



Analysis & Reporting

Monitoring ecosystems; identifying pollution causes & impacts

Major issues over the last three months:

- Ogwen & Dwyrdd Fisheries Monitoring
- Cwmstradllyn PhD
- Monitoring Cockle stocks
- Promising Future resource

Ogwen & Dwyrdd additional monitoring

We have been producing salmon action plans for both catchments and one of the actions was to gather more data regarding juveniles. Full surveys were carried out and overall grades were good, however the work has further highlighted the issues on a few tributaries.

Cwmstradllyn PhD

We will be working with Bernice Brewster from the University College London looking into the life cycle of *Eustrongylides* sp. that has been found in Brown Trout at Cwmstradllyn. So far we have gathered invertebrates to identify the intermediate host, and we will be taking fish samples in the next month



Cysts containing *Eustrongylides* spp.

Sampling & Collection



Carrying out a cockle survey

Monitoring of Cockle stocks

It has been a highly successful season for cockles. The licensed fishermen took 690 tonnes from the Salisbury, Thurstaston and West Kirby beds by the end of August.

Intensive monitoring of the cockle beds throughout the summer has enabled us to closely monitor the stocks. In August we found cockle quantities on one of the closed beds at Mostyn had increased considerably and we opened this bed on 1st September for four weeks. We will be doing a follow up survey on Mostyn in October.

Promising future resource

Further good news is the heavy spat falls (a settlement of very young cockles) that occurred during this and last summer. This indicates that the fishery is on course to thrive for years to come.

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Environmental Crime

Reducing illegal fisheries and waste activities in North Wales.

Major issues over the last three months:

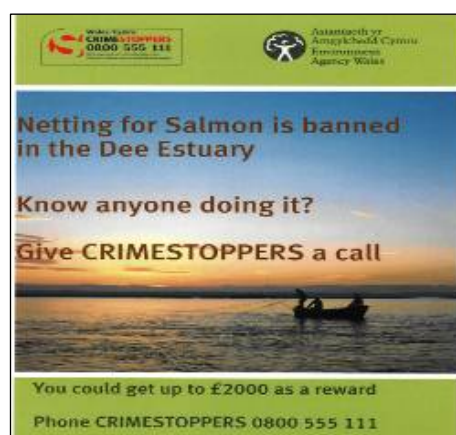
- **Crime Stoppers on the Dee Estuary**
- **Illegal Trawling on the Dee Estuary**
- **Illegal Coastal Netting in North Wales**

Crime Stoppers on the Dee Estuary

In July, working with the Dee Fisheries Association and the crime-fighting charity, Crimestoppers, we launched a new campaign to target people who cause significant damage to the salmon through the Dee Estuary.

People who use nets to catch fish illegally in the estuary are preventing many migrating fish from reaching their spawning grounds, which has a significant effect on the population.

We are asking people to help us by phoning Crimestoppers if they see anything suspicious. It is completely anonymous and you will get a reward of up to £2,000 if the information leads to a prosecution and confiscation of equipment.



Crimestoppers poster



Boat illegally trawling on the Dee

Illegal Trawling on the Dee Estuary

In July two were fined a total of £4,400 including costs for trawling illegally in a restricted area on the Dee Estuary at Mold Magistrates court. The men were caught following a covert operation in March 2009 by the Environmental Crime Team

Illegal Coastal Netting in North Wales

In June 2009 we apprehended two men fishing illegally at Criccieth. In July Seven men were caught fishing illegally on the Dee estuary. In August 2009 two men were caught fishing illegally in the Caernarfon area. Enforcement action is now pending against all the individuals involved.

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Technical Fisheries

Maintaining and improving fisheries

Major issues over the last three months:

- Rhyl Cut, a step closer
- Local children learn about salmon
- Signal crayfish on the Mawddach
- A new mobile fish trap

Rhyl Cut, a step closer

Recent developments have ensured that Rhyl Cut fishery project is a step closer to being realised. A Memorandum of Agreement has been signed with Denbighshire CC together with an Environment Agency contribution of £70K. This triggered a W.A.G Regeneration fund bid which has now been successful enabling the project to move to the planning and launch stage.

