

Ciliates

Ciliates are simple organisms. They move quickly. They move much faster, in fact, than the bacteria, protozoa, and amoebas already discussed. The reason for this is that ciliates have many **cilia** (SIL-ee-uh). These hairlike extensions look like eyelashes. They work like oars to move ciliates quickly through water.

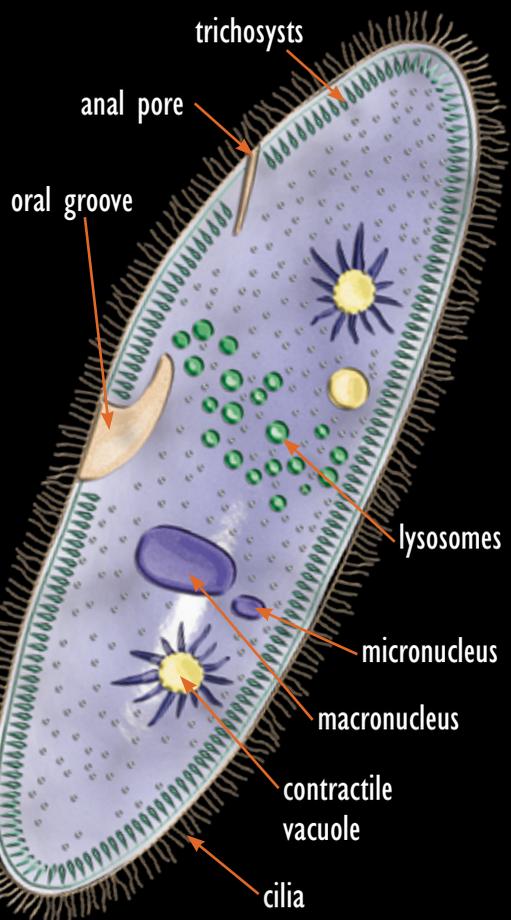
There are more than 8,000 types of ciliates in the world. Scientists believe that even more ciliates exist than have been found. Ciliates live in every type of water you can imagine. They eat bacteria. So, they can most easily be found in places where natural things have started to rot. In fact, most ciliates are found in water with rotting plants and protists.

ciliate →



Ciliate Protection

When the environment becomes harsh, ciliates are able to form a protective sac. They become smaller, and enclose themselves in the sac. When conditions improve, the sac opens up. The ciliate comes out to feed and reproduce.



The most common ciliate is the **paramecium** (par-uh-MEE-see-uhm). You can see paramecia without the use of a microscope. They are big enough to see with your eyes. Looking into a body of water, they look like gray specks.

Paramecia have some interesting parts inside their cells. They have star-shaped **vacuoles** (VAK-yoo-ohls) at each end of their bodies. A vacuole is like a storage chamber. Paramecia live in freshwater that can enter into their bodies. If this happens, they could fill up with too much water and burst. The vacuoles pump out water and waste to keep this from happening.

Paramecia also have structures through their bodies called **trichocysts** (TRIKE-uh-sists). These structures look like rods. They give the protist its shape. Paramecia eat by pulling other organisms inside their cells. The trichocysts are used to hold the food in place while the paramecium eats it.

Paramecia reproduce by splitting in two. In time, those two paramecia will split into four. Then the four split into eight. It doesn't take long for one paramecium to turn into many separate organisms.

Complex Creatures?

These creatures are quite complex. Paramecia are able to move away from extreme temperatures and chemicals. If they eat something they don't like, they will know to stay away from it the next time.

↓ This didinium (a flesh-eating protozoa) is attacking a paramecium, which has fired its trichocysts in defense.

