



## **Dorset Frome – Wrackelford Estate**



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

## **1. Introduction**

This report is the output of a Wild Trout Trust advisory visit undertaken on the the River Frome in Dorset. This report specifically covers the Wrackleford Estate Waters, which are owned and managed by Mr Oliver Pope. The inspection and report includes sections of the main river Frome, the Wrackle and the Sidling brook. This report is one of a series of WTT advisory visits undertaken in conjunction with the Dorset Wildlife Trust and the Environment Agency as part of the Dorset Chalkstream Project.

During the site visit the author was accompanied by Sarah Williams from the Dorset Wildlife Trust, Mr Oliver Pope and head keeper Mr Mark Valder.

The comments and recommendations made in this report are based on the observations of the Trust's Conservation Officer, Andy Thomas and discussions with the owners and their representatives.

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 River Frome has the reputation of being an excellent chalkstream fishery supporting good stocks of brown trout *Salmo trutta*, and grayling *Thymallus thymallus*, as well as atlantic salmon *Salmo salar*. The river also supports indigenous stocks of coarse fish as well as key conservation species such as bullhead *Cottus gobio* and brook lamprey *Lampetra planeri*.

The Wrackleford estate fishery is largely managed as a commercial trout fishery, selling day, season and rods for corporate events. The estate is keen to promote and improve the component of wild trout throughout the fishery but also relies on introducing substantial numbers of hatchery derived trout to augment the catch deemed necessary to sustain the current levels of angling activity.

The fishery is currently divided up into seven beats. The top three beats on the main Frome are not included in this report, as it was thought that the lower beats known as The Mill beat, the Bricks and the Wrackleford Home water had the most potential for enhancement. In addition the Sydling brook, which is a small tributary joining the Frome at Grimstone and the Wrackle, which is in effect a northern carrier to the main river also had considerable scope for fishery development.

### **2.1 Home Water**

This section of river is the bottom beat on the main Frome and is characterised as main Frome channel, carrying most of the flow within the one main channel. The section inspected was the bottom half of the beat below a large weir. A Dorset Wildlife Trust-led habitat enhancement scheme was carried out on this reach a couple of years ago. The scheme was designed to consolidate a new margin through the construction of a causeway which was reveted with faggot

bundles with the objective of improving in-channel habitat, access for angling and marginal wetland habitat.



Weir bisecting the Home Water beat



Site of previous enhancement works. Note the presence of non-native Himalayan balsam

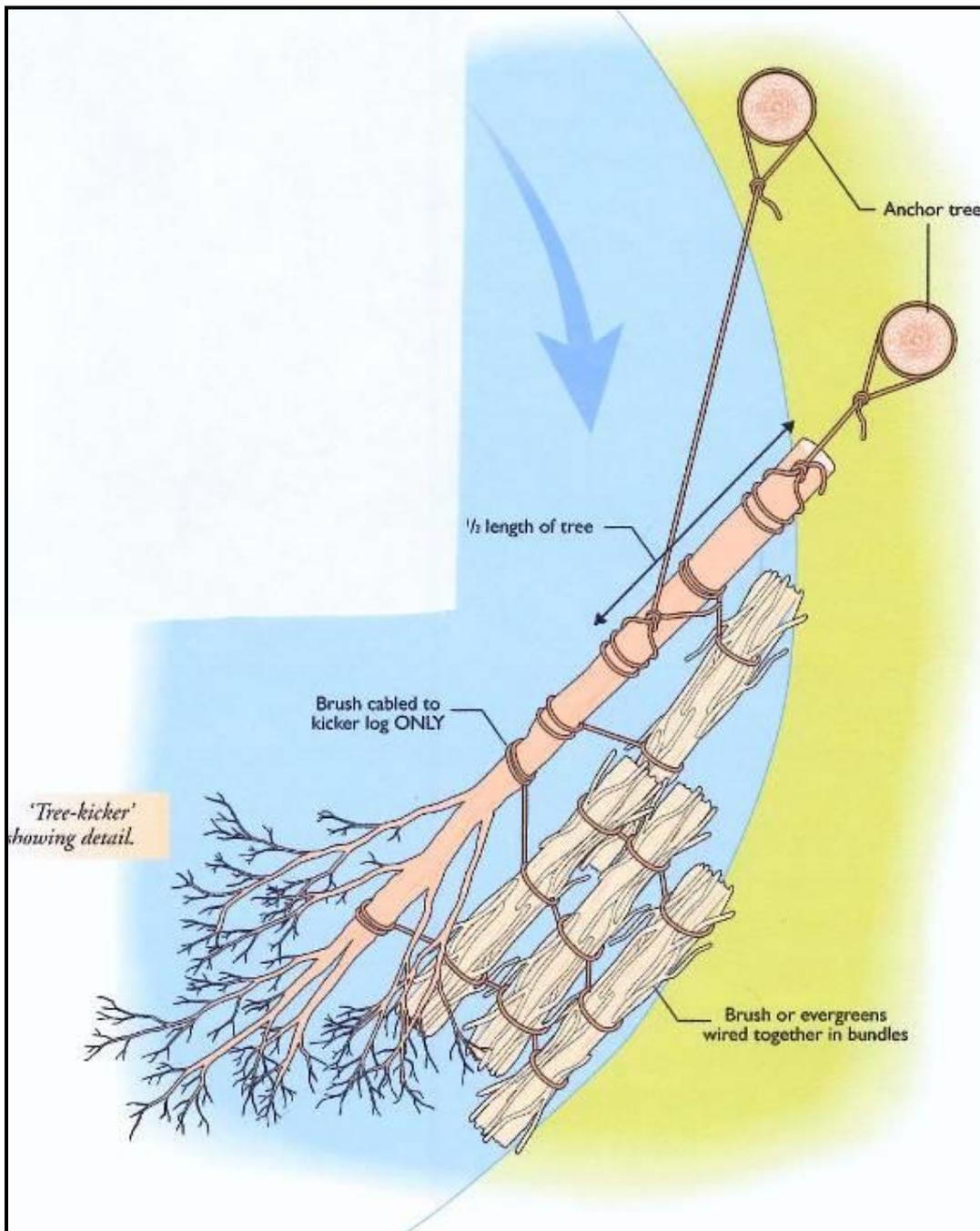
Near the bottom of the beat there was evidence of substantial marginal erosion to the LHB. This was of concern to the management of the site and some ideas about how to manage this section were discussed. One potential issue discussed was the way in which the marginal fringe of emergent plants and herbs were being managed. Although much of the reach, particularly the non fished RHB were left largely unmanaged, the LHB was quite heavily mown, with only a comparatively thin marginal strip of emergent ecotone plants left to develop. Even these were topped quite low to facilitate angling access. A thicker, wider riparian zone would be much more likely to resist the erosive forces of high winter flows and it is recommended that a reappraisal of the maintenance regime is undertaken.



