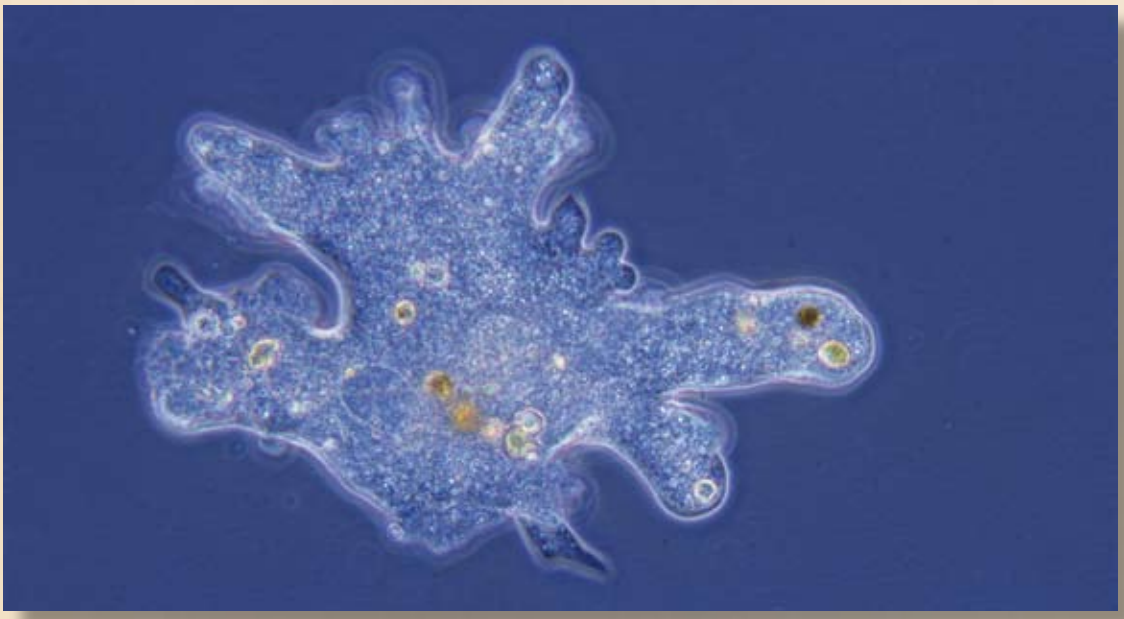
Microscopic Behavior

Protozoa (pro-tuh-ZOH-uh) are living things. They are very small. They act like animals. They move. They hunt for food. They eat other tiny things. But they are made of just one cell. They take food right into the cell. It comes through pores on the outside of the cell. There are many of them in the world. There are more of them than any other kind of living thing. Two kinds are amoebas (uh-MEE-buhs) and paramecia (par-uh-MEE-see-uh).

Amoebas

Amoebas are very small. They are about as big as the head of a pin. They are very simple. They live in rivers and ponds. They can also be found on the leaves of plants that live in water.

The amoeba cell is made of a liquid. A membrane wraps around it. It holds it all in. Amoebas need water and air. They pull them through tiny holes in their cell membranes. They do not have mouths. They pull food through their membranes, too.



The amoeba is made of liquid wrapped up in a membrane. That means its shape changes all the time. In fact, this is how it moves. The amoeba is known for its "false feet." These are parts of its body. It pushes them out. It uses them to move and eat. The amoeba sends these feet to where it wants to move. Its body then flows after the false feet.

The nucleus floats in the middle of the amoeba cell. It works as the amoeba's control center. An amoeba makes more amoebas by splitting. First it splits its nucleus in two. Then it splits the rest of the cell into two parts. The cell can't split first. If it did, one half would not have a nucleus. It would die.

