

# Discussion points from our BO outline

2) *Detecting blooms of certain phytoplankton type:*

*What blooms can be differentiated / which ones are challenging with multi- but may be detected with hyperspectral?*

*Which ones are useful for water quality, eutrophication, fisheries stock assessment, other applications?*

*How do these blooms fit into Phytoplankton Functional Type categories?*

*Would it be useful if the community comes to consensus on a “minimum” list to attempt to be retrieved globally with sufficient accuracy? – e.g. see list at PACE website*

## *The Mighty Phyto Roster*

*Alexandrium tamarens* - Eat shellfish? Watch out for this phyto!

*Chaetoceros debilis* - Very common and potentially harmful

*Dinophysis species* - Steals pigments and can be toxic!

*Emiliania huxleyi* – “Hubcaps” help reduce carbon dioxide

*Microcystis species* – Freshwater species that is harmful

*Myrionecta rubra* – Dense bloomer that can turn waters red

*Phaeocystis species* - Helps form clouds and beach foam

*Prochlorococcus species* – Tiniest phyto is a huge primary producer

*Protoperidinium divergens* - Deadly beauty? Can be toxic and glow

*Rhizosolenia species* – Moves nitrogen from depth to surface

*Synechococcus species* - Thrives where other phytos fail

*Trichodesmium species* - Key source of nitrogen for food web