Wide mown paths and thin marginal buffer can leave banks vulnerable to erosion

Where erosion threatens to overwhelm footpaths it is often much cheaper and easier to realign fences and move the path further away from the river. Allowing the eroded bank to slump and then colonise with native emergent plants and herbs will stop further nibbling back of the bank. Marginal emergent plants such as sedge *Carex* sp, burr reed *Sparganium* sp and reed canary grass *Phalaris* sp interspersed with marginal herbs and low scrubby trees such as goat willow *Salix caprea* will help to protect the bankside soils. The soft mattress of plants and roots absorb energy from the river and provide essential habitats for fish and the food of fish.

Where a managed retreat is not possible because of land ownership issues or because of health and safety issues then it is possible to slow down the rate of erosion with green engineering techniques using either logs or faggot bundles to form a toe to the bank and backfilling with a brushwood mattress to form a medium conducive for planting with marginal emergent plants. If the erosion is on the outside of a deep bend it may not be feasible or effective to use faggots and the use of Large Woody Debris (LWD) in the form of hinged trees to form current deflectors or anchored floating tree kickers may be a more effective method of combating erosion.



Diagram

depicting the construction of a simple "treekicker"



Section of bank lost to erosion

Another issue that will be exacerbating problems associated with bank erosion is the presence of the non native plant Himalayan balsam (*Impatiens glandulifera*). Note in the above picture the presence of the plant immediately adjacent to an area of bank erosion where the stock fence now straddles the river.

Himalayan balsam 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.

This plant was observed on numerous sections of the Frome and its carriers and there was evidence of how damaging it can be for trout habitats, where it has the capacity to outcompete and shade other native plants and prevent the establishment of those crucially important marginal fringes. It is recommended that efforts are made to eradicate the plant, especially where it is found adjacent to potentially high quality marginal habitat.

Control measures are required to prevent flowering and if this is achieved before seeds are set, eradication is possible in two to three years. Options for control include:

- **Chemical control:** can use glyphosate or 2,4-D amine. Need to be used whilst plant is actively growing in early spring for best effect.
- **Cutting/mowing/strimming:** cut at ground level, before the flowering stage in June. Do not cut earlier as this promotes greater seed production in any plants that regrow. Cutting should be repeated annually until no more growth occurs.
- **Pulling:** shallow-rooted plants can be pulled up very easily and disposed of by burning or composting, unless seeds are present.
- **Grazing:** Grazing by cattle and sheep is effective from April throughout the growing season. It should be continued until no new growth occurs.

