Newsletter

March 2008

We aim to work in friendly collaboration with landowners and farmers, Conservation organisations and relevant public bodies.

RGCG Annual General Meeting

Saturday 19th April

Our AGM this year moves from a mill venue and from the middle reaches of the river to the estuary.

Speakers from the Environment Agency will give a talk on the Glaven re-alignment works, which set back the river from the shingle bank of the seashore. They will discuss the aims of the work, and how it was implemented. The completion of the work in 2006 now makes this a good time to review the changes brought about by the programme of works, and how they have fared since then.

In the rear foreground, between the new and old courses, are the remains of a medieval building known as The Chapel. To the left is the western part of Cley Marshes. Centre photograph are Cley and Wiveton. www.mike-page.co.uk

An item of particular interest to the RGCG is the follow-up discussion on opportunities and challenges presented to wildlife. For example the future management of the Chapel area, as described by David Wood of the National Trust in the October Newsletter; also the long term changes in the Cley freshwater marshes.

The meeting will be held in Cley Village Hall, and the timing of the programme will be:

2.30pm-3pm.	Formal business of the RGCG.
3pm-4pm.	Talk by Rod Hicks of the Environment Agency; questions and discussion.
4pm-4.30pm.	Tea and biscuits.

This year we will open the talk to non members by advertising in the Glaven Valley Newsletter. But as a member, please bring along anybody who you think would be interested in the topic and the activities of the RGCG. We aim to continue to increase our membership!

Where are we going?

So far much of our practical conservation work has been focused on the middle reach of the river, and this programme will continue through 2008 and 2009. We are now also beginning to think ahead to what we might do in the lower reach, and also what might be done in the upper reach. Witness the theme of our AGM this year, and the items within on sea trout and a silt trap above Selbrigg pond.

Glaven realignment works

The Glaven outfall into Blakeney Pit, Old and New

The new course of the river is at the centre of the picture; note the S-shape, which is better than a straight line cut. The 'old' course [1924] loops to the shoreline. It was vulnerable to shingle infill and back flooding in the event of a high tide and surge.

[Cley Marsh drain and sluice in the west bank, is at bottom left and Beach Road car park at bottom right.]

The Glaven outfall into Blakeney Pit. The New

The new course at centre right is shown from a higher angle than above. That part of the old course parallel to the shore line has now been filled in, but the two ends of the loop remain as backwaters to the new course.

Cley marshes drainage system at the west bank

The Cley marshes [see top] drain passes through the new and enlarged capacity sluices in the west bank, and connects in a widened channel into the Glaven

Great Crested Newt: The discovery of pond heaven!

The charismatic great crested newt (GCN) is Britain's most protected amphibian. It is big, beautiful and for those of you who have never seen one we recommend that you try and see one soon! It is included within the EU Habitats Directive and as a consequence the UK has a GCN Species Action Plan. The UK's other resident newts, palmate newt and smooth newt have survived the ravages of twentieth century agricultural intensification better than the GCN which, by the mid-1900s, was in severe decline. Pond destruction, infilling, eutrophication (enrichment of waters by nitrogen and phosphorus) and hedge removal have all worked against this species which is fairly choosy in its demands ideally needing, clear, weedy, fairly deep, fishless ponds close to other similar ponds (the existence of a so-called "pondscape") for breeding (March-June) and wooded areas for living over the rest of the year. Norfolk should be a perfect place for GCNs due to the high density of old marl pits present, but again the infilling of important breeding ponds and perhaps more importantly a general neglect of pond habitats has meant that GCN probably has a restricted and patchy distribution in the county.

But what of GCN in the Glaven catchment? Well, with a realisation that very little information existed myself and Ewan Shilland at University College have been on the hunt for GCNs for a number of years. So far we have found 3 populations (meaning a network of ponds supporting them) at lower Bodham, in the "Hangs Valley", Kelling and most importantly on the Glaven/Bure border at Melton Constable. It is this later set of ponds which represent the best discovery. Richard Waddingham is the owner of Manor Farm which he has farmed all of his life. The farm has many small marl pits (over 40) and on a number of spring weekends between 2003-2007 we have searched these ponds for GCN and other amphibians, whilst also noting down the aquatic plants present. Amazingly we have now located some 18 ponds with breeding GCNs, which must make Manor Farm one of the very best places for the species in Norfolk. And so the question needs to be asked...why is Richard's farm so good? The answer is a simple one, careful, but active pond management. While most Norfolk field ponds are suffocated by a dense ring of encroaching blackthorn and bramble, Richard's ponds are kept open due to a rotational programme of pond excavation and scrub clearance. Every year he digs out at least 3 ponds and this means that most of the ponds have light getting into them. In addition most of his ponds have a "headland" around them, effectively a margin of tall grass which buffers them against pollution from fertilisers and sprays. As a consequence his ponds generally have clear waters and are full of a variety of waterweed species. This combined with the absence of fish from most of his ponds (the baby newts suffer badly from fish predation) means perfect conditions for GCNs. He has in effect created a safe haven for them while in many other areas they have undergone a slow decline.

