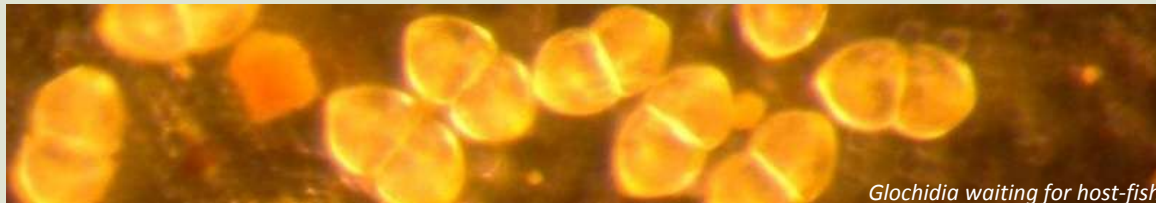


BENDING RIVERS BY MUSSELS



Kids having fun(?) sampling @ Fyleån Creek

FOR THE BENEFIT OF ALL



Glochidia waiting for host-fish

OUTLINE...

- The project
- Objectives
- Results and achievements
- The Fyleån Creek
- The thick shelled river mussel (*U. crassus*)



THE UC4LIFE PROJECT (2012 – 2016)



Restoration



Scientific approach



Re-introduction

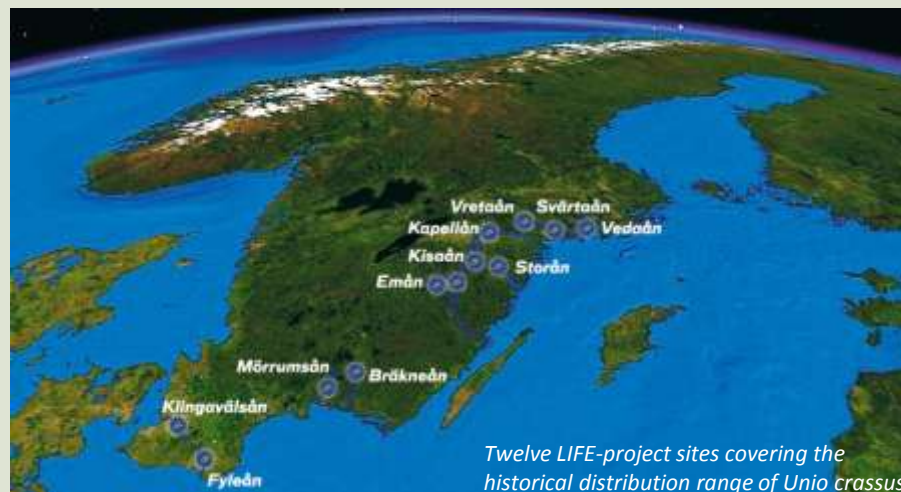


Monitoring and information



@ twelve sites

- Site specific measures
- Habitat enhancements
- Migration barriers
- Re-introduction
- Information and Dissemination



Twelve LIFE-project sites covering the historical distribution range of Unio crassus

ONE VERY CLEAR OBJECTIVE...



Dead organic matter (Cladophera) @ the Österlen shoreline

A healthier Baltic Sea by landbased measures...

- Water quality improvements
- Increased biodiversity
- *Knowledge (by science)*
- *Public understanding...*
- *Catalyst...*
- *The Baltic Sea as the platform...*



THE MOST POLLUTED SEA IN THE WORLD



Eutrophication:

- Algal blooms
- Oxygen deprivation (>15%)
- Fish population collapses
- Loss of ecosystem services

Acidification, toxins ...

Cocktail effect (?)

Meny | **sverigesradio** | Q S

PM

Vetandets värld

Start | Lyssna på program | Kontakt | Textarkiv

Fisken flyr från Hanöbukten



Näringslivet i Östergötland. Foto: Therese Forsberg

Något har hänt med ekosystemet i Östersjöns grunda vatten. Ett exempel är Hanöbukten, där fisken inte längre trivs och har flyttat ut på djupare vatten. Det småskaliga yrkesfisket är hotat och myndigheterna konstaterar att den vanliga miljöövervakningen inte räcker till.

