Essex Otter Survey 2009-2010

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Introduction

It seems incredible to us now that a species so well loved and easily recognised as the otter had never been systematically surveyed in Essex until it was finally extinct.

This report celebrates 15 years of the annual Essex Otter Survey; however otters have been part of the fossil record of the British Isles for a staggering half a million years (Harris and Yalden, 2008), illustrating just how resilient a feature they have been as part of our native fauna.

It is therefore even more startling that after enduring 500 years of deliberate persecution, they were finally driven to near extinction in East Anglia not by hunting, but as an incidental consequence of our twentieth century lifestyle. The accumulation of pollutants in our waterways, ingested via the fish on which they fed, led to infertility in adults and debilitating deformities in their cubs. Legal protection in England and Wales in 1978 (1982 in Scotland) may have protected them from deliberate harm, but it was the banning of harmful, persistent PCBs, organo-chlorines and the removal of lead from petrol that allowed the species to begin the long road to recovery.

The return of the otter in Essex over the past 25 years is especially remarkable as it is almost entirely due to natural re-colonisation. During the 1991-1994 National Otter Survey only two sites on the Stour and one on the Colne were positive but between 1996 and 2003 otters started to establish breeding territories and were already moving south onto the tributaries of the Blackwater and Chelmer. The significance of this natural movement of animals is clear; without good habitat, relatively unpolluted water and an adequate population of fish in our watercourses this expansion of range would have been impossible.

For an animal that holds territories many miles long, otters are never particularly numerous on rivers (the River Colne for example might support as few as 8-12 resident animals), but the number of Essex survey sites with clear otter signs finally exceeded 100 in 2009 for the first time since the survey began. Although this dropped back in 2010, the population still expanded its range.

The last few years have seen a big increase in the number of positive sites and I would like to thank the dedicated team of RIVERSEARCH volunteer surveyors across Essex that continue to make this long term study possible. Without their skill, enthusiasm and willingness to investigate their own rivers and streams we would have no idea how well this iconic riverside mammal was doing.

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Riversearch

Surveying for otters

Even when otters are using a river they are rarely seen. Their main prey, eels and other fish, are more sluggish and easier to catch at night so riverine otters have adapted to a nocturnal lifestyle. They can also occupy very large territories, with males typically holding 15-25km overlapping with several females. It has therefore been important to develop a method of surveying that does not rely on actual sightings.

Otters communicate with each other by depositing droppings, known as spraints, on prominent features such as fallen trees, boulders, grass tussocks, shingle bars and road bridge supports. The males travel greater distances and need to territory-mark more regularly so their spraints tend to be smaller than the females or juveniles (Woodroffe, 2007). With training and practice spraints can be easily located and identified. Dark and sticky when fresh, spraints contain fish bones and scales and have a distinctive scent, variously described as smelling like fresh hay, 'jasmine tea' or fishy and musty.

Survey transects generally begin at bridges or other prominent features and include a total of 600m of bank in the most easily accessible direction from the starting point. When a sprainting site is found the spraints are counted (but not removed) and the survey is complete. Footprints and other field signs are noted but a survey point is only identified as positive if spraints are present or if suitable photographic evidence is produced to enable verification.

The easiest time for surveying is from February to the end of May before waterside vegetation becomes too dense. Surveys should not be undertaken during times of flood or high water as field signs will be washed away. Spraints generally begin to reappear a few days after the water levels drop as otters remark their territories. Tracks may also be more obvious after floods in recently deposited silt. Where access is possible sites can be searched at any time of year and some may be visited several times.

Survey limitations

While a survey of field signs can reveal the presence of otters, it tells us little or nothing about the individual or the number of animals present in a catchment. Only detailed analysis of spraints in a lab can confirm the identity of an individual and unfortunately usable DNA is only present in an average of 20% of samples. A further limitation of this technique is that spraints must be collected within an hour of deposition to be fresh enough for examination.

