

# RIVER FROME & RIVER PIDDLER

## REDD COUNT REPORT

### 2010/11



# **River Frome & River Piddle Redd Counts 2010/11**

## **Introduction**

Salmonid spawning takes place in the late autumn and winter. Migratory salmonids such as salmon and sea trout migrate upstream to spawn in their favoured locations in rivers and streams, and bury their eggs in depressions in the gravel created by kicking the gravel up with their tails. These areas are called redds and are fairly easy to spot when river conditions allow.

Redd counting has been taking place on the Wessex rivers for many years and has proved to be a very useful fishery management tool for both River Keepers/riparian owners and regulatory bodies. Casterbridge Fisheries have been redd counting for many years now and has developed a consistent and reliable programme for collecting this valuable data in line with those employed by the Environment Agency on the other Wessex Rivers.

## **Aims & objectives**

Redd counting provides the following information:

- A record of the spawning range in each year under specific flow conditions
- A comparison between years, allowing trends to be identified over time
- Identifies obstructions to fish passage
- Identifies areas of clustered spawning
- Identifies under-utilised spawning habitat
- The identification and later assessment of gravel cleaning sites
- Provides spawning data for the interpretation of fish population surveys

Ideally redd count data is collected every winter. However, river conditions can be unfavourable for long periods and monitoring windows missed, or the redds are flattened out and confidence in the accuracy of a count is too low. For this reason every effort is made to collect reliable data when river conditions allow.

In addition to the above, redd count data is of great importance when used to monitor the success of recently constructed fish passes, hydro electric schemes and in river enhancement projects.

Overall redd counting gives fishery owners, managers and other interested bodies a detailed indication of salmonid spawning abundance within the river catchment. The

collection of this information is an important tool for the future research of our changing rivers and will continue to drive enhancements leading to the protection and promotion of our migratory salmonid stocks.

## **Methodology**

The following methodology is used to collect the Redd count data and has been developed in conjunction with the Environment Agency (EA) to retain a high level of comparability with historical data collected by the EA and its predecessors.

- Redd counting takes place in late December and early January when the Salmon and sea trout have only just finished spawning
- Water conditions must be suitable for full observation of redds and any fish in the immediate area
- Individual salmon redds are mapped using GPS, the length and width of each redd is recorded and whether the redd has been cut on a gravel cleaned site
- Redds >1.1m wide are recorded as Salmon, <1.1m as sea trout
- Surveyors are experienced operatives who are competent at redd counting and work in pairs in line with our redd counting work instruction and risk assessment
- Information on the numbers recorded, measurements taken and, if possible, photographs, are then compiled and submitted in a detailed report

With experience it is possible to differentiate between salmon and sea trout redds by recording the timing of the spawning, gravel size and the size and shape of the redds excavated. The monitoring team should always consist of at least one person involved in the previous surveys to maintain a high level of consistency.

## **Funding**

This year's redd counting was funded as follows;

- **The Environment Agency**  
The River Frome from Maiden Newton downstream to Wool Bridge  
(SY 59490 97647 – SY 84435 87127)
- **Lulworth Estates**  
The River Frome from Wool Bridge downstream to below Bindon Abbey  
(SY 84435 87127 – SY 85901 86791)
- **Frome Piddle and West Dorset Fisheries Association**  
The River Piddle from Tolpuddle downstream to below Carey  
(SY 78050 93942 – SY 90944 87666)

The Environment Agency (EA) funded the River Frome count, as they have done in previous years.

The Frome, Piddle and West Dorset Fisheries Association (FP&WDFFA) were very keen to match the EA funding and have a detailed redd count done on the River Piddle, as the last count was done in the winter of 1992/3.

Finally, the Lulworth Estate funded a downstream extension of the redd count to monitor the Salmonid migration around their 2010 hydro electric scheme at Bindon Abbey.

