# River Meon – Moorhen Fishery, Warnford

**An advisory visit carried out by the Wild Trout Trust – October 2009**

## 1. Introduction

This report is the output of a Wild Trout Trust advisory visit undertaken on the River Meon at Warnford. The advisory visit was undertaken at the request of Mr. and Mrs. Rogers who own a short section of the Meon, which runs adjacent to their stocked stillwater trout fishery (Moorhen Trout Fishery). The owners realise that the Meon is a very small stream at this location and that it may only have very limited potential as an angling resource. They are very keen, however, to manage the river in a way that will enhance its conservation and fishery value.

Comments in this report are based on observations on the day of the site visit and discussions principally with Mr. and Mrs Rogers. It should be noted that at the time of the site visit in October, the river had been suffering from severe drought conditions. As a result the Meon at Warnford had virtually stopped flowing, with obvious consequences for the river's ecology and habitat quality.

Throughout the report, normal convention is followed with respect to bank identification i.e. banks are designated Left Bank (LB) or Right Bank (RB) whilst looking downstream.

## 2. Catchment overview

The River Meon rises from the Hampshire chalk aquifer near the village of East Meon and flows south for approximately 37km before entering the sea at Hill Head. The river enjoys a steep gradient for a chalk river, falling approximately 120m from source to sea. The river flows over deposits of Lower Chalk which is less permeable than the Upper Chalk geology predominantly found in the rest of the East Hampshire. As a result the Meon tends to have a greater flow range compared to other southern chalk streams.

For much of its length the river displays the classic chalk stream characteristics of clear water, low soft margins and an abundance of in-channel macrophytes dominated by water crowfoot (*Ranuculus aquatilis),* starwort (*Calltriche stagnalis)* and water moss (*Fontinalis antipyretica).* As with most chalk rivers the channel is heavily modified and in-channel habitats are heavily influenced by the numerous structures and milling impoundments found throughout its length.

Fishery surveys undertaken on the Meon conducted by the Environment Agency (EA) have concluded that the river Meon is "a productive brown trout river". The Meon is also noted for a strong run of sea trout although they are rarely targeted by anglers on this system and rarely penetrate upstream as far as Warnford.

## 3. Fishery overview

The section of the Meon adjacent to the Moorhen fishery is ephemeral in nature with the river occasionally drying up following prolonged drought conditions. The river does not uniformly dry from the source downstream to a point where the river begins to flow, rather there are dry sections interspersed with flowing reaches. This is thought to be due to natural variations in substrata porosity with "perched" sections continuing to flow over less porous substrata and other sections where the river flows below ground.
Previous owners of the Moorhen fishery have attempted to "improve" the river by making the channel wider and deeper. This has, in places, led to a loss of channel definition and a river channel dominated by emergent vegetation.

Following periods of average or above average rainfall, the Meon at Warnford will support good numbers of brown trout *Salmo trutta*. Many of these fish will either be adult trout that have migrated upstream in search of spawning habitats or offspring of fish that have successfully spawned locally. Some downstream drift of juvenile trout spawned further up the system may occur following prolonged periods of stable flows. It is surprising how quickly the river will recover following a "drying up" episode with fish rapidly recolonising the river once flowing sections are reconnected.

Although there is undoubtedly a demand for small stream wild trout fishing, the length of channel available at Moorhen is very short. Even during favourable conditions it could only sustain a very limited amount of fishing effort. It could, however, provide a valuable resource by providing coaching opportunities as an introduction to small stream wild trout fishing. The lower half of the section is likely to be an important spawning and nursery site and deserves to be protected and well managed as a valuable resource for the river as a whole.

## 4. Habitat assessment.

At the time of the inspection (October) the river had virtually stopped flowing but it is believed that spawning might yet occur given the wet November and the strong likelihood that the river will have started to flow. Wild brown trout on Hampshire chalkstreams often do not spawn until December and sometimes not until January.

In-channel habitats on the bottom half of the section are quite favourable with several interconnected pools punctuated by narrow shallow gravel riffles. Some of these had ceased to function as riffles but will come back when flows return. One such site (pic1) has been narrowed using imported stone in an attempt to locally increase water velocities. These modifications will help to scour good quality spawning sites once flows return.