A new method of analysing spraints by their chemical scent markers is still under development at Cardiff University. The main advantage of this in comparison with DNA is that all spraints contain scent information even if they are not fresh. This method could potentially identify individual otters and possibly even age, sex and breeding status. In the future we hope to undertake such a survey to calculate the number of otters on our river catchments.

Above: Otter spraints (droppings)
A fresh spraint with a black, tarry appearance and (inset) an old spraint showing bleached fish bones and scales. Spraints are often deposited in obvious places such as logs, tree roots, in-channel debris, road bridge supports and silt bars. Photos: Darren Tansley & Geoff Empson

Right: A typical sprainting site
Otters often spraint at the base of a riverside tree. Note the bare patch in the grass next to the trunk where continued urination has killed off the vegetation. Photo: Darren Tansley

2009-2010 survey results

Survey points

RIVERSEARCH now aims to survey 255 points along 27 rivers/catchments covering Essex and adjacent parts of neighbouring counties Suffolk, London, Hertfordshire, and Cambridgeshire. These points cover 26 districts and boroughs - 13 in Essex, 8 in London, 2 in Suffolk, 2 in Hertfordshire and 1 in Cambridgeshire. The list includes the original 234 survey points (Macdonald & Mason, 2003) as well as extra locations that have subsequently been incorporated.

In 2009, 225 (88.5%) of the 255 survey points were surveyed but this dropped to 192 (75.3%) in 2010 due to extreme weather during the final November/December checks and the loss of a key surveyor on the Blackwater catchment. Of these, 49% (n=110) were positive and 51% (n=114) negative in 2009 compared with 47.5% (n=91) positive and 50.5% (n=97) negative in 2010. The remaining 1 site in 2009 and 4 (2%) in 2010 showed other signs of otter activity but no spraints. A comparison of the last eight years shows an upward trend in positive results for the surveyed sites and a downward trend in negative results (see chart 1 below).

Rivers and catchments

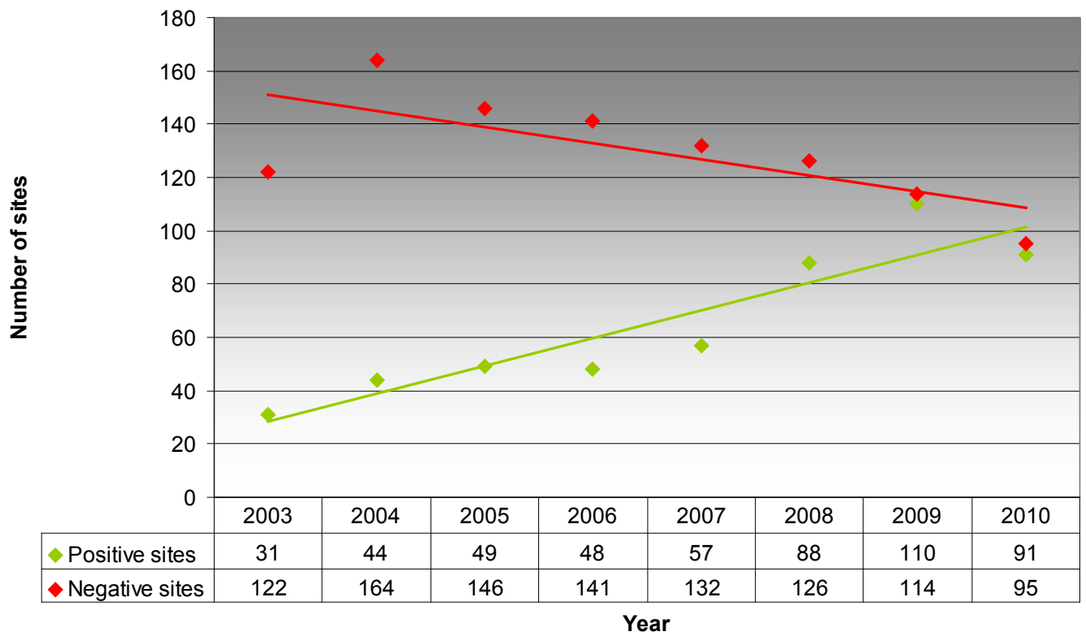
In 2009, 17 catchments were surveyed in their entirety and a further 8 partially. For the first time Stebbing Brook was surveyed but Cripsey Brook and Pincey Brook were not. The latter are both small watercourses with only 2 survey points each so this was not considered to be a significant omission.

