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Lab 2 – Identifying Algae and Protists

In this lab, the goal was to analyze the different types of cells present in the hay infusion culture we made in the previous lab from samples we obtained from the marshland transect. We took drops from the top layer of the culture and another from the bottom. Both drops were made into wet mounts and viewed under a microscope in order to identify different types of cells living within.

The hay infusion culture smelled rancid, like hot sewage. The water was a yellow color, and a fine layer of silt had collected along the bottom of the jar. A whitish film had developed over the top of the water, and the vegetation from the sample floated near the bottom. The plants were still green, so we could assume they were still alive. The film appeared to be some sort of mold, which we also categorized as alive.

The first sample we took was from the very top of the jar, just underneath the moldy film so that water could be drawn out. From the sample, we identified three different types of protists/algae.

Sample 1:

<u>Paramecium Bursaria</u>

100nm

Motile

Green color indicates photosynthesis

*This organism is able to survive in its environment because it's able to obtain energy (photosynthesis) and move around to get to areas where energy will be most available.

Pandorina

70nm

Colony

Not motile

Didn't appear to use photosynthesis

Blepharisma sp.

450nm

Purple color

Not motile

No photosynthesis.

Sample 2:

Sample 2 was obtained near the bottom of the jar. Some silt was taken up along with the water.

Ameoba Proteus

20nm

Moving/sprouting (motile)

No photosynthesis

Paramecium Bursaria

50nm

Motile

Used photosynthesis (green color)

Colpidium

60nm

Motile

No photosynthesis

If the hay infusion culture were left for another two months, I would expect the amount of cells to diminish as the amount of energy available decreased. Not to mention there is a good chance the water would all have evaporated at the end of two months. Without that water most if not all the cells would die shortly.