The Food and Environment Protection Act 1985 (Control of Pesticides Regulations 1986, as amended), sets out the rules on the use of pesticides to control weeds growing in water or on land. *'Pesticides' includes herbicides as well as insecticides and fungicides.*

Under the Regulations, anyone who wants to use herbicides to control aquatic or bankside weeds must have written agreement to their proposals from the Environment Agency. They must notify the Agency of their proposed programme, including details of the site to be treated, who will be applying the herbicide, and which herbicides they will use. See: [http://www.environment-agency.gov.uk/commodata/acrobat/wqm1\\_notes201\\_1797478.pdf](http://www.environment-agency.gov.uk/commodata/acrobat/wqm1_notes201_1797478.pdf)

## 2.2 The Mill beat and the Bricks.

The Mill beat and the Bricks beat are formed from an old milling impoundment with its characteristically straight, perched channel and a parallel semi natural channel (Bricks beat). On the lower section the flow is mainly consolidated into one channel forming the bottom end of the Mill beat.



Top section of the Mill Beat (note the rare but valuable LWD in the channel)



Marginal fringe dominated by Himalayan balsam

The mill beat is naturally shaded, nestling beneath a heavy tree canopy and below a comparatively steep north facing bank. The limited amount of incident sunlight and associated lack of in-channel plants, coupled with the slow impounding nature of the reach leaves this section less than ideal for wild trout. The marginal fringe was dominated in parts by Himalayan balsam which would offer no cover to juvenile trout in the winter and leave the bank vulnerable to erosion. In addition, the mid-channel habitat consisted mainly of one long, steady laminar glide. This type of habitat is generally favoured by shoal fish rather than trout. Very little in-channel cover was available and with no weed or debris to up-well the current and cause surface disturbance. Any trout, wild or stocked, would feel nervous in such an environment, where it would be vulnerable to predation or where it would be difficult to define an individual territory for holding and feeding. One or two examples of LWD were noted along this stretch but increasing the amount of in-channel habitat through the use of pinned down LWD would undoubtedly boost its trout holding potential.



An example of LWD providing a marginal lie for a trout

The Bricks and the lower Mill beat however were characterised by a meandering channel with comparatively little shading. Much of the reach had heavy marginal beds of burr-reed, some which had encroached into the centre of the channel. Much of the reach was comparatively deep and looked as if it had been subjected to some unsympathetic land drainage works in the past. Some faster riffle habitat was evident at the bottom end of the beat but generally spawning and nursery habitat was at a premium.

### 2.3 The Wrackle

A section of a parallel carrier known as the Wrackle was also inspected. This carrier is formed from local springs and a network of meadow drains and carriers and runs to the north of the main Frome on the lower reaches of the estate. Currently the Wrackle is not utilised as a fishing beat by the estate and is largely neglected.



Wrackle – heavily shaded by sycamore and balsam

The habitat seen was of two distinct forms. Below Lower Wrackleford Farm the channel was excessively shaded by sycamore and tall stands of balsam, with the in-channel habitat formed of slow glide over a mainly soft silt bed. Further downstream the carrier gently flowed through a series of open meadows, where the channel was choked with burr reed. Only occasional short sections of open water could be seen.

Controlling the in-channel burr reed on the lower section may help to re-establish some shape to the channel, however, without establishing a shallower, narrower, faster flowing form to the channel, it may well be a constant battle to maintain it. Securing more flows to this channel through manipulating the side carriers may be possible but probably at the expense of the main river. Often when there is a network of parallel channels there are tough choices to be made about where the flow will do most good. Flow and water levels are obviously not the same thing and maintaining strong flows in the channel with the steepest gradient (usually in the bottom of the valley floor) is nearly always the best use

of resource for maintaining and improving trout habitats. Parallel carriers with little or no gradient can be very difficult to maintain as “open water” river habitat and are sometimes better managed as wet lands with a maintained water level but with minimal flows.



An open section of the Wrackle choked with burr reed.

It may be possible to re-establish an open channel capable of supporting a reasonable stock of trout. In my opinion, without securing a sustained increase in flows or a radical reduction in the cross-sectional area of the channel, it will be very difficult to maintain a sustainable trout fishery on the Wrackle.

## **2.4 The Sydling Brook**

The Sydling brook is a delightful little tributary of the Frome, with the estate owning the bottom mile of the river down to the confluence with the Frome near the hamlet of Grimstone.

Currently the estate operates a very low key fishery for a limited number of days a year, where anglers can fish this small stream for wild trout. Currently no stocking of hatchery fish is undertaken.

The Sydling is a crucially important spawning and nursery habitat. During my day walking through the Frome Valley from Notton down to south of Charminster, the Sydling represented the best quality spawning and nursery habitat observed. Good numbers of small fish were seen during the walk-through survey and large areas of near perfect trout habitat were evident. Of particular note was the condition of the extensive gravel bed, which was loose

and apparently unimpacted by the natural concretion that appears to blight much of the main river.