The estate have done some fine work repairing the existing fish pass around the new turbine and adequate fish passage was observed through both the fish pass and the previously existing hatches, that were adjusted by contractors Kingcombe Aquacare a few years ago. Salmon were observed using these hatches soon after they finished work.

One redd was marked immediately above the turbine and none below the structure, as the habitat is only suitable for Salmon to rest up, spawning habitat improving upstream of Wool Bridge.

From the number of redds recorded upstream of this structure we see no reason for it to hinder upstream salmonid passage.

## **Results**

Conditions for Redd counting this winter were again on our side with only a few days delay due to coloured water from a short spell of heavy rainfall.

Very few spawning fish were still seen in the rivers (generally cock fish in the vicinity of the redds) indicating the majority of the spawning was complete giving a high confidence in the correct timing of the count.

Assessment of key spawning areas after the main count was completed indicated that there was little or no late spawning activity, and that this year's count has a high level of accuracy.

The total counts are as follows for salmon redds, as defined by the above methodology. This year's figures are in red.

1. Total number of River Frome Redds counted;  
2008/9 - 235  
2009/10 - 168  
2010/11 - 131

2. Total number of Redds counted above Louds Mill fish pass was 23 (included in above figures).

3. Total number of River Piddle Redds counted

1987/88	-	109
1988/89	-	123
1989/90	-	73
1991/92	-	84
1992/3	-	39
2010/11	-	111

The above historical figures for the River Piddle have been supplied by the Environment Agency.

### **Discussion**

There were no salmon redds recorded on the Cerne, Hooke and Sydling water, this is probably a result of the low winter flows which appear to have limited upstream migration in 2010/11.

The amount of redds counted up stream of the new fish pass at Louds mill is again more than pre fish pass years, but just over twenty redds were recorded this year, (44 last year, and 44 the year before). A cluster of redds below the tilting weir at Hangmans Cottage in Dorchester was recorded, suggesting a problem with migration at this structure, not only for Salmonids but probably Eels and Elvers.

On the River Frome the condition of Hyde hatches near Notton again made it very difficult for any upstream migration of Salmonids and consequently only a couple of redds were observed upstream of this structure.

The relatively high number of redds recorded on the river Piddle was encouraging, but raised the question of whether some of those fish turned right in the Wareham channel and headed up the Piddle because of low flow rates and river conditions in the Frome. Also, do we need to consider these populations as one?

### **Conclusion**

The overall numbers of salmon redds recorded on the river Frome are down again this winter.

The numbers recorded on the river Piddle are similar to those of the late 1980s.

Overall, this is cause for concern, with the reduction in redds at this level every winter your guess is as good as mine as to the number of years we will have a viable salmon population left!

## **Recommendations**

It is important to continue the redd count monitoring on these rivers in order to assess the changes to our migratory salmonid stocks and to identify those factors limiting spawning success.

In addition we need to monitor the impacts of the changing pressures on this fragile ecosystem, such as hydropower schemes, and ensure that both individual and combined effects are not becoming new limiting factors to the success of our migratory salmonids.

It is recommended that there is need to redd count both the River Frome and River Piddle in future years in order to better understand their interactions. In addition the continual monitoring of structures/barriers, both new and old is an important part of managing our fisheries.

It is imperative we do all we can to help these fish NOW.

Finally, we would like to acknowledge all those who have given their permission for us to carry out this and previous years monitoring. Without your support we would not have the data we need to influence and highlight areas of concern on these catchments. Thank you.



Hangman's Tilting Weir. Dorchester.