▶ LYSSNA (20 MIN)

⬇ LADDA NER (20 MIN, MP3)

➔ DELA LÄRDET

LANDBASED SEA PROBLEMS



Fyleån Creek, pre-restoration conditions

Fyledalen Valley was drained during the thirties (to gain agricultural areas):

- Changes in hydrology (faster discharge and dryer floodplain conditions)
- Negative impact on habitats, biodiversity and water quality
- Negative impact on the Baltic Sea



Floodplain restoration was initiated 2013

THE FYLEÅN CREEK PROJECT (2013)



The objectives were to recreate the hydrological regime, habitats and connectivity...

Concrete achievements:

- Re-meandering (5 km, 1 km longer today)
- Rising the groundwater level (70 ha)
- Restored wetlands, 9
- Opening up tribs, 4
- Habitats suitable for *U. crassus*
- Re-introduction of *U. crassus*, previously extinct



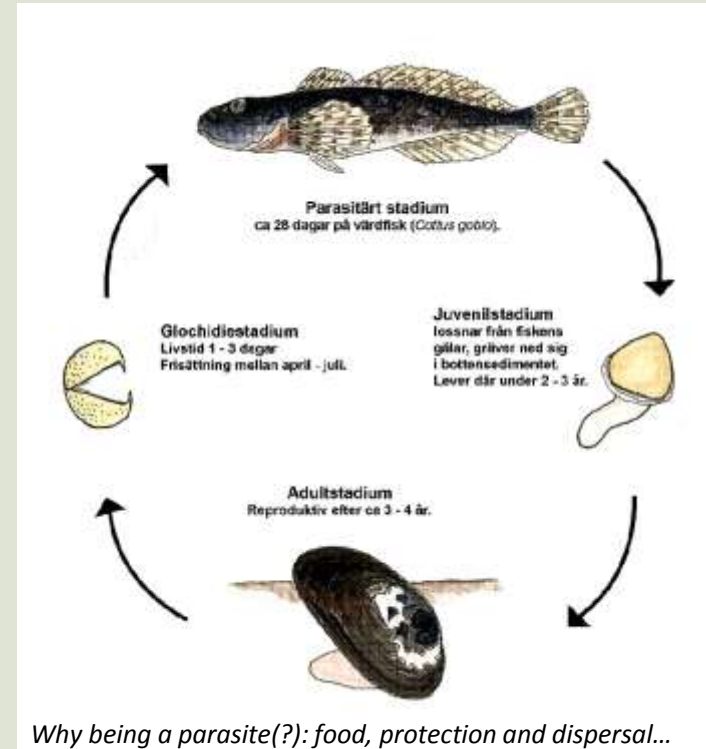
CRACKING THE UNIO CRASSUS LIFE CYCLE ENIGMA



1) Functional species, river specific ?



2) Farming methods ...



RE-INTRODUCTION OF UNIO CRASSUS (2013 – 14)



Unio crassus stocked in enclosures @ Fyleån Creek

80 000 glochidia (200 infected fish)
2 600 juveniles (Schneider boxes)
600 juveniles (control)



Crassus dancing

Survival rates after transplantation are monitored

**The
movie**

THE RETURN



Long term objective is a reproductive *Unio crassus* population in less than 10 years...

Brown trout (*Salmo trutta*) and white stork (*Ciconia ciconia*), previously extinct, have returned to the Fyleån area.



WHY FOCUSING ON A MUSSEL?



- A symbol / indicator for a healthy environment
Unio crassus = clean water = healthy kids
- Huge historical distribution, today threatened
- Filter the water (40 l/day) reducing nutrients
- Long lived, complex lifecycle...
- A good pedagogue



European Parliament Member I. Löwin
@ Fylan opening ceremony in May 2014

CONCLUSIONS



YES - BENDING RIVERS BY MUSSELS MIGHT JUST WORK(?)...

The work at Fyleån Creek is promising and a interesting case study to follow...

Methods for re-introduce *Unio crassus* seems to work, so far so good...

Restoration at the Klingavälsån River on-going (similar approach)

UC4LIFE-project approach replicable in other areas?

Huge interest for the project and a lot of spin-offs

THE UC4LIFE GANG



“Action speaks louder than words but not nearly as often”



WWW.UCFORLIFE.SE

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