Local children learn about salmon

Three groups of local children enjoyed a trip to the salmon hatchery at Maerdy. They learnt about the lifecycle of the salmon and the role the hatchery plays as well as being lucky enough to see the adult fish feeding.



Local children visit Maerdy



Signal crayfish

Signal crayfish on the Mawddach

A young angler fishing the River Wnion, near Dolgellau, caught the first recorded crayfish. It has now been identified by the biodiversity team as an American signal crayfish. The Mawddach catchment has no record of native white-clawed crayfish. Fisheries and biodiversity are now surveying the Wnion to assess the population.

A new mobile fish trap

A new fish trap has been constructed by a local fabricator. The all aluminium trap is going to be used, where necessary, to catch returning salmon for enhancement stocking. The juveniles will then be introduced to the areas from where the adults were removed, in order to try and improve fish returns.

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Technical Fisheries

Maintaining and improving fisheries

Major issues over the last three months:

- Increasing fisheries awareness
- Hesbin habitat improvement
- 2009 National fishing week
- Fisheries information packs

Increasing fisheries awareness

The Environment Agency Wales operational works team had a day with the fisheries team, learning about our role. Educating other teams about our work is very important. It helps them to understand and consider the impact of their work on fisheries. It also reveals ways in which we can work together in the future.

Hesbin habitat improvement

Four adjoining farms were involved in a habitat improvement scheme on the Hesbin at Llanelidan, a tributary of the Clwyd. Over 1km of fencing was erected to create a buffer strip, protecting the stream from poaching by livestock.



Operational team constructing new fishpass



National fishing week

2009 National Fishing week

As usual we suffered with indifferent summer weather for National fishing week but this did not put people off attending. We recorded our best attendance figures to date showing that the scheme does work. The commitment and efforts of the coaches was again fantastic throughout the week.

Fisheries information packs

A Technical Fisheries Team pack is now available for our customers, through a series of planned visits. Fishery officers will use the packs while visiting angling clubs; they are an educational tool to help clubs understand who we are and what we do. Environmental Crime Team information is included and visits to tackle shops and commercial fisheries are planned for the future.

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Technical Fisheries

Maintaining and improving fisheries

Major issues over the last three months:

- Afon Llynor
- Coarse fish increase in the Dee
- Habitat techniques demonstration
- Afon Iwrch Challenge Fund

Afon Llynor

In 2005, a collaborative habitat restoration project, funded by the Environment Agency Wales and Tilhill Forestry Ltd, was undertaken. It created a buffer strip along the River Llynor to reduce over shading and improve fish habitat. The upstream view shows the level of overshading that existed prior to the work, while the downstream view shows the buffer strip established through this project. Tilhill Forestry plan to remove the timber downstream next year and create a further buffer strip.



Upstream and downstream view - Afon Llynor

Coarse fish increase in the Dee

Surveys of the Dee this summer have shown a dramatic improvement in coarse fish densities compared to previous years. The area which has particularly increased is the lower Dee, in the region of Eccleston Ferry.



Representatives of the Clwyd & Conwy Trust and the Environment Agency at the Iwrch

Habitat techniques demonstration

On the 10th of October 2009, there will be a habitat techniques demonstration day run by the Wild Trout Trust on the Afon Aled, Clwyd. The day will provide ways to identify habitat and an opportunity to learn practical techniques. There are two sessions and up to 50 places available to all who are interested. Please contact Katrina Marshall on 01248 484005.

Afon Iwrch Challenge Fund

A river habitat restoration scheme has just been completed on the Afon Iwrch, an important spawning tributary of the upper Conwy. Delivered by the newly formed Clwyd & Conwy Rivers Trust working in partnership with E.A. Wales fisheries department and the National Trust.