**APPENDICES**  
**RIVER FROME REDD COUNTS 2011**

Casterbridge Fisheries Ltd

[www.riverworks.co.uk](http://www.riverworks.co.uk)

SECTION	GPS READING SY BNG	REDD LENGTH M	REDD WIDTH M	GRAVEL CLEANED Y/N
Maiden Newton	60070 97260	2.5	1.5	N
Frampton	63130 94170	2.5	1.5	N
Grimstone	63927 93966	2.5	1.0	N
Muckleford	64481 93568	3.0	1.5	Y
Wrackelford	65181 93428	3.0	2.0	N
Wrackelford	65344 93354	3.0	1.5	N
Wrackelford	65445 93317	2.5	1.0	N
Bradford Peverell	65743 93181	3.0	1.0	N
Poundbury	67677 91473	3.5	2.5	Y
Loders Garage	68807 91168	2.0	1.0	N
Hangmans Cottage (Tilting Weir)	69112 91150	3.5	2.5	N
Hangmans Cottage	69114 91164	3.0	1.5	N
Hangmans Cottage	69128 91210	3.0	1.5	N
Blue Bridge	69134 91219	5.0	2.0	N
Blue Bridge	69150 91296	3.0	1.5	N
Blue Bridge	69209 91306	5.0	2.0	N
Blue Bridge	69244 91286	4.5	2.0	N
Blue Bridge	69420 91196	5.0	2.0	N
Mayos Hatches	69588 91194	2.5	1.0	N
Mayos Hatches	69772 91082	6.5	2.5	N
Ten Hatches	69862 91038	5.0	2.5	N

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SECTION	GPS READING SY BNG	REDD LENGTH M	REDD WIDTH M	GRAVEL CLEANED Y/N
Greys Bridge	69987 90901	3.0	1.5	Y
Greys Bridge	70047 90798	3.0	1.5	Y
Louds Mill	71126 90348	3.0	1.5	Y
Louds Mill	71169 90351	3.0	1.0	Y
Louds Mill	71396 90312	2.5	1.5	N
Louds Mill	71881 90302	4.0	2.0	Yes new riffle
Louds Mill	72155 90500	5.0	2.0	Y
Louds Mill	72424 90627	3.0	2.0	Yes new riffle
Louds Mill	72274 90654	4.0	2.0	Y
Louds Mill	72274 90654	3.0	1.5	Y
Louds Mill	72096 90727	3.0	1.5	Y
Louds Mill	72096 90727	3.0	1.5	Y
Bockhampton	72068 90722	3.0	2.0	Y
Bockhampton	72068 90722	3.0	2.0	Y
Bockhampton	71931 90738	3.0	1.5	N
Bockhampton	71912 90715	2.5	1.5	N
Bockhampton	71827 90736	2.5	1.5	N
Bockhampton	71706 90760	3.0	1.5	N
Stinsford	71701 90702	2.0	1.0	N
Stinsford	70686 90848	5.0	2.0	N



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SECTION	GPS READING SY BNG	REDD LENGTH M	REDD WIDTH M	GRAVEL CLEANED Y/N
West Stafford	73159 90009	3.0	2.0	Y
West Stafford	73113 90031	2.5	1.5	Y
West Stafford	73098 90033	4.0	1.5	Y
West Stafford	73037 90012	4.0	2.0	Y
West Stafford	72950 90008	3.0	1.5	Yes new riffle
West Stafford	72950 90008	2.5	1.5	Yes new riffle
West Stafford	72910 89995	4.0	2.0	Y
West Stafford	72872 90004	4.0	2.0	N
West Stafford	72860 89993	6.0	3.0	N
West Stafford	72860 89993	3.0	1.5	N
West Stafford	73221 89890	6.0	3.0	N
West Stafford	73221 89890	4.0	2.0	N
West Stafford	73477 90031	3.0	1.5	N
West Stafford	73477 90031	3.0	1.5	N
West Stafford	73510 90037	5.0	4.0	N
West Stafford	73510 90037	3.5	2.0	N
Mill Stream	70019 90563	2.5	1.5	N
Mill Stream	69184 91021	2.5	1.5	N
Bhompston	72600 90628	4.0	2.5	N
Bhompston	72710 90646	6.0	1.5	N
Bhompston	72791 90583	4.5	1.5	N

