



An individual diatom cell from a prepared slide, viewed under 10x objective magnification. The length and width of this specimen are 100 micrometers and 20 micrometers, respectively. Among a small sample of diatoms on this slide, the average length and average width were 89 micrometers and 74 micrometers, respectively. Similar to *Elodea* and *Paramecium*, diatoms are eukaryotic, with the nucleus being visible as a dark blue splotch in the interior of the cell. A structural similarity with *Elodea*, but not with *Paramecium*, is the presence of a rigid cell wall; however, unlike *Elodea*, this cell wall is composed of silica. Another commonality with *Elodea* and not *Paramecium* is that this organism, as a kind of algae, is photosynthetic. Similar to *Paramecium* and not *Elodea*, diatoms are unicellular. Because the specimen was dead at the time of observation, its movement or lack thereof was not observed. This cell was roughly the same size as that of the other organisms, although other cells on the slide were smaller or larger.

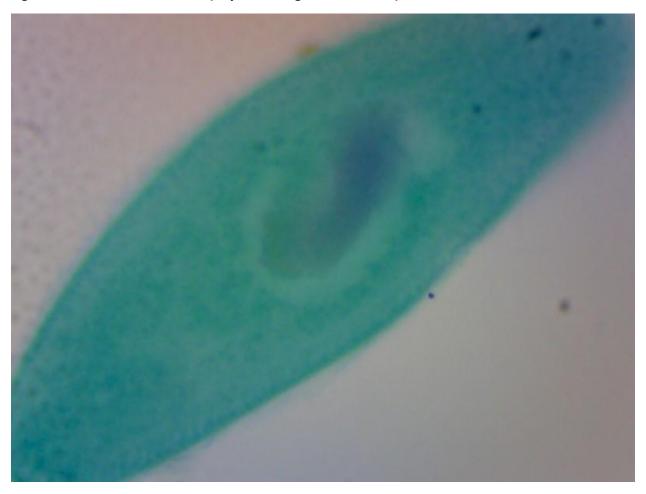
Figure 2: Living *Elodea* (Objective Magnification = 10x)

A collection of living *Elodea* cells from a wet mount, viewed under 10x objective magnification. Average length was approximately 140 micrometers; average width was 50 micrometers. Similar to diatoms and *Paramecium, Elodea* cells are eukaryotic, although their nuclei are not clearly visible in this image. Similar to diatoms, but not to *Paramecium, Elodea* cells exhibit a rigid cell wall, although unlike diatoms, this cell wall is not composed of silica. Another similarity with diatoms and not *Paramecium* is that *Elodea* is photosynthetic, although unlike the diatom pictured in figure 1, chloroplasts are clearly visible in these cells. Unlike the other two specimins, *Elodea* is multicellular. Movement was observed within the cells, as the chloroplasts would move on ocassion, but the cells themselves were stationary. These cells are roughly of the same dimensions as all of the other cells pictured.

Figure 3: Living *Paramecium* (Objective Magnification = 10x)

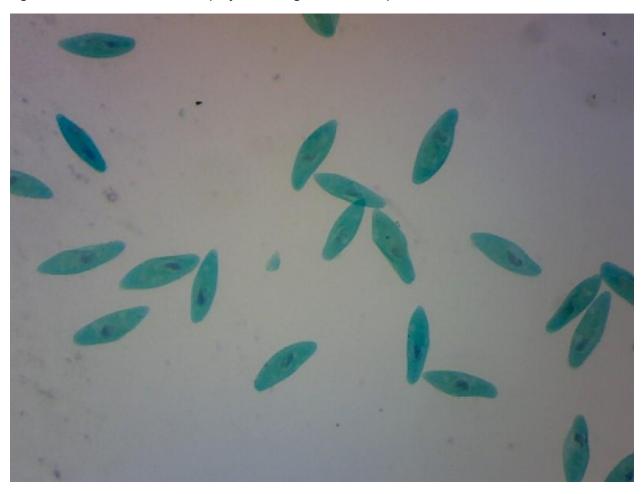
A pair of *Paramecium* cells from a wet mount, viewed under 10x objective magnification. Dimensions are addressed by another figure. Similar to the other two organisms, *Paramecium* cells are eukaryotic, although their nuclei are not clearly visible in this image. Unlike the other two organisms, *Paramecia* do not have rigid cell walls, and they are heterotrophic rather than photosynthetic. Similar to diatoms, but not to *Elodea*, *Paramecium* is unicellular. The cells in this image were very motile; they would never stay still for long, and were capable of rotation and short bursts of movement along their lateral dimension.

Figure 4: Deceased *Paramecium* (Objective Magnification = 40x)



Deceased *Paramecium* cell from a prepared slide, viewed under 40x objective magnification. The length of this specimen (measured at 10x rather than 40x) was 145 micrometers; the width was 40 micrometers. This means that the *Paramecium* cells were roughly the of the same dimensions as the other cells pictured in this document. Note the dark blue splotch in the cell's interior. This is the cell's nucleus, and indicates that *Paramecium*, like the other organisms, is eukaryotic.

Figure 5: Deceased *Paramecium* (Objective Magnification = 4x)



Deceased *Paramecium* cells viewed at 4x objective magnification. This is a supplemental figure.