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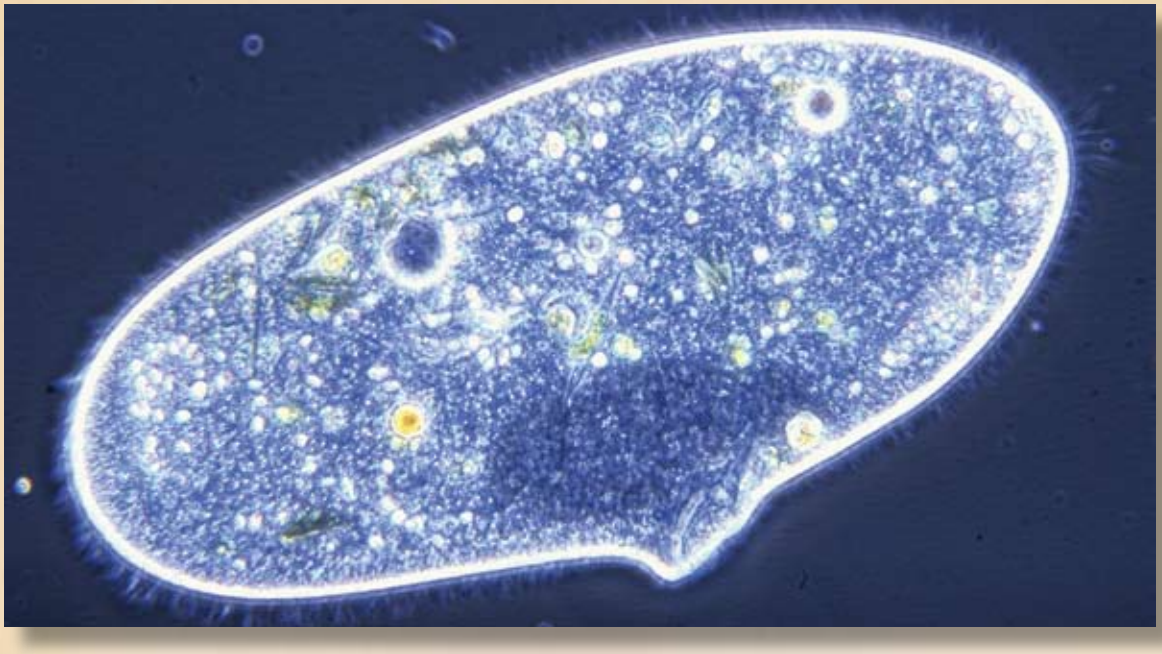

Paramecia

The paramecium is a kind of protozoa. It is the most common kind. They are big for microbes. You can see them with your eyes. You don't need a microscope. They look like gray specks in a body of water.

They move away from high heat and cold. They avoid harmful things. Sometimes they eat things they don't like. They will stay away from it the next time.

Paramecia have some neat parts in their cells. At each end of their bodies they have vacuoles (VAK-yoo-ohls). These are like storage places. They are shaped like stars. Paramecia live in water. That water can flow through their bodies. This is normal, but it can go wrong. Too much water can make the cell burst! The vacuoles can pump out water and waste to prevent the cell from bursting.

Paramecia also have little rods in their cells. The rods are called trichocysts (TRIKE-uh-sists). They give the cell its shape. Paramecia pull their prey inside their cells. The trichocysts hold the prey in place. Then the cell eats it.

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

Comprehension Question

How do amoebas and paramecia eat?

