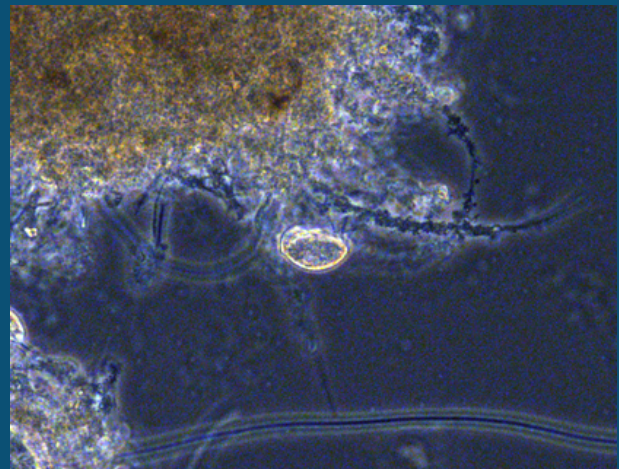
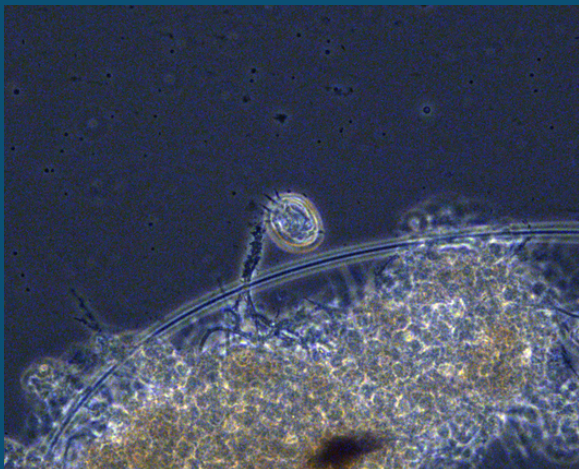


# WASTEWATER BUG SPOTLIGHT

## CRAWLING CILIATE

Crawling ciliates are small protozoa named for hair-like protrusions that cover their bodies. These “hairs,” called cilia, which is Latin for eyelash, enable the ciliates to climb over clumps of bacteria at the El Estero Water Resource Center in search of food. Ciliates have a tough and flexible outer shell called a pellicle, which helps them keep their shape. The cilia protrude through the pellicle in a variety of patterns depending on their species. Crawling ciliates are quite small, measuring 20 to 200  $\mu\text{m}$  long. For reference, a dime is 1350  $\mu\text{m}$  thick!

Crawling ciliates prefer an aquatic environment that is indicative of healthy wastewater treatment, generally thriving in higher concentrations of dissolved oxygen. Crawling ciliates help to condense El Estero's activated sludge by eating loosely attached bacteria which helps the solid waste settle out from the water. This practice of eating edge bacteria is known as “grazing,” which is why crawling ciliates are referred to as the cows of wastewater.



Crawling ciliates found under the microscope at the City's El Estero Water Resource Center, magnified x400.



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wastewater treatment visit  
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