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SECTION	GPS READING SY BNG	REDD LENGTH M	REDD WIDTH M	GRAVEL CLEANED Y/N
Bhompston	72992 90648	3.0	1.75	N
Lewell Mill	73998 90077	3.1	1.2	N
Lewell Mill	74209 90128	4.5	2.5	N
Lewell Mill	74290 90195	3.0	2.0	N
Lewell Mill	74375 90195	5.5	2.5	N
Lewell Mill	74496 90282	5.0	2.0	N
Nine Hatches	75111 90628	6.0	3.0	N
Sturts Weir	76274 90741	6.0	4.0	Y
Sturts Weir	76274 90741	5.0	3.0	Y
Sturts Weir	76274 90741	4.5	2.0	Y
Sturts Weir	76300 90764	6.0	2.0	Y
Sturts Weir	76320 90775	6.5	2.5	Y
Sturts Weir	76333 90789	5.0	2.0	Y
Sturts Weir	76341 90794	5.5	3.0	Y
Sturts Weir	76435 90915	3.5	1.5	Y
Sturts Weir	76435 90915	5.0	2.5	Y
Sturts Weir	76435 90915	5.5	2.5	Y
Sturts Weir	76435 90915	5.0	2.25	Y
Sturts Weir	76439 90931	7.0	3.0	Y
Sturts Weir	76439 90931	5.0	3.5	Y
Sturts Weir	76543 91089	5.5	3.0	Y

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SECTION	GPS READING SY BNG	REDD LENGTH M	REDD WIDTH M	GRAVEL CLEANED Y/N
Tingleton Bridge	77237 90985	2.5	1.5	N
Tingleton Bridge	77237 90985	2.5	1.5	N
North Stream	77525 91363	5.5	2.0	N
North Stream	77290 91341	3.0	1.5	N
North Stream	77229 91337	4.0	2.0	N
North Stream	77038 91299	4.0	2.5	N
North Stream	76866 91282	4.0	1.5	N
North Stream	76812 91282	4.5	1.5	N
North Stream	76264 91099	5.0	2.5	N
North Stream	75861 90942	5.0	2.0	N
North Stream	74799 90814	6.0	3.0	N
North Stream	74729 90809	6.5	3.0	N
Duddle Farm	73678 90805	6.0	2.5	N
Duddle Farm	73609 90780	5.0	1.5	N
Duddle Farm	73176 90415	2.5	1.5	N
Duddle Farm	73144 90369	4.0	2.0	N
Duddle Farm	73147 90263	4.5	2.0	N
Duddle Farm	73746 90380	6.0	1.5	N
Duddle Farm	73768 90357	5.0	2.5	N
Moreton	78442 91050	5.5	2.5	N
Moreton	78461 91058	5.0	2.5	N

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SECTION	GPS READING SY BNG	REDD LENGTH M	REDD WIDTH M	GRAVEL CLEANED Y/N
Moreton	78517 90993	5.5	2.5	N
Moreton	78664 90940	6.0	2.5	N
Moreton	79323 90584	6.5	2.0	N
Moreton	79969 90088	7.0	2.5	N
Moreton	80002 90055	6.0	2.5	N
Moreton	79999 90042	4.0	1.75	N
Long Bridge	80467 89579	6.0	2.5	N
Moreton House	80683 89285	5.0	1.75	N
Moreton House	80972 89087	4.0	1.5	N
Moreton House	81197 88778	6.5	2.0	N
Moreton House	80644 89262	4.0	1.5	N
Moreton House	80644 89262	5.5	2.0	Y
East Burton	81646 87832	4.0	2.0	Y
East Burton	81571 87963	5.0	2.5	N
East Burton	81345 88420	6.0	2.5	N
East Burton	82014 87689	5.0	2.5	Y
East Burton	82552 87389	6.0	2.0	Y
East Burton	82552 87389	4.0	2.0	N
East Burton	83058 87439	5.5	2.0	N
East Burton	83162 87464	4.5	2.0	N
East Burton	83162 87464	5.5	2.5	N

