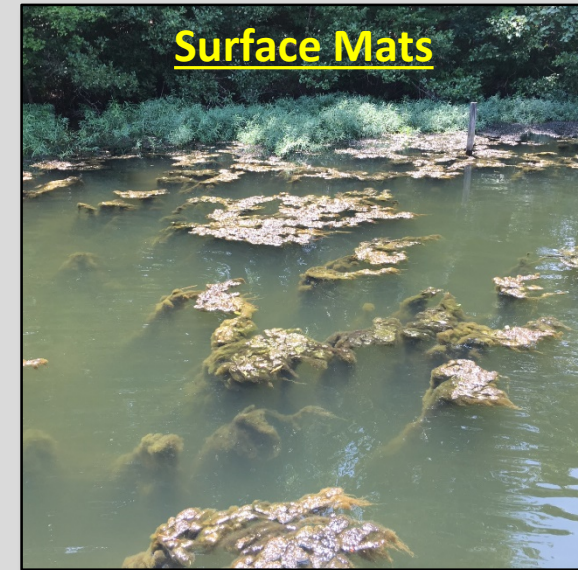


Background - Lyngbya

What is Lyngbya??

- Cyanobacteria



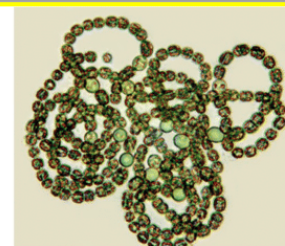
Background - Lyngbya

What is Cyanobacteria??

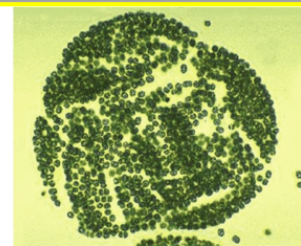
- Photosynthetic Bacteria
 - Blue-green algae
 - chlorophyll *a*
- Also receive energy from nitrogen fixation
- Gliding motility



Chroococcales (unicellular)



Anabaena (filamentous)



Microcystis (colonial)

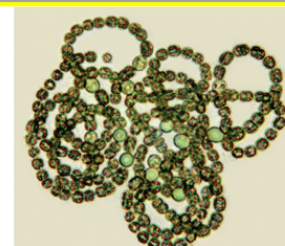
Background - Lyngbya

What is Cyanobacteria??

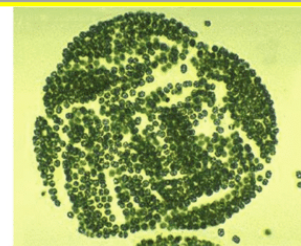
- Normally not a bad guy.....
- Very important in creating global climate
 - Oldest known fossil
 - Produced the Earth's first oxygen atmosphere
 - Origin of photosynthetic plants
 - Increase nutrients in soils and water
 - Used in medicines, renewable energy, etc.



Chroococcales (unicellular)



Anabaena (filamentous)



Microcystis (colonial)

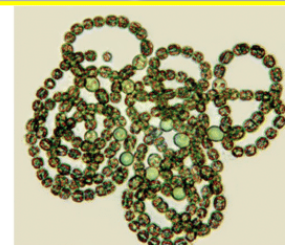
Background - Lyngbya

What is Cyanobacteria??

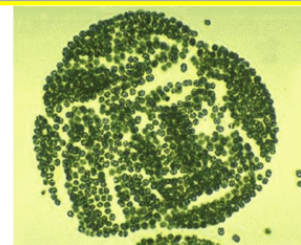
- *Normally* not a bad guy.....
- But they can be a **very bad guy!**
 - Cyanotoxin Production
 - Stay tuned.....



Chroococcales (unicellular)



Anabaena (filamentous)

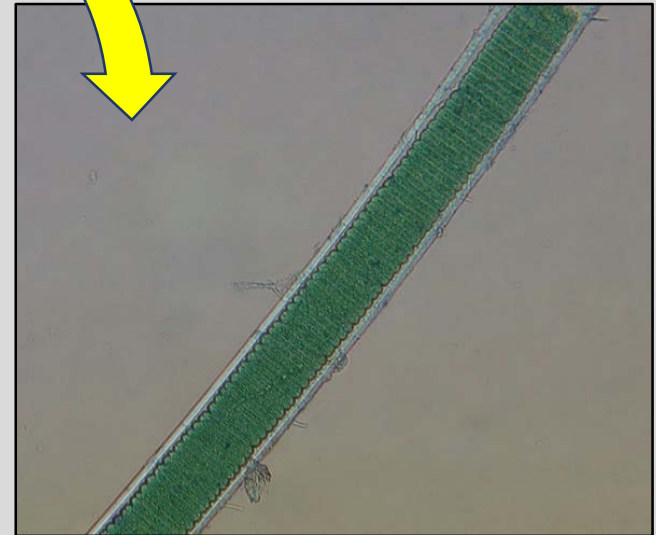


Microcystis (colonial)

Background - Lyngbya

What is Lyngbya??