If you want any pond management tips I am sure that Richard will be happy to advise. It is true to say that farm ponds are one of the most neglected habitats in the UK, yet Richard's ponds show what is possible. Some 19 species of dragonfly have been recorded on his farm and in some of the ponds, despite their small size, more plant species are found than in many of the Norfolk Broads...need we say more...

If you have seen GCN in the Glaven valley or if you would like us to look at your pond please let us know. We would love to hear from you.

Carl Sayer & Ewan Shilland – contact: c.sayer@ucl.ac.uk, 07766717245

The RGCG thank **Mike Page** the well known local aerial photographer for providing the photographs that we have used on pages 1 & 2 of this edition of our Newsletter.

All photographs that Mike allows to be used have a fee attached in way of a donation that goes to a charity of his choice. All monies for photographs and books that he sells has gone to charities. Since the start of his aerial photograph activities many tens of thousands of pounds have been raised for charities of his choice.

We are pleased to have helped his efforts.

Please have a look at his web site www.mike-page.co.uk

From this you will be able to see photographs taken in other areas of East Anglia and especially the Norfolk Coast.

He has also published several books of his aerial photographs some of which we feel sure you would find of interest.

Thanks Mike!

What a difference a day makes

The day was Friday the 9th November when an exceptionally high tide brought about a dramatic re-profiling of the shingle bank fronting the Cley fresh water marshes, the Norfolk Wildlife Trust reserve.

I walked around on Monday the 12th, when there was still much flood water on the marshes. However, the level had clearly subsided a great deal, as shown by the tide line of dead vegetation hanging on the fencing, and along the Beach Road, which was still in parts under water. The enlarged sluice system on the west bank was discharging well from the main drain into the cut connecting to the re-aligned Glaven. However the tideline left by the flood water suggested that at its peak water from the estuary had come in over the sluice area for distances of about 150m to the south and 50m to the north.

The shingle bank from the Beach Café to the new "coastal change" hide on the NWT reserve had been rolled flat, with the shingle being carried well inland. From here to the east bank, apart from a short section close to this bank, when viewed from the main road looked to be intact. In fact it was a "cardboard cut-out" façade. The whole seaward face of the bank and the top had gone.

In the new NWT centre I met a Salthouse resident who said he was surprised at seeing the flood water moving the "wrong way" on the marshes - in a Cley to Salthouse direction – during the flood event; but this might be explained if there was some over-topping on the west bank, as well as the main entry of sea water from the shoreline.

The recovery from saline to fresh water marsh is very dependent on the rate at which the Salthouse and Cley marshes drain down after a flood event. Certainly the new sluice system on the west bank was clearly operating well. It seems likely that the reduction in salinity might have some secondary help from the current high level of the aquifer and inflow of fresh water; and by the significant levels of rainfall which followed, but fortunately not on the 14th November when these pictures were taken.

Ian Shepherd

No, not dancing. Line *clearance*

The 1,900m perimeter of Thornage Common County Wildlife Site has been re-fenced to enable conservation grazing to take place again after an absence of over five years. Grazing is vital to these wet meadows site for attractive plants such as the common spotted orchid and ragged robin, and as optimal hunting territory for barn owls.

We are using professional fencers to meet the stringent standards for specifications of the three types of post used, their spacing, and the tension in the 4 strands of barbed wire to be used. This will offer uniformity and durability to a high standard to potential graziers, as well as meeting the specifications of the grant aid we have managed to source.

However, before the fencing operation can start there is a need for line clearance. For this site this was a really major task for the RGCG to take on. The existing fencing was 25-30 years old, and most places where still standing was no longer stock proof. In many places hedgerow trees had been used to fix the wire, a practice which is no longer in use. In the majority of places a tangle of bramble and blackthorn had grown forward from the hedges and old fence line. This was between 2-5 yards deep, but in one shaded stretch was nearer 10 yards.

Clearance of line and driving in posts along eastern boundary

The fencing operation needs ground, hedge and overhead clearance to allow access of a tractor fitted with the facilities of a post "thumper" and to reel out of coils of barbed wire. Our approach therefore was to clear all vegetation back to the original fenceline, and then re-fence some 1-1.5m inside that. The vegetation would grow forward again to the new fencing and thicken the hedges which line the long west and east boundaries of the site.

The scale of the operation, the density of the bramble and blackthorn growth, and the amount of the overhanging branches and the size and weight of some, presented a formidable problem. Plus we were working on river meadows which were even wetter this year than the winter norm. A fencer company who also quoted for the line clearance cost estimated this to be over £6,000, about the same as the fencing itself. We managed to do it at about one tenth of this.