The Sydling. Herb rich natural margins and crowfoot galore.



The Sydling. First class spawning and nursery habitats

The varied channel form, steep gradient and excellent gravel bed are all favourable attributes for wild trout. It was interesting to note that riparian habitat tended to vary from one extreme to another with either virtually no tree shading or complete canopy cover of mainly willow. It is likely that some sympathetic thinning and pollarding of the thick willow fringe, as well as some potential re-planting of willow whips on the more open sections will enhance the habitat quality further.

Improvements to spawning success could be achieved through the provision of LWD on wide shallow spawning riffles.

Great care must be taken when considering how to utilise this resource for angling. There is undoubtedly a demand for high quality, small stream, wild brown trout fishing. The real value to the estate from this fishery however, will undoubtedly be the natural production of juvenile trout that will be displaced down into the lower beats of the main river Frome on an annual basis. Any development or excessive pressure that impacts on its productivity as a spawning and nursery stream is likely to have a knock on effect to the other beats on the Wrackleford Estate. For these reasons I would recommend that the stream is fished by a maximum of one rod a day or two rods for a half day on a once a week basis in May and June only and on a catch and release basis.

Late season fishing should not be contemplated as early running brood fish will be particularly vulnerable to damage.

### **3. Conclusions**

The waters of the Wrackleford estate offer the potential for a wide and varied habitat for trout. The stocking of hatchery reared trout is considered by the estate essential in providing adequate sport for the paying visitor. Much of the main river on the Home water beat and sections of the Mill stream and The Bricks offer limited scope for wild trout with very limited spawning and juvenile habitats. That said there is considerable scope for enhancement that will not only improve the component of the wild stock but also provide improved conditions for stocked fish.

Getting the balance between access for angling and habitat for fish is difficult. Thick marginal fringes of native chalk river herbs and emergent plants as well as the provision of low overhanging scrubby cover is essential in providing food and cover for trout as well as protecting the bank from excessive erosion. Combating the well established beds of Himalayan balsam is seen as a priority action. It was noted that little or no balsam is present on the Sydling Brook and annual inspections should be made of where this plant exists and any new colonises identified should be immediately controlled.

The estate should have a much more relaxed approach to the removal of woody debris within the channel. Indeed, sections of the Mill beat would benefit from the active introduction of LWD to create more comfortable lies for adult trout. LWD should only be removed if it potentially poses a threat to flood defences by breaking free and blocking a bridge or culvert. Sometimes moving the debris and

pegging it to the bed or anchoring it to a rooted tree will ensure it doesn't cause any additional flooding risk.

The Sydling brook is a stunning spawning and nursery habitat. A minimal amount of maintenance should be carried out aimed at allowing a little more light into the channel on the heavily shaded section and the provision of some further low scrubby cover on the open reaches. Angling access must be very carefully controlled and monitored to avoid damaging potentially valuable broodstock.

Restoring the Wrackle to become a sustainable fishery will only be possible with a whole sale reduction in physical channel width and depth. This work would be expensive but could potentially be undertaken to restore a self cleansing channel capable of sustaining a small fishery.

Further information on techniques that can be used to manage chalk stream habitats can be found in the WTT Chalkstream management guidelines, which can be downloaded as pdf files from the WTT website.

**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.**

A further way of reducing the pressure on wild stocks throughout the fishery is to limit the spawning interactions between wild stocks and introduced hatchery derived stocks. This can be achieved through giving careful consideration to where and when you stock, as well as looking closely at catch returns to ensure that most stocked fish are removed before the critically important autumn period. Stocking with sterile hatchery fish in line with the recommendations made in the Environment Agency's Trout and Grayling Fisheries Strategy will benefit the wild component of the stock.

#### **4. Recommendations**

- On sections of eroded bank consider a managed retreat rather than immediate bank repair.
- Maintain a much thicker marginal fringe of native herbs and plants.
- Make every effort to control the non native plant Himalayan balsam.
- Do not remove pieces of LWD from the channel. Move them if they pose a threat to flood defence or for access to angling.
- Peg down LWD on laminar glides to provide lying up habitat.

- Peg down LWD on shallow riffles to help sort and clean spawning gravels.
- Implement a "light touch" approach to the maintenance of the Sydling Brook.
- Carefully control angling access to the Sydling Brook.
- Consider an early move to stocking with all female triploid brown trout as an alternative to fertile trout. Do not stock those beats where there is potential to develop improved wild stocks.

## **5. 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 an 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.

### **Disclaimer**

This report is produced for guidance only and should not be used as a substitute for full professional advice. Accordingly, no liability or responsibility for any loss or damage can be accepted by the Wild Trout Trust as a result of any other person, company or organisation acting, or refraining from acting, upon comments made in this report.

### **Acknowledgement**

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