Cuckmere – Sussex Piscatorials

An advisory visit carried out by the Wild Trout Trust – July 2008

1. Introduction

This report is the output of a Wild Trout Trust advisory visit undertaken on the Cuckmere in East Sussex on 1st July 2008. The request for advice came from Mr Charles Bacchus from the Environment Agency who is a Fisheries Technical Specialist in the Kent and East Sussex Area. Mr Bacchus wishes to evaluate the current habitat quality of the Cuckmere and explore potential for enhancing the fishery in general. The river is known to support good wild brown trout *Salmo trutta* populations in some of the headwater streams as well as a significant numbers of sea trout.

The comments and recommendations made in this report are based on the observations of the Trust's Conservation Officer, Andy Thomas and discussions with Mr Charles Bacchus from the Environment Agency and Mr Chris Myers and Keith Russell representing the Sussex Piscatorials.

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. Description of the Fishery

The Cuckmere is an East Sussex river that rises from the greensand aquifer in the southern valley between Uckfield and Heathfield. These streams eventually meet to form the main channel, running on south through the local geology of gault and wealden clay, before cutting through the chalk downs to enter the sea at Cuckmere Haven.

The fishery inspected is under the control of the Sussex Piscatorials and starts from the road bridge below Mickleham Priory. From here the river winds its way south for approximately two miles. The river has obviously suffered from some unsympathetic river engineering in the past and also has a large Environment Agency owned weir near the bottom boundary, which potentially fragments fish populations and restricts the development of habitat features within the river channel.

The Sussex Piscatorials is a well established and progressive fishing club which actively manages a range of river and stillwater fisheries. Further information about the fishing club can be found at www.sussexpiscatorialsociety.co.uk

The Cuckmere fishery is a very lightly fished and managed water that is primarily used for coarse fishing. Although trout have been caught on this reach, most anglers fish for the chub, roach and bream that predominantly populate the deep glides and pools that characterise this stretch of river. Sea trout undoubtedly hold up on some sections prior to upstream migration but are rarely seen or caught by the anglers.

Very little good quality trout habitat was observed, with only one or two very short sections of gravel riffle habitat capable of supporting any spawning activity for reophilic fish species such as trout, dace and chub.

Environment Agency weir near the bottom boundary of the fishery. A barrier to fish migration during low flows

A thin gravel riffle. One of the few spots that could potentially support spawning activity

Throughout the whole reach the channel was deeply incised, suggesting previous dredging activity. Many sections were extremely difficult to access for angling due to the steep banks and thick stands of bankside nettle. Some of the banks were eroded suggesting that the Cuckmere can be quite “flashy” in nature with the river responding rapidly following heavy rainfall events. Shallow marginal bay habitat was at a premium and it is likely that this river is a hostile environment for juvenile fish during a significant flood event.

A nettle dominated bank on top of the deeply incised channel.

Very few in-channel macrophytes were seen on the upper half of the fishery. Where sufficient light was hitting the channel some beds of strap or ribbon weed were observed. Two different species were noted, unbranched burr reed, *Sparganium emersum* and arrow head *Sagittaria sagittolia,* which has strap like leaves as well as the more easily recognised arrow shaped leaves.

Near the bottom of the fishery where the river was excessively impounded by the weir, there were beds of broadleaf pondweed, *Potamogeton natans* and yellow water-lily, *Nuphar lutea.* These plants are usually associated with low flow or backwater habitats.

Marginal trees were scattered throughout the reach and included ash, willow and alder. The river does pass through a comparatively heavily wooded section, although this section was not inspected. Overall the reach was not considered to be excessively shaded and had a good mix of dappled light and shade hitting the channel.

Adjacent land use was mainly pasture with low density cattle grazing. Much of the RB was fenced, which has protected the banks from excessive cattle poaching with the farmer providing one or two access points for drinking. These drinking areas could potentially be enlarged and improved to provide some low flow beach habitat which is known to be favoured by a range of cyprinid fry and also provides a refuge during spate conditions.

It was noted that one field half way down the beat on the LB was planted with maize. Crops that are harvested in autumn and leave the soil bare are prone to excessive sediment runoff following heavy rainfall events. It is suggested that perhaps the fishing club might be able to influence the farmer as to which fields are cultivated this way to give the river as much protection as possible. Further information can be obtained from the local Catchment Sensitive Farming Officer. Details can be obtained via the local Environment Agency Fisheries and Biodiversity team.

The non native plant himalayan balsam was evident on several sections

An area of potential concern relates to the presence of non native plants. Himalayan balsam (*Impatiens glandulifera*) was observed on several sections of the river. It is a relative of the busy Lizzie and is known by a wide variety of common names, including Indian balsam, jumping jack and policeman's helmet. It is a tall, robust, annual producing clusters of purplish pink (or rarely white) helmet-shaped flowers. These are followed by seed pods that open explosively when ripe, shooting their seeds up to 7m (22ft) away. Each plant can produce up to 800 seeds. Himalayan balsam tolerates low light levels and, in turn, tends to shade out other vegetation, impoverishing habitats. In the autumn, the plants die back, leaving the banks bare of vegetation and vulnerable to erosion.

Currently only very small patches were observed and it is recommended that efforts are made to eradicate the plant before it spreads too widely.

These plants can be easily pulled up by hand or treated with a contact herbicide (Environment Agency consent required).

3. Conclusion

This reach of the Cuckmere supports a delightful mixed coarse fishery. Any brown trout caught here in the past are probably fish displaced from more conducive habitats found further upstream. It has very little potential for developing wild trout populations but may well be an important holding reach for migratory sea trout in the late summer/autumn period. The comparatively flat gradient and heavily incised channel would render the development of potential trout habitat very difficult. The river has, however, lots of potential for further enhancement as a mixed coarse fishery, with the occasional opportunity for intercepting migratory sea trout.

The greatest obstacle to enhancing this stretch is the large weir near the bottom boundary. It is unclear as to what function the weir performs but it is understood that the tilting mechanism is no longer operational and that perhaps the original function is no longer required. It is possible the structure was constructed to facilitate local abstraction or perhaps flood storage. If an adjustable structure is deemed unnecessary then it might be possible to remove or lower the structure and replace any impoundment that might be needed with a series of gravel riffle ramps. The benefit of the riffle ramps will be that it might be possible to create a series of spawning and nursery sites for a range of flow loving species including trout, chub and dace.

This old structure holds the key to improving fish migration and habitat quality

4. Recommendations

- This section of the Cuckmere River could be radically improved if the large impoundment on the bottom boundary was lowered or removed.

- It is likely that any proposal to remove or lower the structure will require detailed modelling and feasibility study. This should be a priority action undertaken by the Environment Agency.

- If current water levels are required to be maintained to facilitate licensed abstraction, or for flood defence purposes, then a series of gravel ramp weirs should be used to maintain the required head and also create spawning habitats for flow loving species.

- On those few sections that have potential for spawning, the substrate could be improved by importing mixed gravel rejects to augment the thin gravels currently present. Advice on riffle design, source of materials and quantities can be obtained from the WTT Conservation Officer.

- Cattle drinking areas could be enlarged and improved to provide off-line refuges for fish fry.

- The angling club should instigate a programme of non native plant control.

- Cutting and removal of marginal nettles will help to restore a more natural mix of bankside herbs and plants.

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 Development Control Officer.

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