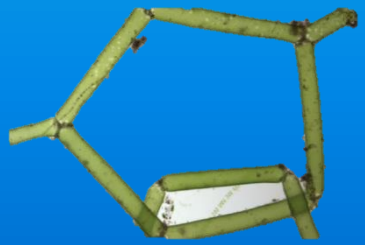
Haptophytes



Dinoflagellates

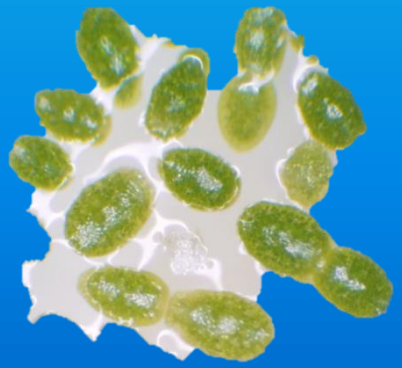


Euglenophytes



Chlorophytes

Charophytes



Plants

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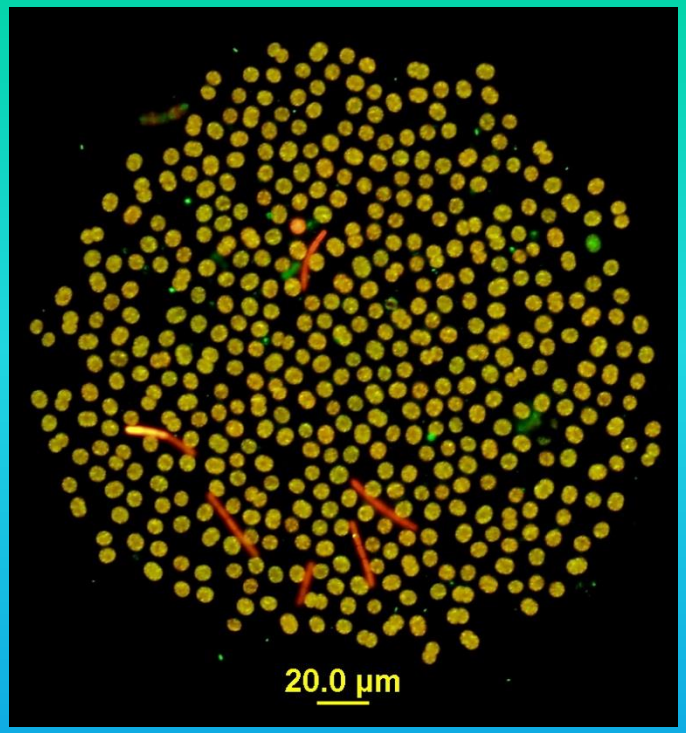
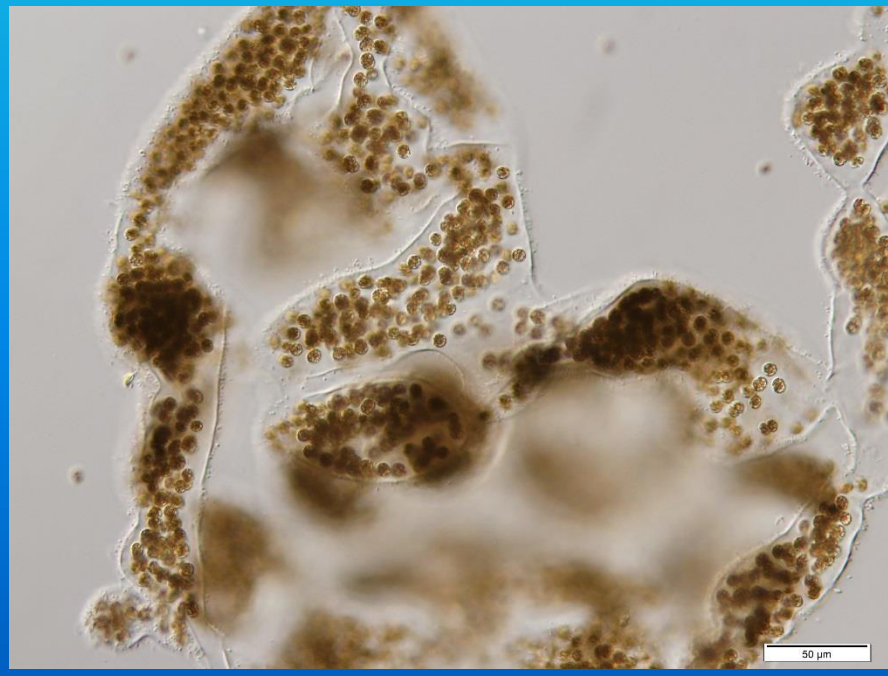
Microcystis