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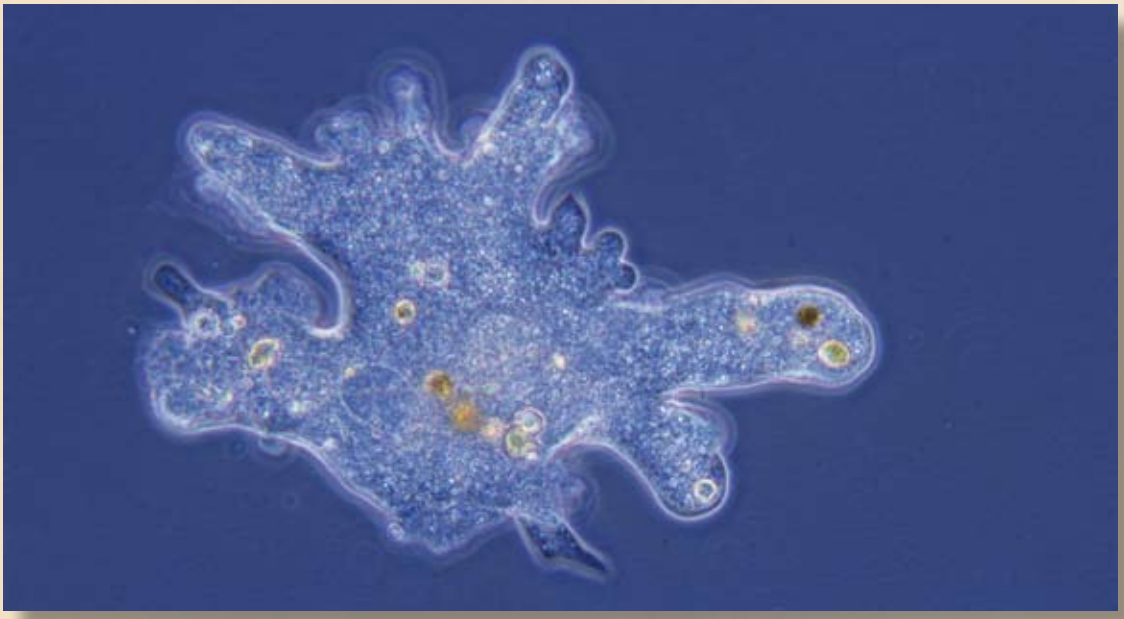
Microscopic Behavior

Protozoa (pro-tuh-ZOH-uh) are tiny living things. They act like little animals. They move around. They hunt for food. Mostly, they eat bacteria. But they are made of only one cell. They take in food through pores on the outside of the cell. There are many protozoa in the world. There are more of them than any other kind of living thing. Two kinds are amoebas (uh-MEE-buhs) and paramecia (par-uh-MEE-see-uh).

Amoebas

Amoebas are very small organisms. They are about as big as the head of a pin. They are one of the simplest protozoa. Amoebas live in rivers and ponds. They can also be found on the leaves of plants that live in water.

The amoeba cell is made of a liquid. A membrane wraps around the liquid. It holds it all in. Amoebas take in water and air through tiny holes in their cell membranes. They absorb food through their membranes because they do not have mouths.



Since it is made of liquid wrapped up by a membrane, the shape of the amoeba changes all the time. In fact, this is how it moves. The amoeba is known for its "false feet." These are parts of its body it extends out. It uses them to move and eat. The amoeba sends these feet in the direction it wants to move. Its fluid-filled body then follows the false feet.

The nucleus floats in the middle of the amoeba cell. It works as the amoeba's control center. An amoeba reproduces by splitting its nucleus. Then it splits the rest of the cell into two parts. The cell can't split before the nucleus. If it did, the half without the nucleus would die.