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SECTION	GPS READING SY BNG	REDD LENGTH M	REDD WIDTH M	GRAVEL CLEANED Y/N
North Stream	82878 87641	3.0	1.5	N
North Stream	82546 87632	6.0	2.0	N
Hyford Weir	81956 87581	5.5	2.5	N
Hyford Weir	82017 87580	5.5	3.0	N
Hyford Weir	82054 87581	5.5	3.0	N
<b>Bindon Abbey</b>	85227 86931	5.0	2.5	N
<b>Total Redds 131</b>				

## RIVER PIDDLER REDD COUNTS 2011

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SECTION	GPS READING SY BNG	REDD LENGTH M	REDD WIDTH M	GRAVEL CLEANED Y/N
Southover	78362 94085	3.0	1.5	N
Southover	78113 93965	3.5	1.5	N
Southover	78078 93951	3.0	1.5	N
Southover	79260 94029	4.0	2.0	N
Southover	80042 94136	4.5	2.0	N
Southover	80039 94127	4.5	2.5	N
Southover	80040 94124	3.0	2.0	N
Southover	80039 94119	4.5	2.5	N
Southover	80262 94064	3.0	2.0	N
Briantspuddle	81481 93396	4.5	2.0	N
Briantspuddle	81471 93397	5.0	2.0	N
Briantspuddle	81324 93486	3.5	1.0	N
Briantspuddle	81307 93496	2.5	1.5	N
Briantspuddle	81280 93499	2.5	1.25	N
Briantspuddle	80979 93619	3.0	1.5	N
Briantspuddle	80816 93635	2.5	1.5	N
Briantspuddle	80713 93705	3.5	2.0	N
Briantspuddle	80641 93729	5.0	2.5	N
Briantspuddle	82048 93465	3.5	1.5	N
Briantspuddle	82294 93375	3.0	1.5	N
Briantspuddle	82446 93351	3.0	1.25	N

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SECTION	GPS READING SY BNG	REDD LENGTH M	REDD WIDTH M	GRAVEL CLEANED Y/N
Throop	83881 92922	4.0	2.5	N
Throop	83365 92990	3.5	1.5	N
Throop	83385 93006	3.0	1.5	N
Throop	83317 93080	2.5	1.25	N
Throop	83248 93121	2.5	2.5	N
Throop	83158 93174	2.5	1.5	N
Throop	83018 93228	2.5	1.5	N
Throop	82961 93280	2.5	1.5	N
Throop	82813 93301	3.0	1.5	N
Broom Hill	83470 92884	3.5	2.0	N
Broom Hill	83475 92819	3.5	2.0	N
Broom Hill	83500 92884	2.0	1.25	N
Broom Hill	83541 92888	2.5	1.25	N
Broom Hill	83660 92964	2.5	1.25	N
Broom Hill	83708 92959	3.5	2.0	N
Broom Hill	83811 92891	2.5	2.0	N
Chamberlyns Farm	84084 92703	2.5	2.0	N
Chamberlyns Farm	84117 92678	5.5	2.5	N
Chamberlyns Farm	84384 92815	3.5	2.0	N
Bere Stream	85846 91797	4.0	1.5	N
Bere Stream	85808 91753	4.0	2.0	N

