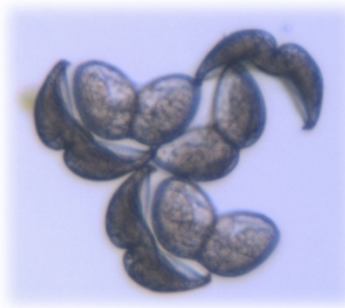




UNIVERSITY OF BERGEN

Cultivation of freshwater pearl mussels (*Margaritifera margaritifera*)

Per Jakobsen and Ragnhild Jakobsen



Breeding station, Austevoll, Norway



Naturally infested fish by electrofishing



Artificial infestation of fish



Glochidia from field



Stem mussels at the breeding station

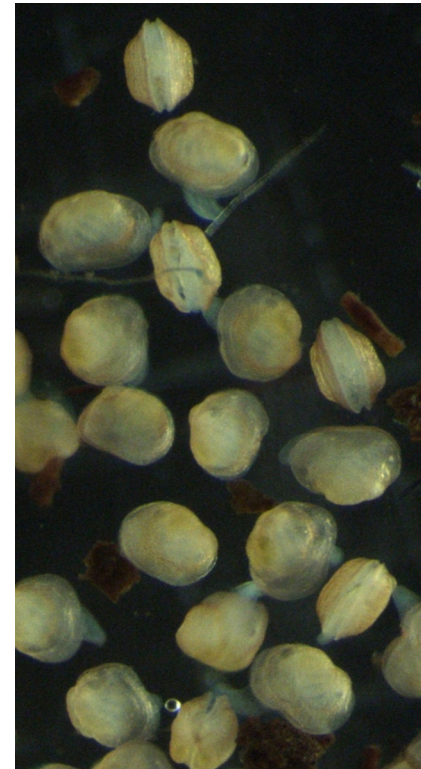


Infestation of fish

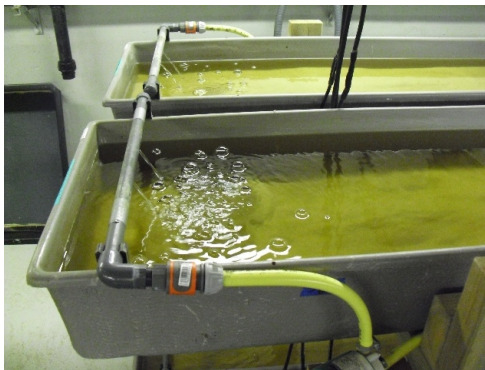




Collection of juvenile mussels



Rearing of juvenile mussels



Quality of water source not sufficient anymore. P/N Ratio = 1/7



Blooms from April to Desember – Includes Planktotrix spp., *Cylindrospermopsis* spp., *Anabaena* spp., *Aphanizomenon* spp., Produce large amounts of Microcystin (Hobæk NIVA), but not yet registered neurotoxins.



The worst sinner Planktotrix spp.

From 2011 to 2017

Survival of young mussels (< 2mm) decreased steadily from 95 % to 0.04 %

(Correlated to number of sleepless nights)

- Indications of a poor waterquality
- In Olden water- survival high
- In Wales and Newcastle identical methods adopted-good results
- Mortality mostly due to fungal infections and diffuse mortality
- Increased deformation of small mussels
- Increased mortality of larger mussels
- Decreased filtration rate- reduced production of glochidia
- Pseudofeces cyanobacteria

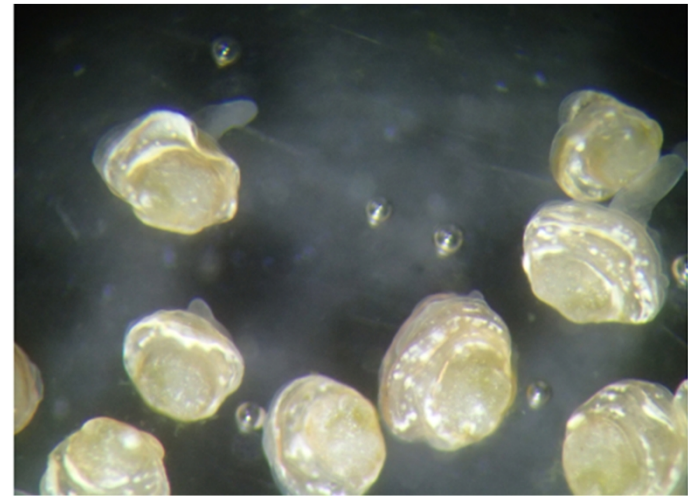
Treatment of water intake



2018 – Increased survival- but still deformations,
high diffuse mortality, and decreased growth



2013



2018

Water-treatment started to late in the season

- Mussels were heavily exposed to large amounts of blue greens in the harvest sieves
- Exposure to Microcystin until the beginning of September- Less fungal problems- but deformations of small mussels
- The permanent water treatment not finished before end of October.
- We hope this will solve most of our problems with small mussels

Release — preliminary results



Thank you!

