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earls in Peril LIFE+GB Project – Afon Eden,

The Freshwater Pearl Mussel

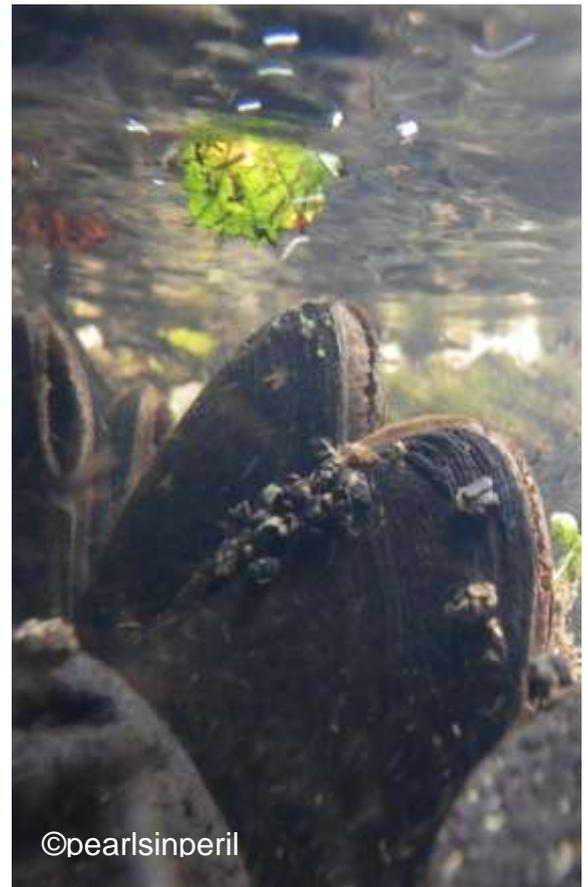
(*margaritifera margaritifera*)

The freshwater pearl mussel is one of the longest lived invertebrates known, and can live for more than a 100 years. Formerly widespread and abundant in the UK, its numbers have severely declined with most former populations now virtually extinct.

The decline in pearl mussel population is due to a number of factors:

- Habitat degradation caused by sedimentation of river gravel.
- Historic pearl fishing.
- Pollution and water quality deterioration.
- River channelization work.
- Change in riparian land use.

The pearl mussels in the Eden are one of the last surviving populations in Wales. Action is needed to secure a future for this population.



The Afon Eden's Freshwater Pearl Mussels.

The pearls in peril project aims to :

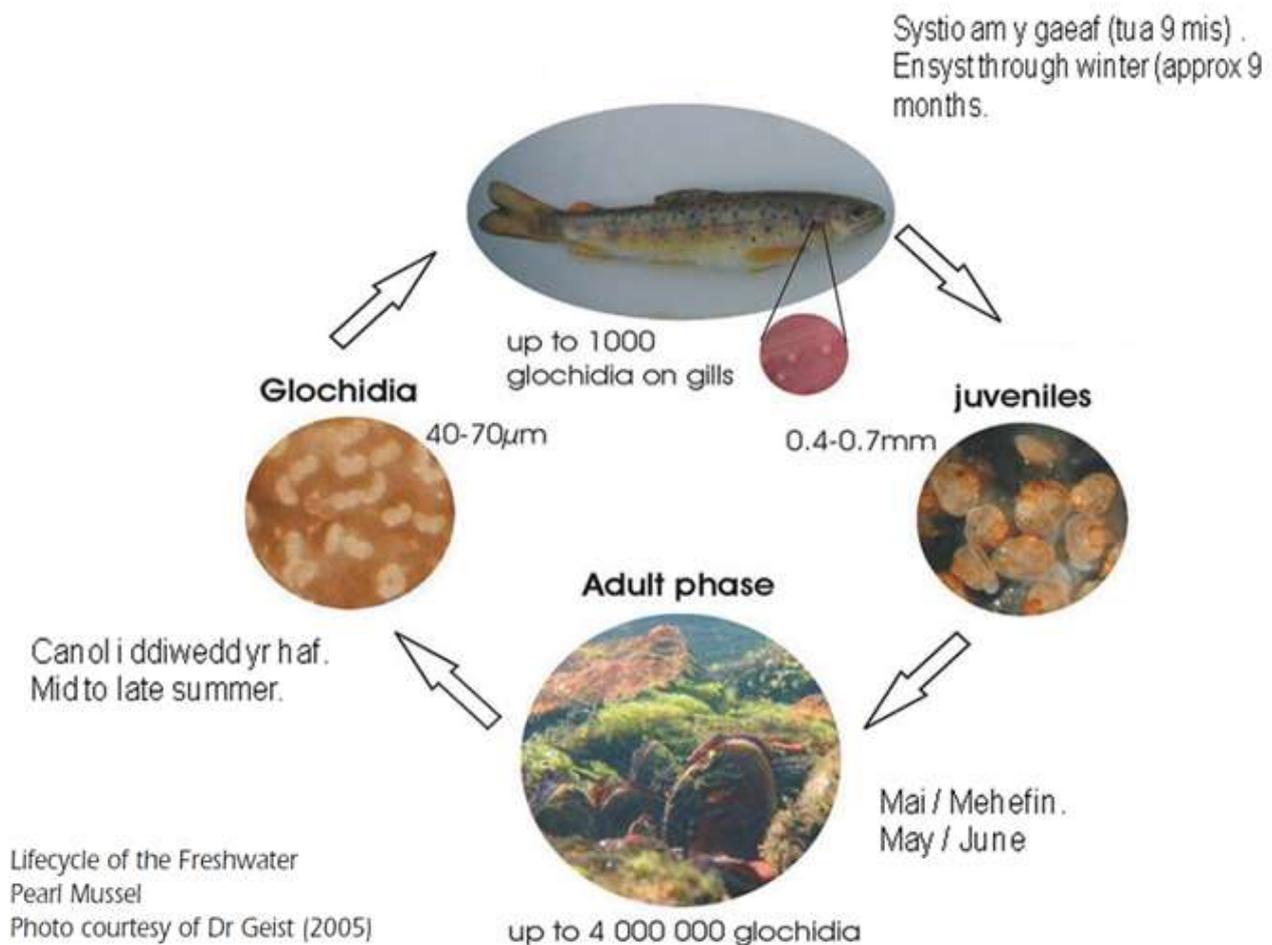
RESTORE the habitat of freshwater pearl mussel and salmonids.