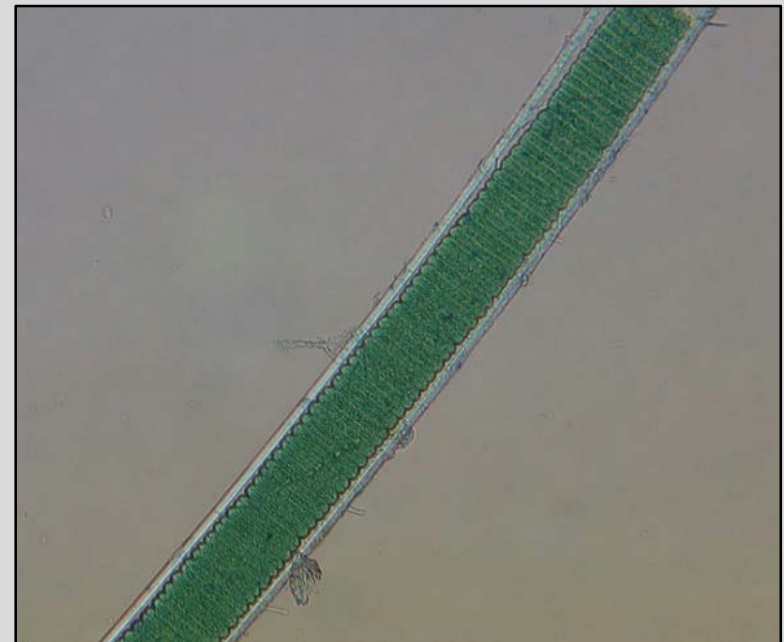
- **Filamentous**, Cyanobacteria (Blue-green Alga)



Background - Lyngbya

What is Lyngbya??

- Filamentous, Cyanobacteria (Blue-green Alga)
- Individual cells are stacked within **protective sheath**
 - Protects cells from UV light and environmental stressors
 - Assists in gliding motility
 - VERY good at it's job!
 - Difficult to manage!!



Background - Lyngbya

What is Lyngbya??

- Filamentous, Cyanobacteria (Blue-green Alga)
- Individual cells are stacked within protective sheath
 - Difficult to manage
- Hormogonia are offspring that depart from parental filament



Background - Lyngbya

What is Lyngbya??

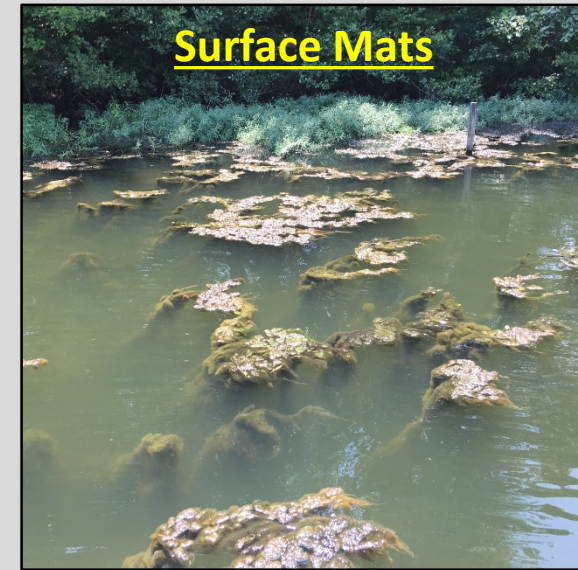
- Filamentous, Cyanobacteria (Blue-green Alga)
- Individual cells are stacked within protective sheath
 - Difficult to manage
- Hormogonia are offspring that depart from parental filament
- **Lyngbya can be transferred by movement of viable cells (boats, animals, water movement)**



Background - Lyngbya

Why is Lyngbya a Problem??

- Found world-wide, but problematic throughout the Southeast
 - Freshwater and Marine environments
 - Several different species
 - Different levels of toxicity potential
 - Gaston's lyngbya is:
 - *Lyngbya wollei*, now *Microseira wollei*



Background - Lyngbya

Why is Lyngbya a Problem??

- Found world-wide, but problematic throughout the Southeast
- Problematic in mid 2010's
- Mats can impeded navigation, recreation, and clog intakes
- Impacts habitats needed for native fauna
- Produces a strong, foul musk-like odor and taste to water
- Alter chemical water quality parameters (oxygen, pH)
- ***Toxin producing...stay tuned!***