Our approach was to use a mixture of a very skilled application of brute force, followed by a gentle touch. First Peter Howard went in with a tracked digger, working over the Christmas-New Year period. With this (plus some sawing for large branches) it was possible to knock down much of the over-hanging branches, and side swipe down and to one side most of the bramble and blackthorn growth. Also lengths of collapsed fencing, posts and lengths of old barbed wire that came with it.

An important role for the digger was not only to pull this tangled mass away from the fence line, but to push it into consolidated heaps in non-sensitive areas where it could later be burned and the ash and any wire remaining could be disposed off.

The heavy plant work was followed by weeks of hand work with bow saw, heavy duty loppers, wire cutters and a rake. This was needed to remove remaining small branches in the line, saplings and in particular bramble stalks, which remained obstinately flat or upright. Stray lengths of barbed wire still attached to a post or tree wire pulled out. (Warning, do not try this at home. Barbed wire can snag up on even a blade of grass it seems. A tug to free it can result in a sudden and sharp release, with the wire curling itself about your person, rather than the old post you have to wind it around and to take it away safely).

A very secondary item to the fencing in terms of time and cost, but still important, was to improve the cattle crossing/ drinks areas. The approaches were dressed with a fine stone, and guide rails erected, to prevent the cattle form trampling banks and carrying mud into the river. At the same time, in a piece of unfinished business, the riffle sections running downstream from the crossing area itself, were "top-dressed" with a fine gravel suitable for

Clearance of line and post and barbed wire fence in place.

"I walk the line": we save much Cash!

trout spawning and invertebrates.

So on this site the RGCG have undertaken their second major project; the first of course being the Cinderella Chalk Rivers Restoration Project, for which we won the annual Wild Trout Trust and Orvis Conservation Awards 2007 (see last Newsletter).

In carrying out this important fencing operation we thank first of all Rosanna Dollman of Natural England, the Catchment Sensitive Farming Officer, for her encouragement and help in applying for grant aid through the CSF scheme; Defra for awarding the grant to the two farmers involved; Norfolk County Council for making a further contribution on biodiversity interests; Cemex for the favourable price for the stone and gravel.

Finally we express our thanks to the Cozens-Hardy family as owners of the larger part of the site, and Peter Howard as farmer on the rest of the meadows, and for his skills as a heavy plant operator.

Ian Shepherd

Hunworth: August 2008

Practical work on river restoration, and a reconnection of river and flood plain meadow, will be carried out in August on the stretch from Hunworth rail bridge downstream to Beck Farm.

This is a partnership project between the Stody Estate, the Environment Agency and the RCGC.

The specialist consultant Richard Hey has an international reputation for river restoration projects.

North Norfolk Rivers Sea Trout Project

A sea trout project is now well under way, managed by Wild Trout Trust Director Simon Johnson, who has already secured significant funding and commitment for this. The inaugural meeting was held on the 20th December. Attendees and speakers were CEFAS and Environment Agencies fishery people; and representatives of the Stiffkey, Burn and Glaven rivers; the NWT; and Charles Rangeley-Wilson, who many might have seen on his engaging travels round the world looking at trout rivers in a recent TV series.

A brown trout is a sea trout is a brown trout. A small percentage of brown trout from our rivers manage to find their way past various barriers, the final frontier in our case being a tidal sluice, and hopefully at a later stage manage to make the return journey from the sea. Having said that, the migratory pathways of those brown trout who make their way out to sea and back, and whether to the same river or not, are not at all well known.

On the return of a sea trout, the window of opportunity for coming through the tidal sluice is narrow, but at least a few do make it. To improve the access of sea trout and other migratory species at a tidal sluice is a costly business. It was clear that the modification of the sluice on the Stiffkey would unlock the largest single upstream stretch of the three rivers.

In giving the RGCG input following the meeting we suggested that the Stiffkey sluice should have the first priority of the whole programme. It had the greatest immediate benefit when considered what lay behind this major and first barrier. It would also give an experience base from which at a later stage to turn to the Burn or Glaven.

The Glaven was the most complex. While the river has much good in-river habitat, there was a series of significant barriers in moving beyond the tidal sluice; the structures at Glandford, Letheringsett, Thornage and Hunworth Mills, and the underground section parallel to Bayfield Lake. We should look at each for feasibility and cost of facilitating free movement, and what would be the "cost benefit" in biodiversity terms in relation to the next stretch upstream that would be opened up.

So in addition to trout, we would also consider other migratory species that would benefit from improvements in access, in particular eels; and for example, in the case of the invasive alien and destructive signal crayfish, we may well **not** consider even the feasibility of seeking to make it easier to get past Letheringsett Mill.