SECURE the long term survival of existing freshwater pearl mussel populations.

COMMUNICATE with local, national and international audiences to raise awareness of freshwater pearl mussel conservation issues.

The Life Cycle of the Pearl Mussel

The lifecycle of the Freshwater Pearl Mussel is very complex and also very unusual. The male pearl mussels release sperm into the water, which is then filtered by the females. The eggs are fertilised, and develop in the female's breeding pouch before being released as larvae (also known as glochidia). These larvae are then washed downstream by the river, and if they are lucky they attach themselves onto the gills of young salmon or trout. Only 4 in each million will succeed to encyst onto a fish. The young mussels develop on the gills of the fish for approximately nine months, before dropping off into the gravels. They then grow in the river bed and develop into juvenile pearl mussels. The juvenile mussels take about 15 years to mature, and during this time they are very sensitive to pollution and sedimentation.



Improving the Riparian Habitat

The Brynteg forestry block is having a significant negative impact on the Afon Eden SAC. Therefore work has begun here.

Gwasanaethau'r Cwm have finished removing the unintended conifer regen. These was considered essential to remove as they are and would continue to dominate the regeneration and it would not reach the native broadleaf and bog habitat that is desired to aid the FWPM.

Ditches will be blocked here and ponds will be created to reduce the amount of sediment that enters the Afon Eden.



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S.E.Metcalf & co are currently stock-proofing the forestry block to ensure that the native trees will be able to reach broadleaf maturity.

Pearls in the classroom



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Through a classroom project we aim to raise awareness of the freshwater pearl mussel with children in local catchments, as well as highlighting the species' important cultural history in Britain. We will teach primary school children about its unusual lifecycle, its habitat requirements, and about threats to the species' survival

An adult mussel can filter 50 litres of water a day, having a significant positive impact on the river ecosystem and also on the health and populations of salmonids.

Proposed Conservation Actions

- Improve the river habitat through gravel seeding, boulder & woody debris replacement.
- Reduce nutrient and sediment input from diffuse pollution sources
- Monitor the changes in FWPM & Salmonid populations, changes in water quality, encystment levels.

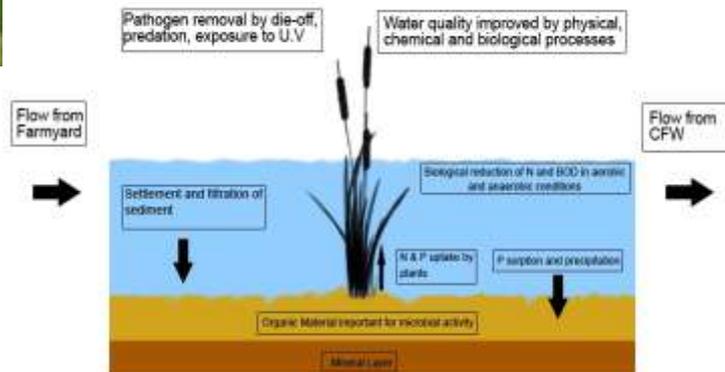
Constructed Farm Wetland – Benefits



- Treating different types of contaminated surface water run-off from farmyards before discharge into watercourses.
- Flexible and versatile

- Simple to build
- Safe for farmers and the public
- Minimized odours
- Provide habitats for birds and amphibians

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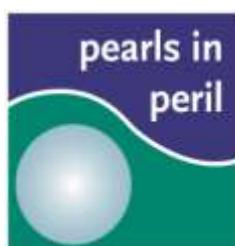


Funding

Funds are available for farmers and landowners to :

- Create wetland / settlement ponds to reduce farm pollution
- Block ditches

Please contact the Project Officer for details.



If you would like to discuss funding opportunities or would like any further information about the project, please contact:

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