

## Bachelor Thesis project at IOW:

### Temporal distribution and viability of ancient toxic Cyanobacteria in “sediment archives” from the Baltic Sea

#### Background

Within DFG funded project Cya-ReMo (Cyanobacteria under Climate Change: looking into the past to predict the future through Resurrection, Evolution and Modelling) we are seeking an enthusiastic Bachelor's student to analyse cyanobacteria resting stages in sediment cores from the Baltic Sea. The aim of this thesis is to gain information on the long term history of cyanobacteria in the Gulf of Finland and the Gotland Basin. Therefore, **the vertical distribution of cyanobacteria resting stage (akinete) will be determined in laminated dated sediment cores reaching approximately 6000 years back in time.** The data will be used to hind-cast cyanobacterial blooms of the past. The work will support the Cya-REMO project which investigate Baltic Cyanobacteria under the impact of **climate change** and anthropogenic influences.

#### Tasks

- Processing of sediment material from Gulf of Finland and Gotland Basin cores
- Microscopic determination of akinete concentrations cope using different staining techniques (e.g. Fluorescence, DNA-staining)
- Data analysis and interpretation in context with published research related to the topic

#### Requirements

- Basic knowledge of marine environment (Baltic Sea) and microalgae
- Interest in cyanobacteria blooms and the Baltic Sea ecosystem
- Familiarity with english literature search and interest in exploring old records (<1950)

#### Further Information

The thesis is to be started at the next possible date. The thesis project is placed in the Phytoplankton Ecology group, led by Dr. Anke Kremp, at the Department of Biological Oceanography, IOW

<https://www.io-warnemuende.de/phytoplanktonoekologie.html>

#### You are interested?

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