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SECTION	GPS READING SY BNG	REDD LENGTH M	REDD WIDTH M	GRAVEL CLEANED Y/N
Bere Stream	85860 91680	3.5	2.0	N
Bere Stream	85930 91604	3.0	1.5	N
Culeaze	84709 92229	3.0	1.5	N
Culeaze	84735 92299	4.5	1.5	N
Culeaze	84780 92262	3.5	1.5	N
Culeaze	84780 92262	4.0	1.5	N
Culeaze	84947 92266	5.0	2.0	N
Culeaze	84943 92214	4.0	2.0	N
Culeaze	84959 92181	4.0	2.0	N
Culeaze	84975 92135	4.0	2.0	N
Culeaze	85064 92031	3.0	1.5	N
Culeaze	85089 91995	4.0	2.0	N
Warren Lane	85302 91876	3.0	2.0	N
Warren Lane	85318 91861	4.0	2.0	N
Warren Lane	85336 91715	3.0	1.5	N
Warren Lane	85446 91541	3.2	1.75	N
Warren Lane	85449 91541	3.0	1.5	N
Warren Lane	85459 91547	3.0	1.25	N
Warren Lane	85532 91556	3.0	1.5	N
Warren Lane	85643 91494	3.0	1.5	N
Warren Lane	85675 91460	2.5	1.25	N



## RIVER PIDDLE REDD COUNTS 2011

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SECTION	GPS READING SY BNG	REDD LENGTH M	REDD WIDTH M	GRAVEL CLEANED Y/N
Warren Lane	85721 91403	3.0	2.0	N
Warren Lane	85753 91249	3.0	1.5	N
Warren Lane	85770 91231	5.0	2.0	N
Warren Lane	85787 91210	3.0	2.0	N
Upper Hyde	85812 91206	4.0	2.5	N
Upper Hyde	85885 91201	6.0	2.5	N
Upper Hyde	85906 91192	4.0	1.25	N
Upper Hyde	85998 91156	4.0	1.5	N
Upper Hyde	86028 91148	4.0	1.5	N
Upper Hyde	86031 91134	2.0	1.25	N
Upper Hyde	86234 90909	6.0	2.0	N
Upper Hyde	86234 90909	3.5	1.75	N
Upper Hyde	86290 90848	5.0	2.0	N
Upper Hyde	86328 90803	2.0	1.25	N
Upper Hyde	86360 90835	6.0	3.0	N
Upper Hyde	86395 90736	5.0	2.0	N
Upper Hyde	86396 90693	4.5	1.75	N
Upper Hyde	86448 90689	3.0	1.25	N
Hyde House	86982 90419	2.5	1.5	N
Hyde House	86978 90405	3.0	2.0	N
Hyde House	86988 90383	4.0	2.0	N

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SECTION	GPS READING SY BNG	REDD LENGTH M	REDD WIDTH M	GRAVEL CLEANED Y/N
Hyde House	87070 90220	2.5	1.25	N
Hyde House	87115 90242	5.0	2.0	N
Hyde House	87133 90239	4.0	2.0	N
Hyde House	87157 90231	2.0	1.25	N
Hyde House	87147 90135	5.0	2.0	N
Hyde House	87166 90104	4.0	1.5	N
Hyde House	87176 90091	3.0	1.5	N
Hyde House	87232 89996	3.5	2.0	N
Hyde House	87255 89990	3.0	2.0	N
Hyde House	87259 89949	3.0	1.75	N
Hyde House	87207 89934	4.0	2.0	N
Hyde House	87207 89934	4.0	2.0	N
Hyde House	87303 88915	4.0	1.75	N
Hyde House	87324 89779	3.5	1.5	N
Hyde House	87690 89438	5.5	1.5	N
Hyde House	87697 89389	5.0	1.5	N
Hyde House	87696 89339	3.0	1.25	N
Hyde House	87741 89269	3.0	2.0	N
Trigon	88475 88565	5.0	2.25	N
Trigon	88547 88569	5.0	3.0	N
Trigon	88615 88585	2.5	1.5	N

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SECTION	GPS READING SY BNG	REDD LENGTH M	REDD WIDTH M	GRAVEL CLEANED Y/N
Trigon	88819 88586	4.5	2.0	N
Trigon	88934 88537	4.0	2.0	N
Trigon	88948 88523	4.5	2.0	N
Trigon	89057 88488	5.5	2.5	N
Trigon	89359 88203	5.0	3.0	N
Trigon	89300 88096	3.0	1.75	N
<b>Total Redds 111</b>				

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