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Dolichospermum

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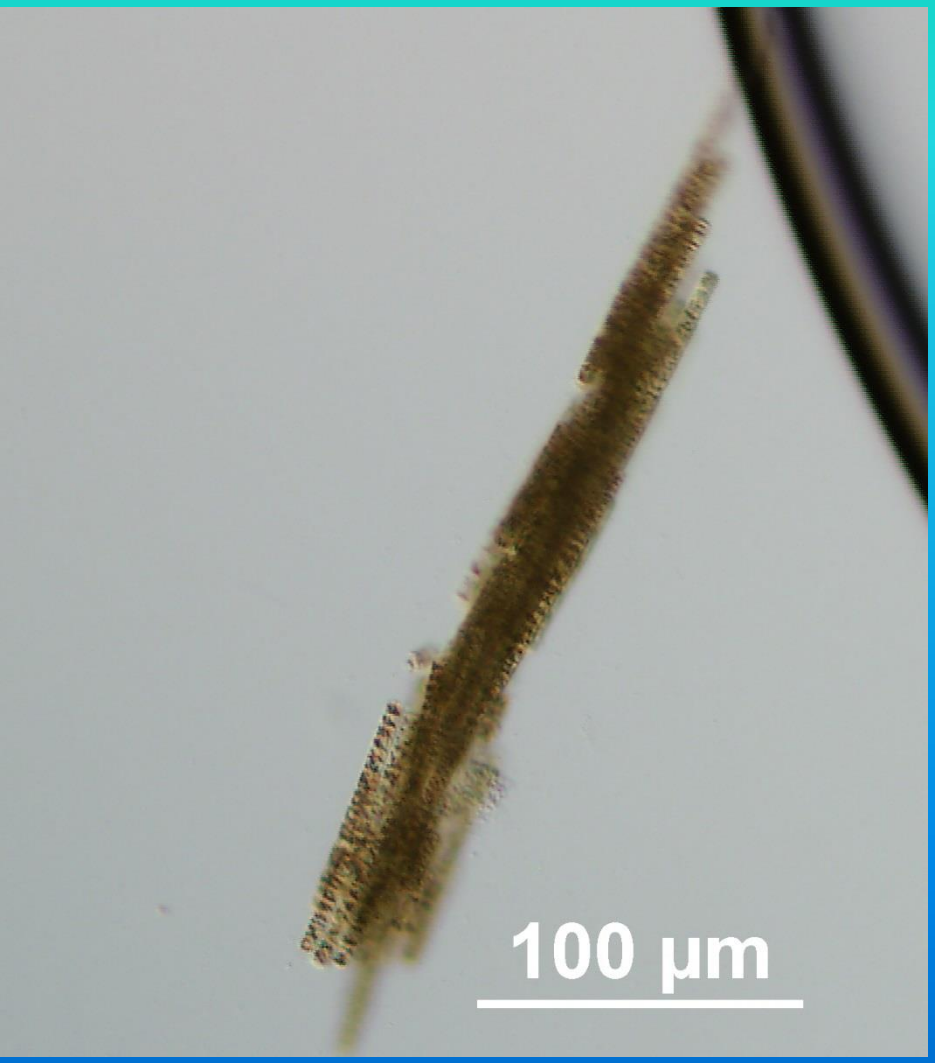
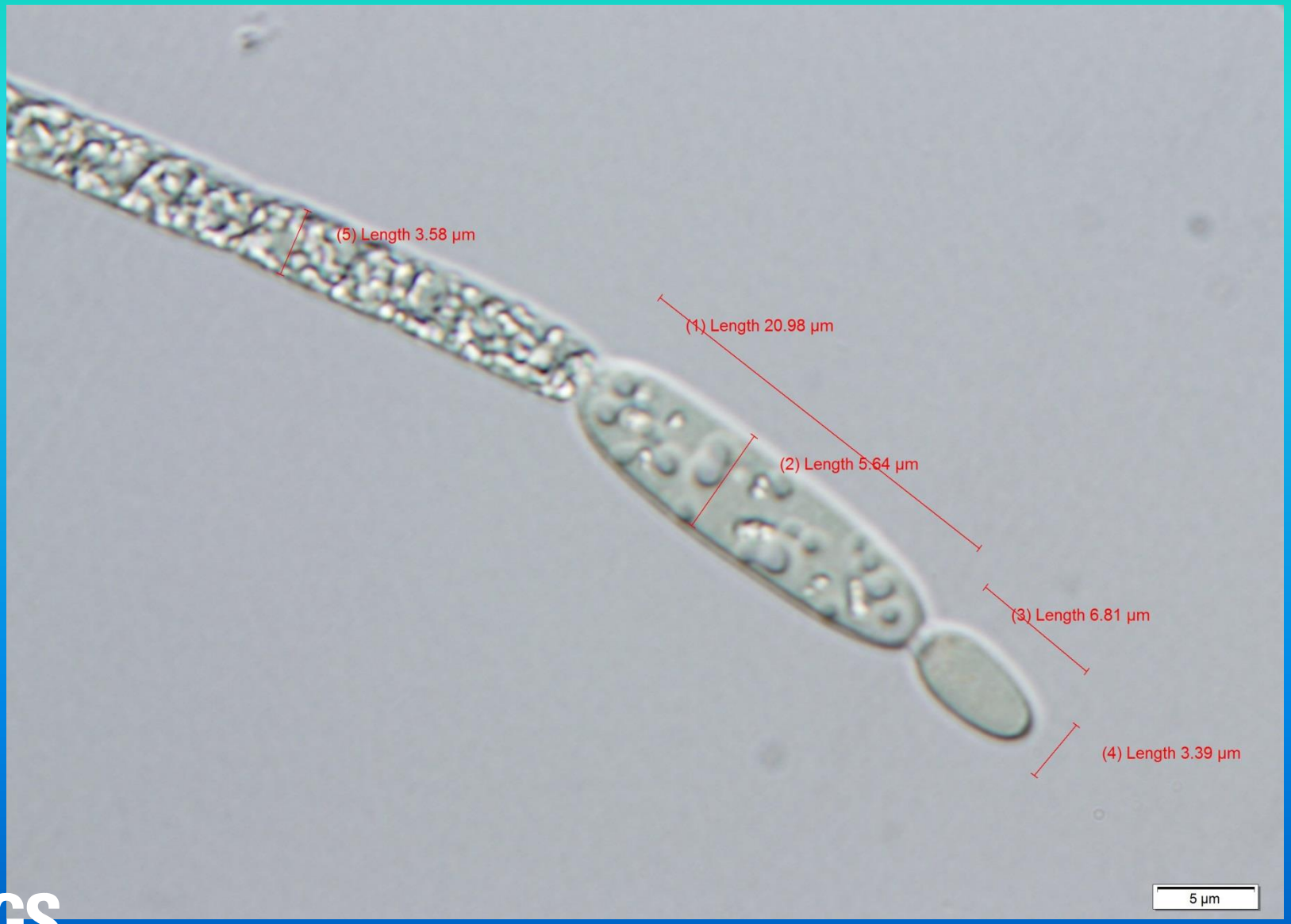
Aphanizomenon



