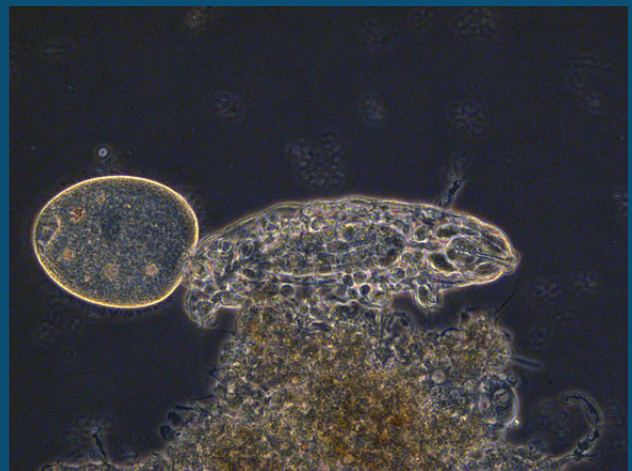
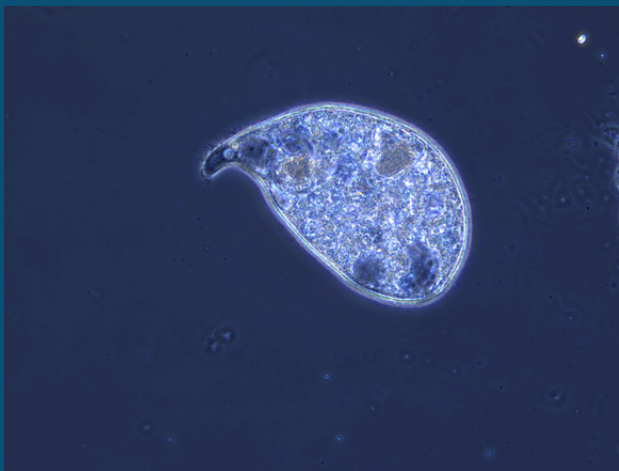


WASTEWATER BUG SPOTLIGHT

FREE SWIMMING CILIATE

The aptly-named free-swimming ciliates are characterized by the hair-like cilia that grow all over their bodies. These cilia not only provide the free-swimming ciliate with the ability to navigate their watery home, but also to capture the bacteria on which they feed. Ciliates typically range between 20 μm and 400 μm , making them some of the largest protozoan predators found under the microscope at the El Estero Water Resource Center.

Free-swimming ciliates are not only large but also relatively fast creatures, allowing them to compete with other micro-organisms by chasing down bacterial food. Due to their size, free-swimming ciliate's only predator is the suctoria, which spear free-swimming ciliates using their unique fang-like tentacles. Free-swimming ciliates are often used by City Laboratory and Operations staff to determine wastewater treatment efficacy; the presence of smaller free-swimming ciliates means that it is a healthy bug population!



Free-swimming ciliates found under the microscope at the City's El Estero Water Resource Center, magnified x400. The one on the right is swimming next to a water bear.



El Estero
WATER RESOURCE CENTER

For more information on
wastewater treatment visit
www.SantaBarbaraCA.gov/ElEstero