Stentor Encyclopedia Article

Stentor

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Stentor

Stentor is a genus of protozoan that is found in slow moving or stagnant fresh water. The microorganism is named for a Greek hero in the Trojan War, who was renowned for his loud voice, in an analogous way to the sound of a trumpet rising up over the sound of other instruments. The description is fitting the microorganism because the organism is shaped somewhat like a trumpet, with small end flaring out to form a much larger opening at the other end. The narrow end can elaborate a sticky substance that aids the protozoan in adhering to plants. At the other end, fine hair-like extensions called cilia beat rhythmically to drive food into the gullet of the organism. The various species of stentor tend to be brightly colored. For example, *Stentor coeruleus* is blue in color. Other species are yellow, red, and brown.

Stentor are one of the largest **protozoa** found in water. As a protozoan, *Stentor* is a single cell. Nonetheless, a typical organism can be 2 mm in length, making them visible to the unaided eye, and even larger than some multi-celled organisms such as rotifers. This large size and ubiquity in pond water has made the organism a favorite tool for school science classes, particularly as a learning tool for the use of the light **microscope**. In particular, the various external and internal features are very apparent under the special type of microscopic illumination called phase contrast. Use of other forms of microscopic illumination, such as bright field, dark field, oblique, and Rheinberg illumination, can each reveal features that together comprise a detailed informational picture of the protozoan. Thus, examination of stentor allows a student to experiment with different forms of light microscopic illumination and to directly compare the effects of each type of illumination of the same sample.

Another feature evident in *Stentor* is known as a contractile vacuole. The vacuole functions to collect and cycle back to the outside of *Stentor* the water that flows in to balance the higher salt concentration inside the protozoan. Careful observation of the individual protozoa usually allows detection of full and collapsed vacuoles.

For the student, fall is a good time to observe *Stentor.* Leaves that have fallen into the water decay and support the growth of large numbers of **bacteria**. These, in turn, support the growth of large numbers of stentor.