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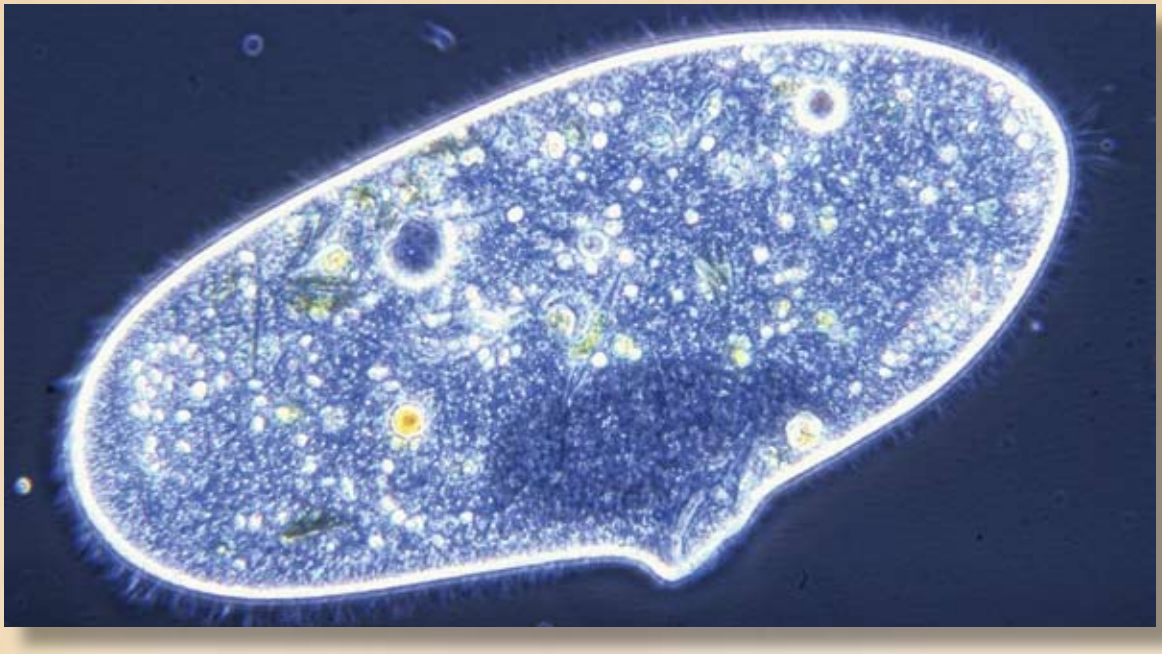

Paramecia

The most common kind of protozoa is the paramecium. They are big for microbes. You can see them with your eyes. You don't need a microscope. They look like gray specks in a body of water.

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

Paramecia have some neat parts in their cells. At each end of their bodies they have vacuoles (VAK-yoo-ohls) shaped like stars. A vacuole is like a storage place. Paramecia live in freshwater. That water can enter into their bodies. This is normal, but it must be controlled. Too much water could make the cell burst! The vacuoles can pump out water and waste to prevent bursting.

Paramecia also have little rods in their bodies. The rods are called trichocysts (TRIKE-uh-sists). They give the cell its shape. Paramecia pull their prey inside their cells. The trichocysts hold the prey in place. Then the cell digests it.

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

Comprehension Question

Describe how amoebas and paramecia eat and how they avoid danger.

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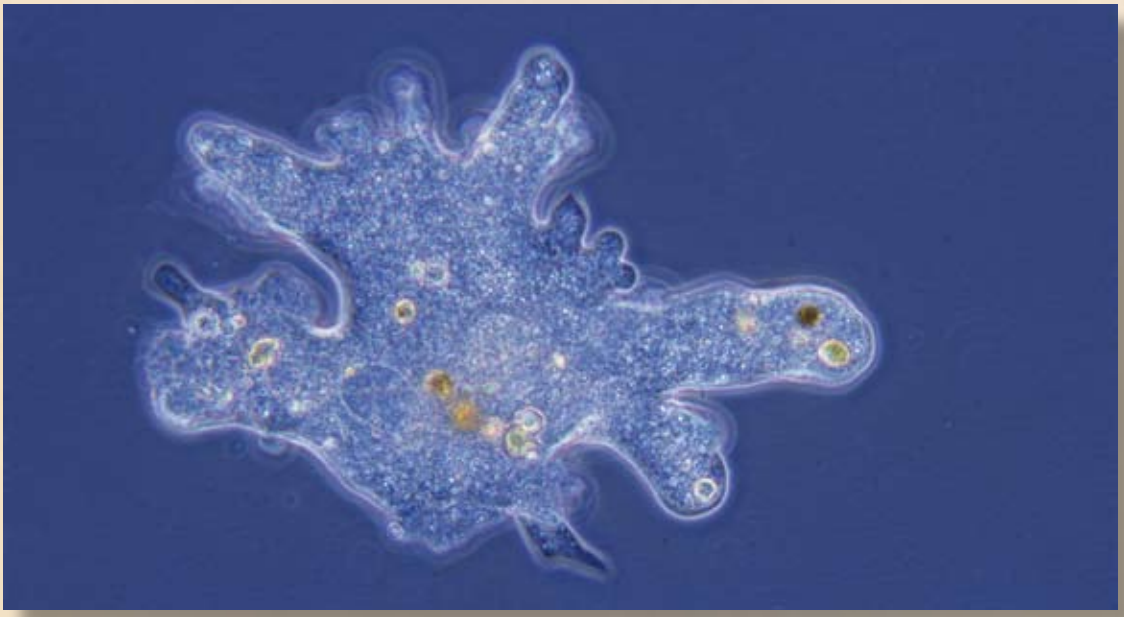
Microscopic Behavior

