



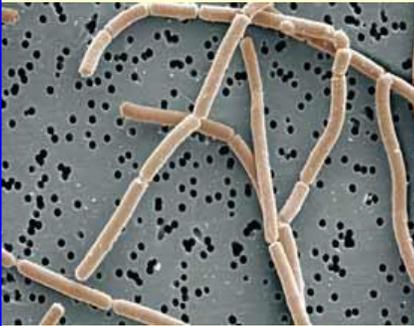
**Kingdom: Monera - Bacteria**  
***Clostridium botulinum***



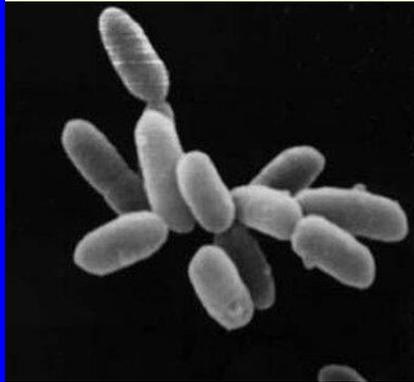
**Kingdom: Monera - Bacteria**  
***Anabaena* - Blue-Green Algae**



**Kingdom: Monera- Bacteria**  
***Borrelia burgdorferi***



**Kingdom: Monera -Bacteria**  
***Lactobacillus delbrueckii***



**Kingdom: Monera -Archaea**  
**Archaea**



**Kingdom: Monera- Bacteria**  
***Yersinia pestis***

### ***Clostridium botulinum***

**Habits:** free-living, sometimes toxic to animals

**Habitat:** found in soil, contaminated food.

**Energy source:** nutrients

**Reproduction:** binary fission, and form resilient spores

**Interesting facts:** These bacteria live without oxygen. They can produce nerve toxins that cause "botulism." Botulism in humans is usually caused eating contaminated food. "Botox" anti-wrinkle treatments use the toxins.

### ***Anabaena*** ***Blue-green algae***

**Habits:** free-living, sometimes toxic to animals

**Habitat:** lakes with high levels of nutrients

**Energy Source:** sunlight

**Reproduction:** binary fission, and form resting cells that can survive many years

**Interesting facts:** Certain *Anabaena* produce a nerve toxin that can poison land animals, and is not easily eaten by animals in the water. *Anabaena* can form huge algal blooms that turn lakes green and choke lake life.

### ***Borrelia burgdorferi***

**Habits:** a disease-causing pathogen

**Habitat:** deer ticks, blood and tissues of mammals (including humans)

**Energy Source:** nutrients

**Reproduction:** binary fission

**Interesting facts:** The bacteria can be given to mammals through the bite of a deer tick, and causes a disease called Lyme Disease. The bacteria move through the bloodstream by twisting along like corkscrews.

### ***Lactobacillus d. bulgaricus***

**Habits:** free-living

**Habitat:** A warm lactose-based environment such as milk

**Energy source:** Lactose sugar

**Reproduction:** binary fission

**Interesting facts:** This bacterium is used in yogurt culture because it turns sweet-tasting lactose sugar into sour-tasting chemicals like lactic acid. Doctors say that eating yogurt with these bacteria in it improves the health of our digestive system.

### ***Archaea***

**Habits:** free-living

**Habitat:** most live in extreme environments: mineral-rich and above boiling point

**Energy source:** different  
*Archaea* use carbon dioxide, nitrogen gas, or hydrogen sulfide gas

**Reproduction:** binary fission

**Interesting facts:** some can live deep underground in under high pressure above 200 atmospheres. *Archaea* are very different from other single-celled creatures and are likely the oldest life-form on Earth.

### ***Yersinia pestis***

**Habits:** a disease-causing pathogen

**Habitat:** fleas, rodents, and humans are hosts.

**Energy source:** nutrients

**Reproduction:** binary fission

**Interesting facts:** The Black Death in the Middle Ages was caused by these bacteria. The disease is also called "the plague." The bacteria can avoid and destroy white blood cells, and reproduce in huge numbers, causing death within a week. Luckily, today there are lots of medications to cure plague.