

## Freshwater Pearl Mussel Conservation in the Shropshire Hills

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Thought to be part of a family that has been around for 200 million years, capable of living well over 100 years and having a unique life cycle, the freshwater pearl mussel is a truly remarkable creature.

A holarctic species, it is threatened throughout its range. Classified by IUCN as endangered, it is listed on annexes II and V of the EU Habitats Directive. Formerly widespread in UK Rivers, the freshwater pearl mussel is now found in only a small number of English rivers including the River Clun.

The pearl mussel has a complex life cycle: during late summer, females release millions of larvae in a synchronised event. To survive, the larvae, known as *glochidia*, have to be inhaled by juvenile brown trout or Atlantic salmon. Some will attach (encyst) to the gills of the fish, and in this oxygen-rich environment they grow, until after about 9-11 months and when about 0.4mm long, the *glochidia* detach and descend to the riverbed. Most will perish if they fall onto unsuitable substrate, but some will establish in stable sandy, gravelly riverbeds, and in a healthy river may live for many years.

Unfortunately, the Clun has seen little recruitment of young in recent decades and, in common with other rivers in the UK, the Clun population has suffered a steady decline. Causes for decline are many, but the principal reasons are siltation of riverbeds and eutrophication of waters. Recognising that without swift action, one of the most important populations in southern England might be lost, a coalition headed by Environment Agency, Natural England, The Teme Catchment Sensitive Farming Initiative and the Shropshire Hills AONB Partnership has been formed. Together, we are working with farmers and other organisations to address the issues causing the decline of this important species.

Funded by Environmental Stewardship schemes, farmers throughout the catchment are establishing riparian buffer strips to help intercept runoff, improving stockyards and farm tracks to minimise dirty water, and installing alternative stock watering facilities.

Reversing the decline may take some years; however, the longevity and fecundity of pearl mussels provides a window of opportunity to conserve the Clun pearl mussel. As part of a national captive breeding programme, the Environment Agency has taken a number of adult mussels and placed them in a local hatchery, rearing juvenile pearl mussels for latter reintroduction when conditions in the Clun improve.

Demanding the highest water quality, the future of pearl mussel is inextricably linked to the survival of other species. By improving for pearl mussel habitat, a host of other aquatic species will benefit.

For more information regarding this project, contact Mike Kelly at the Shropshire Hills AONB Partnership.

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