Protozoa are tiny organisms that behave like little animals. They move around. They hunt other microbes for food. Mostly, they eat bacteria. Protozoa are single-celled organisms. They take in food through the tissue of their cells and through pores. There are more protozoa in the world than any other kind of organism. Two kinds are amoebas and paramecia.

Amoebas

Amoebas are very small organisms. They are about as big as the head of a pin. They are one of the simplest protozoa. Amoebas live in rivers and ponds. They can also be found on the leaves of plants that live in water.

The amoeba cell is made of a liquid. An outer membrane holds it together. Amoebas take in water and oxygen through tiny holes in their cell membranes. They absorb food through their membranes because they do not have mouths.



Because it is made of liquid bound by a membrane, the shape of the amoeba changes all the time as it moves. The amoeba is known for its "false feet." These are extensions of its body. It uses them to move and eat. The amoeba sends these feet in the direction it wants to move. Its fluid-filled body then follows the false feet.

The nucleus floats in the middle of the amoeba cell. The nucleus works as the amoeba's control center. An amoeba reproduces by dividing its nucleus. Then it separates the rest of the cell into two parts. If the cell were to split before the nucleus did, the half without the nucleus would die.

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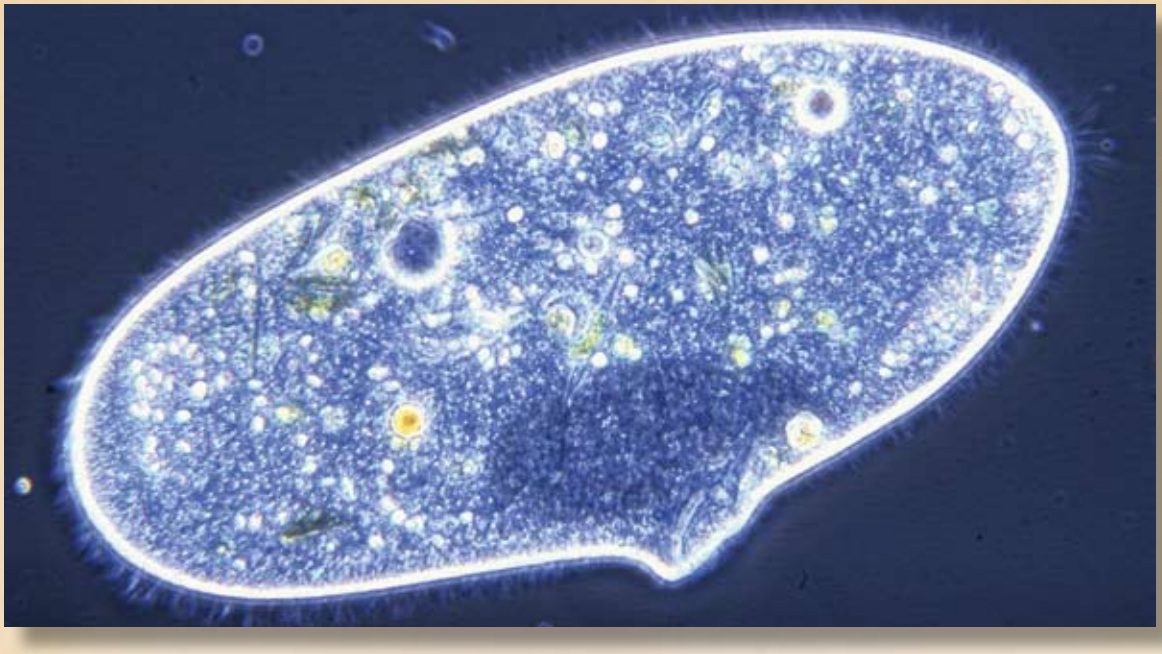

Paramecia

The most common protozoa is the paramecium. 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.