Aphanizomenon



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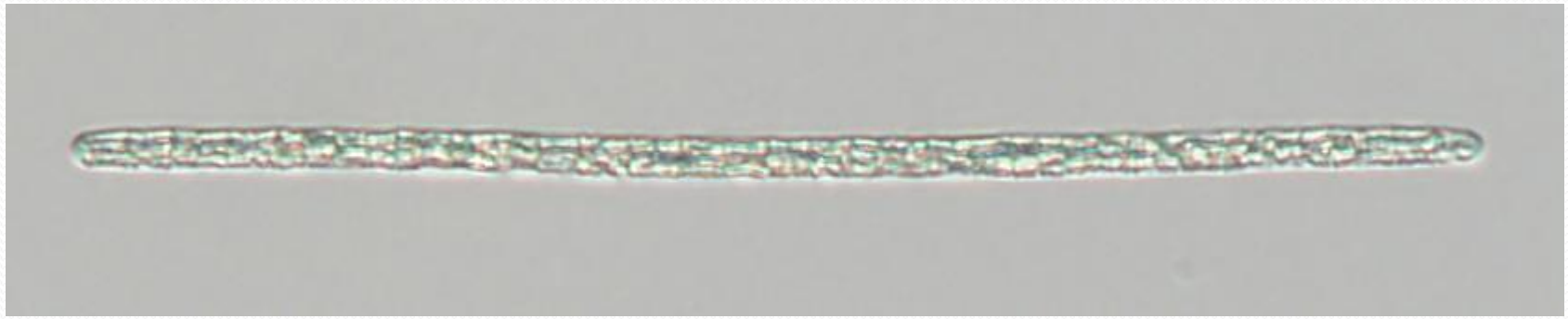
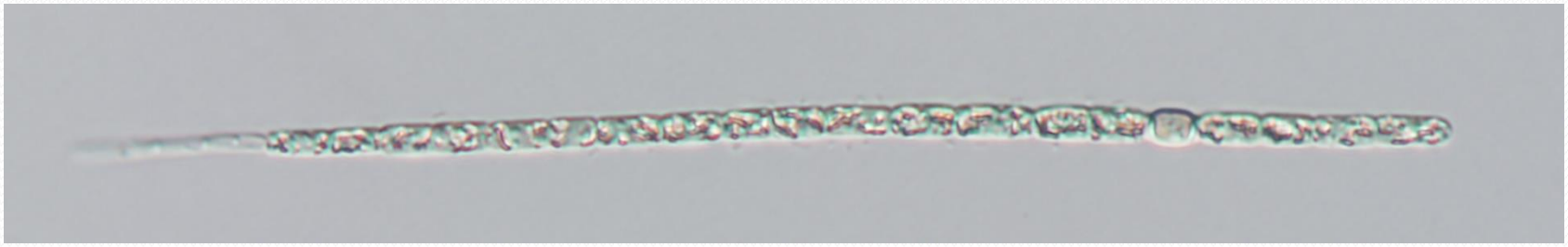
Planktothrix



Cuspidothrix issatschenkoi



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