

# Mahogany Tide Found in the South River

Last Week, several Federation members reported reddish-brown water in Pocahontas Creek and Church Creek. Federation staff delivered samples from both creeks for analysis to the Maryland Department of Environment which determined the discoloration resulted from a "very large bloom of *Prorocentrum minimum*" (over 100,000 cells/mL). The samples from the two creeks also contained *Karlodinium veneficum*. Both *P. Minimum* and *Karlodinium* are bloom-forming dinoflagellates. The MD Dept. of Environment further noted that "a bloom of this biomass is something to watch."

Both algae flourish in nutrient over-enriched waters. Perhaps not coincidentally, Pocahontas Creek and Church Creek have both seen large sediment escapes from construction projects in recent months which have contributed large volumes of nutrients to these creeks. Please alert the Federation if you see any mud floods or discolored water near you and we will ensure that the proper authorities are notified.

Our research on the *P. Minimum* algae reveals that "shellfish toxicity with associated human impacts has been attributed to *P. minimum* blooms from a variety of coastal environments" [including the USA] and "Detrimental ecosystem effects associated with blooms range from fish and zoobenthic mortalities to shellfish aquaculture mortalities" The Department of Natural resources refers to *Karlodinium veneficum* as the "fish-killer" because it produces five varieties of ichthyotoxins which resulted in fish kills in the Middle, Gunpowder, and Bird Rivers in recent years. Thankfully, no evidence of fish kills has surfaced in the South River so far.

The creek samples described above were taken on April 26 and 27, but sampling by MDE today, May 1st, 2018 reveals that the two algae types are still persisting even in the River mainstem off Cedar Point and above the Rt 2 bridge at concentrations that indicate a bloom.

**Mahogany Tides can be subtle. At first glance, they look like muddy water after a rain, but the color is a little orange/red to be caused by dirt.**

Here is a photo of what may be mahogany tide, as seen in Bellport Bay in Virginia, on Thursday, May 26, 2016. Photo Credit: Newsday / Thomas A. Ferrara