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.

Paramecia have some interesting parts inside their cells. They have star-shaped vacuoles at each end of their bodies. A vacuole is like a storage chamber. Paramecia live in freshwater that can enter into their bodies. This is normal, but it must be controlled. Too much water could make the cell burst! The vacuoles pump out water and waste to prevent this.

Paramecia also have structures throughout their bodies called trichocysts. These structures look like rods. They give the protozoa its shape. Paramecia eat by pulling other organisms inside their cells. The trichocysts are used to hold the food in place while the paramecium digests 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.

Comprehension Question

Describe how amoebas and paramecia interact with their world.

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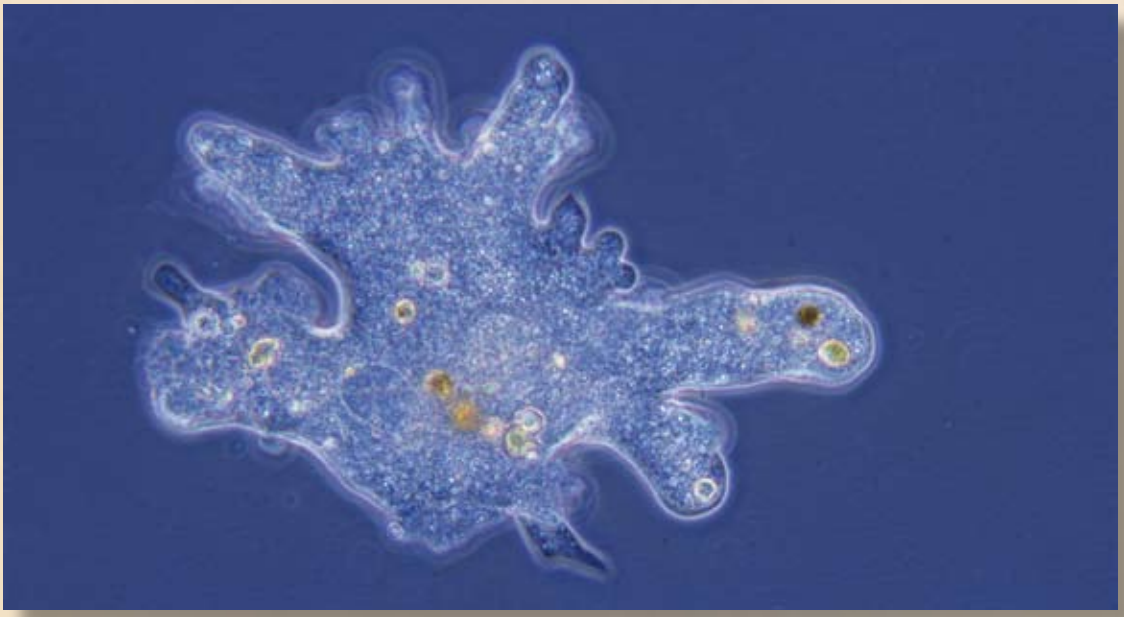
Microscopic Behavior

Protozoa are tiny organisms that behave like little animals. They swim around and hunt other microbes, especially bacteria, for food. Protozoa are single-celled organisms. They take in food through the tissue of their cells and through pores. There are more protozoa in the world than any other kind of organism. Two kinds are amoebas and paramecia.

Amoebas

Amoebas are microscopic organisms, about the size of the head of a pin. They are one of the simplest protozoa. Amoebas live in rivers and ponds, typically on the leaves of plants that live in water.

The amoeba cell is made of a liquid with an outer membrane to hold it together. Amoebas take in water and oxygen through tiny holes in their cell membranes. They absorb food through their membranes because they do not have mouths.