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Fish Culture

Mitigating damage to fisheries

Major issues over the last three months:

- **Grading fish at Maerdy Hatchery**
- **3 year old freshwater pearl mussels survive at Mawddach Hatchery**

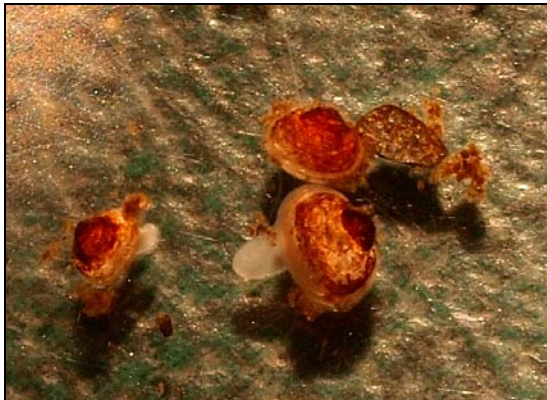
Grading fish at Maerdy Hatchery

All the fish hatched this year at Maerdy Hatchery have just been graded according to size. This ensures good growth and health of the fish and an increase in survival, as fish of a similar size are placed in a tank together.

Grading is carried out up to 3 times a year, with the first grade in August, second in October and a further grade occasionally carried out later in the year, depending upon growth rates. The fish split into 2 size ranges, with the smallest fish being around 1.5g (a total of ~52,000 fish on site) and the larger fish around 4g (a total of ~24,000 fish).



Grading fish



Fresh water pearl mussels – three years old

Pearl mussels – three years of survival

At the Mawddach fish culture unit the freshwater pearl mussel project, which has been running since 2005, has received a major boost with the news that there are 3 year old freshwater pearl mussels surviving at the hatchery. The juvenile mussels are very small and therefore monitoring their survival is very difficult, however the tray containing the 3 year old mussels was recently sampled prior to its transfer outside to the new freshwater pearl mussel rearing facilities and a number of 3 year olds were observed.

The mussels will remain at the culture unit until they are at least 5 years old.

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National Fisheries Services

Providing technical solutions and advice for fisheries

Major issues over the last three months:

- Bala Sluice fish pass
- Poor salmon returns

Improved operation of the Bala Sluice fish pass

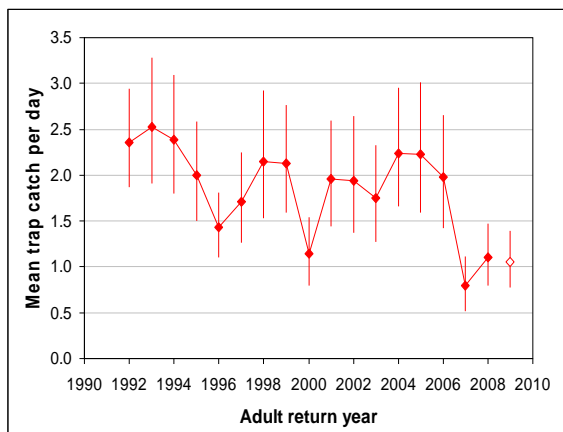
Hydrology and Water Resource Management Teams have been working with Area and National Fisheries staff to improve operation of the fish pass at the Bala Sluice Gates.

The sluice gates regulate flows in the River Dee; however, in low flows salmon have been seen milling downstream raising concerns about the effectiveness of the central fish pass.

A visit in July by fish pass expert Greg Armstrong led to changes in the set-up of the fish pass gates and produced an immediate improvement in the attraction flow below the pass. Fisheries staff are now confident the fish pass is operating effectively and hope to deploy underwater cameras to confirm that salmon and perhaps other species are using this route.



Improved attraction flow from the Bala Sluice fish pass



End of August salmon catch rates at Chester Weir fish trap, 1992-2009

Concern over poor salmon returns

Trap catches on the River Dee at Chester to date indicate that 2009 will be a poor year for adult salmon. A similar picture is also emerging on other rivers – based on counter or trap data and angling reports.

This serves as a timely reminder to anglers that it remains as important as ever to practise catch-and-release to help conserve salmon stocks. This is particularly the case on rivers that are considered to be 'at risk' or 'probably at risk' of failing their Conservation Limits (the latter including the Dee).

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