IDENTIFICATION GUIDE:

Dinoflagellates

fact sheet



Description:

Dinoflagellates are microscopic and single-celled. Each cell has two whip-like tails called flagellae that allow it to swim in a whirling motion. Sizes and shapes vary a great deal within the group.

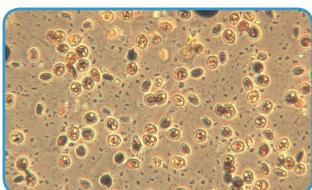
Habitat:

The species *Prorocentrum minimum*, *Heterocapsa triquetra* and *Katodinium rotundatum* are common in North Carolina's brackish rivers and creeks when water temperatures are cold. They are found worldwide in temperate and tropical waters. They may turn water pink, orange, or brown.

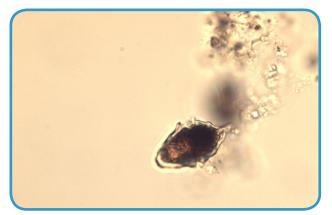
Significance:

All three species tend to grow at high concentrations (bloom) during winter and spring in North Carolina's brackish coastal rivers in response to nutrient enrichment. Most blooms are harmless, but there are occasional exceptions. Some freshwater species of dinoflagellates may cause taste and odor problems that have been described as fishy or septic. A few marine species can cause "red tides" that discolor large patches of water. The actual color of the red tide can range from red to reddish-brown to yellow. Red tides have occurred on almost all shores in North America. The only notable red tide off the North Carolina coast occurred during November 1987. This red tide was transported to North Carolina from Florida by the Gulf Stream due to a number of unusual weather conditions. Red tides are sometimes toxic and humans can become ill from

eating shellfish collected from affected waters.



Prorocentrum minimum



Heterocapsa triquetra



Heterocapsa triquetra - Winter bloom