Because it is made of liquid bound by a membrane, the shape of the amoeba changes all the time as it moves. The amoeba is known for its pseudopods, or "false feet." These are extensions of its body it uses to move and eat. The amoeba sends these feet in the direction it wants to move, and then its fluid-filled body follows after.

Floating in the middle of the cell, the nucleus works as the amoeba's control center. An amoeba reproduces by dividing its nucleus and then separating the rest of the cell into two parts. If the cell were to split before the nucleus did, the half without the nucleus would die.

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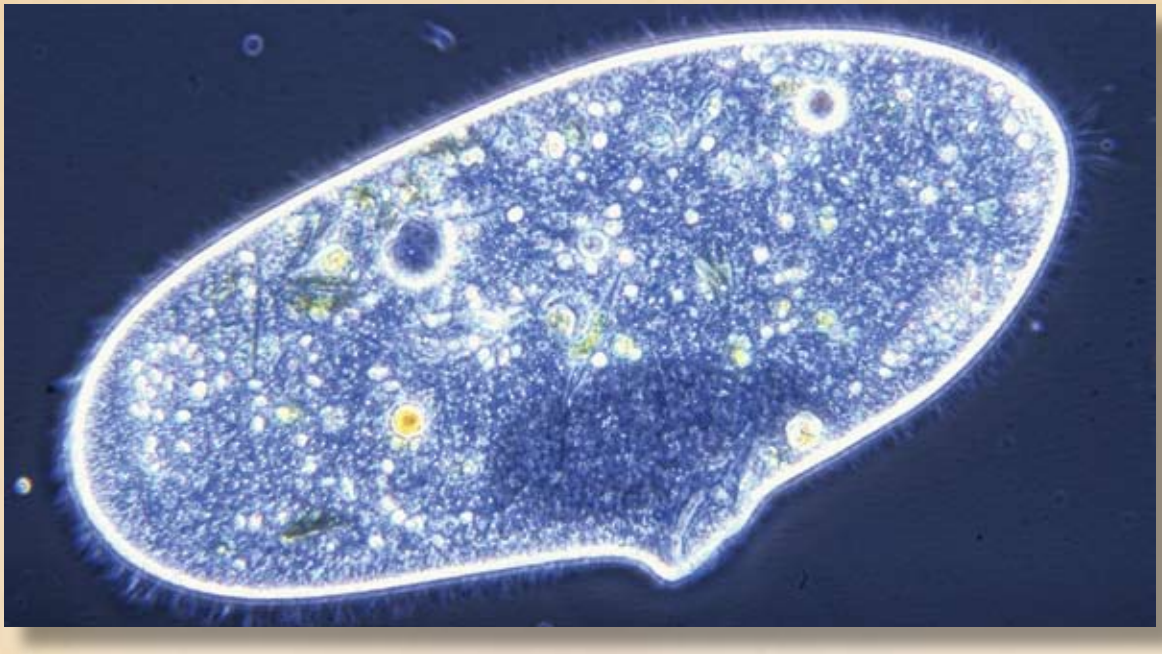

Paramecia

The most common protozoa is the paramecium. While it is very small, you can actually see paramecia without the use of a microscope. They are big enough that you can see them in water with the naked eye. The paramecia look like gray specks.

These creatures are quite complex. Paramecia are able to move away from extreme temperatures and chemicals. If they eat something dangerous or toxic, they will know to avoid it in the future.

Paramecia possess some interesting organelles inside their cells. At each end of their slipper-shaped bodies, they have a star-shaped vacuole, which is like a storage chamber. The freshwater in which paramecia live can enter into their bodies. This is normal, but it must be controlled. The pressure could cause the protozoa to burst. The vacuoles pump out water and waste to prevent this.

Paramecia also have structures throughout their bodies called trichocysts, which look like rods. They give the protozoa its shape. Paramecia eat by pulling other organisms inside their cells. The trichocysts hold the food in place while the paramecium digests 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.

Comprehension Question

Describe how protozoa interact with their environment.

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