The channel has at some stage been heavily engineered and set down in a deeply incised channel. Marginal trees were providing some dappled shading but there was little in the way of low, water level shading which is particularly valuable on small shallow streams.

Pic 1. A section of dry channel where some stone groynes have been installed by the previous owner in an attempt to locally increase water velocities.

Pic 2. A potentially good holding pool for adult trout near the bottom boundary

At the bottom boundary of the reach there is a decent sized pool with an overhanging willow and some marginal shading. This pool will undoubtedly hold trout.

Pic 3. Wide channel choked with sweet reed, canary grass and fools cress.

The section of channel running parallel with the northern bank of the fishery has been previously excavated in an attempt to create open water habitat. This has resulted in a loss of channel definition with emergent plants smothering the entire width of the river bed (pic 3).

Re-defining a narrow flowing channel is a priority on this reach if trout populations are to return. This can be achieved through consolidating a narrow, low level channel and through a programme of sensitive weed management.

The prescription is to wait until flows return and look at the channel to see where the majority of the flow meanders once the weeds have died back. Try and consolidate all of the flow into one narrow channel (max 1m in width) by pegging in some parallel logs or tree branches into the channel to form a new low level margin. Once the spring arrives, introduce a two monthly weed cut using a hand scythe to maintain an"open" but narrow channel. This should have a gentle naturally meandering form. Work with the river rather than fighting it. Hopefully the emergents will soon be replaced with plants such as water crowfoot which can then be encouraged to funnel the flows even further and provide the necessary in-channel cover which is a pre-requisite for trout re-colonising the reach.

It was not possible to determine if any remaining river bed gravels were present in the top half of the section but if this material has been dredged out it might

be necessary to introduce fresh gravels to promote a functioning chalk stream channel.

A final touch will be to plant a few goat willows or sallows (*Salix caprea*) to promote some channel shading.

## 5. Conclusions

The Meon adjacent to the Moorhen fishery is an ephemeral chalk stream. The short length of channel available means that it has very limited value as an angling resource but it is undoubdely a valuable habitat and will at times support populations of wild brown trout.

A priority action is to establish a self cleansing, functioning channel on the top half of the reach. Maintaining a very narrow and shallow channel will help to promote a sustainable regime. Planting the occasional tree to promote shade, introducing an occasional piece of large woody debris (LWD) to promote some local scour and the creating the odd holding pool for adult trout is well worth the effort. Following a winter of average, or above average rainfall, the Meon here could provide an attractive section of small chalk stream which could be a valuable asset to the site as a whole, as well as contributing to the wider ecology of the Meon.

**It is a legal requirement that some works to the river may require written Environment Agency consent prior to undertaking any works, either in-channel or within 8 metres of the bank. Any modifications to hard defences will require a land drainage consent on any river designated as "main river". Advice can be obtained from the EA's Development Control Officer.**

## 6. Recommendations

- Re-establish a defined narrow channel on the upper half of the section by pegging in log/branch or faggot revetment.
- Maintain the channel with a programme of sensitive weed management
- Peg in the some LWD to promote vertical bed scour and plant an occasional goat willow adjacent to the area to maximise its fish holding potential.
- If, on consolidating a new channel form, there is no gravel exposed, consider importing some new angular gravels consisting of flint rejects of between 20 and 60mm in size to raise the bed and encourage broken riffle habitat to form.

## 7. Making it happen

There is the possibility that the WTT could help to start an enhancement programme. Physical enhancement works could be kick-started with the assistance of a WTT 'Practical Visit' (PV). PV's typically comprise a 1-3 day visit where approved WTT 'Wet-Work' experts will complete a demonstration plot on the site to be restored. This will enable project leaders and teams to obtain on the ground training regarding the appropriate use of conservation techniques and materials, including Health & Safety equipment and requirements. This will then give projects the strongest possible start leading to successful completion of aims and objectives.

The WTT can fund the cost of labour (two/ three man team) and materials (max £1800). Recipients will be expected to cover travel and accommodation expenses of the contractor.

There is currently a big demand for practical assistance and the WTT has to prioritise exactly where it can deploy its limited resources. The Trust is always available to provide free advice and help to clubs, syndicates and landowners through guidance and linking them up with others that have had experience in improving trout fisheries.

**Acknowledgement**

The WTT would like to thank the Environment Agency for supporting the advisory and practical visit programmes.

## Disclaimer