Napoleon and the River Glaven

In the distant past the Glaven would have looked very different. In the middle and lower reaches it would have been a meandering and braided flow of water. Over the years it has been increasingly set into one main course, with drainage ditches that carry away spring water and feed into the river some way downstream. In places it is clear that the river has been moved across the valley floor. Clues are a line of soft rush indicating a line of wetness on the meadow, or a field boundary which judging by its erratic line at one time followed a stream, or the fact that the present course sits higher than the lowest point in the meadows alongside.


Letheringsett Mill

A shift of river course could have been done for landscape purposes as at Bayfield. But the commonest and most drastic are likely to be related to the mills on the Glaven. The most obvious diversion is at Thornage Mill, less so at Glandford, and less again at Letheringsett. The latter is clearer now with the removal of bramble along the lane to the ford, which reveals that the drainage ditch half way between the housing and Little Thornage looks to be lower than the river. Another clue might be the ease of putting in fencing posts, indicating a considerable depth of peat soil; perhaps there are more subtle ways in which the depth of peat can be measured in cross section to form part of a multi-disciplinary study!

Each of these mills were re-sited and built as a much bigger building within a year or two of 1800.With this came alterations of the course of the river to increase the head of water, by straightening and increasing the length that was ponded to give a head of water, and so drive the larger machinery required to increase milling capacity. So why on a small river in Norfolk was such a large capital investment put into three mills within two or three miles of each other, and in the space of two of three years?

One book that gives an answer is *English Social History* by G M Trevelyan. The 20 years of war with Revolutionary and Napoleonic France took place in the period 1793-1815. With blockade and counter-blockade the European markets were alternatively opened and closed to British goods. The war also had the effect of shutting out the supply of European corn, which had become necessary to steady food prices in an increasingly thickly populated island. Wheat rose from 43 shillings a quarter, the year before the war broke out, to 126 shillings in 1812, the year that Napoleon went to Moscow.

During the twenty years of war land cultivation was adapted to higher yields to meet demand. With it would come higher profits for the miller as well as the farmer, enough to make what must have been a very substantial investment in building and equipping a new mill, and altering the river course. Although the Glaven is a short river, the drop in gradient in places is steep, certainly for a lowland river, which means it has an unusually high number of mills; and with that, not just some barriers still with us today, but some major man-made changes in the course of the river.

Ian Shepherd.


Glandford Mill from the ford


From Glandford Mill to the ford


Thornage Mill


Thornage Mill, the old river line

Embanked river course to mill

Newsletter

March 2008

NEWS IN BRIEF

- In 2007 university student Victoria Shepherd made a study of the recolonisation and moisture levels where spoil bank removal had taken place as part of the Cinderella Project. She compared the hydrological connectivity of the restored reach and a reach with the embankment remaining. Tori has written a very comprehensive and detailed report of her research project and concludes that the restoration project proved successful in hydrologically reconnecting the river and the floodplain as well as creating a self-sustaining ecosystem. Tori looks to do further research into the succession of vegetation on the restored river bank on the species diversity and the factors in addition to increased moisture which may influence this.

- Planning for a silt trap just upstream of Selbrigg Pond, in the upper reaches of the River Glaven, is now well advanced. The trap will be constructed within the next few months and will be designed to facilitate regular removal of the silt. The trap will benefit the pond which is a County Wildlife Site. It will contribute to a reduction in the level which would otherwise move progressively downstream. Meanwhile the Environment Agency and CSF Officers involved are working with farmers in the area to reduce water borne soil erosion from arable fields

- A planning application was lodged for the construction of an underground cable system from Weybourne to Salle, to connect the proposed Sheringham off-shore windfarm to the National Grid. The RGCG [with CPRE] made representations for the case for directional drilling in crossing the River Glaven headwaters rather than the dam and pipe technique. We also pointed out that the Signal Crayfish is present in the River Bure and a sighting was made in a drainage ditch near Salle. The River Bure is also infected with Himalayan Balsam in much of its floodplain. We requested that a condition of planning approval should be that the strictest precautions should be taken to prevent any cross-contamination from one part of the route to another by invasive species. The River Glaven is comparatively untouched by these at present and particularly in the case of Signal Crayfish, it is important that it stays that way.

Volunteer Help Needed for Himalayan Balsam removal

There is a localised "hot-spot" of Himalayan Balsam at Thornage Mill. A plant pulling day will be held on **SUNDAY 29th June** meeting at **2.00pm**. This is light work in a very pleasant area and volunteers to help in this exercise would be most welcome. This is the third year we have worked over this spot. We should be getting close to exhausting the seed bank!

Robin Combe Chairman 01263 712058;
Ian Shepherd Secretary 01263 713370;
Len Bentley Treasurer & Membership Secretary 01263 741076.
Web site www.riverglaven.org.uk