In fact the total number of unsurveyed sites dropped for the fourth successive year thanks to the efforts of a number of surveyors who returned to points that had not been visited in the spring. Once again several surveyors provided results from extended searches of their water courses outside the official survey points. While these additional areas are not used for the comparative data below, they are incorporated into the species distribution map and helped inform the Environment Agency's National Otter Survey 2009-2010.

In 2010, 14 catchments were surveyed in their entirety and the remaining 13 partially. The number of unsurveyed sites increased substantially for the first time in five years. This was due to the severe snowfalls and subsequent high water in November and December (see photos opposite), the months when unsurveyed sites are usually reallocated to infill areas not completed earlier in the year.

There were, however, new opportunities to record otter activity due to activity on various monitoring rafts originally intended to track the movement of mink in the county. This network of rafts will undoubtedly provide more records as the project is expanded to include the Chelmer and the Blackwater catchments in 2011.

Chart 1. Results from those sites surveyed since 2003. The long term trend indicates an increase in positive sites and a corresponding decrease in negative sites over this period.



	2003	2004	2005	2006	2007	2008	2009	2010
Positive sites	31	44	49	48	57	88	110	91
Negative sites	122	164	146	141	132	126	114	95

Table 1: Breakdown of the sites in each river/catchment that were surveyed as positive, negative or probable for otters in 2009 and 2010. (Shaded catchments were positive for otters during at least one survey.)

River/Catchment	Total No. of survey points	No. of positive		No. of probable		No. of negative		No. of points not surveyed	
Year	(2009) 2010	2009	2010	2009	2010	2009	2010	2009	2010
Blackwater/Pant	29	11	5	0	1	15	7	3	16
Box	(5) 6	2	4	0	0	3	2	0	0
Brain	5	2	1	0	0	1	2	2	2
Brett	12	9	7	0	0	2	5	1	0
Cam	6	3	2	0	0	3	0	0	4
Can	4	4	2	0	0	0	0	0	2
Chad Brook	5	5	2	0	0	0	0	0	3
Chelmer	18	10	9	0	0	6	0	2	9
Colne	26	10	11	1	0	8	7	7	8
Cripsey Brook	2	0	0	0	0	0	2	2	0
Crouch/Dengie	12	0	0	0	0	12	12	0	0
Glem	10	6	2	0	1	4	1	0	6
Hamford Water	5	0	2	0	0	5	1	0	2
Holland Brook	5	0	2	0	0	5	3	0	0
Lee or Lea	10	1	0	0	0	5	5	4	5
Pincey Brook	2	0	0	0	0	0	2	2	0
Roding	17	6	6	0	0	10	8	1	3
Roman River	7	1	1	0	0	1	4	5	2
Sandon Brook	2	2	0	0	0	0	2	0	0
Salary Brook	1	1	1	0	0	0	0	0	0
Southeast Essex	15	0	0	0	0	15	15	0	0
Stebbing Brook	1	0	0	0	0	1	1	0	0
Stort	9	2	1	0	0	7	7	0	1
Stour	27	26	23	0	2	1	2	0	0
Tenpenny Brook	3	0	0	0	0	3	3	0	0
Ter	8	3	4	0	0	5	4	0	0
Wid	8	6	6	0	0	2	2	0	0
Total	**(254) 255**	**110**	**91**	**1**	**4**	**114**	**97**	**29**	**63**

The effects of flooding

Even bridges with purpose built otter ledges are impossible to survey during high water. Photos: Darren Tansley

The River Stour
(Box, Brett, Chad Brook, Glem)

Surveyors:- Liz Brooks, Les Cousins, Adele Devonshire, Bill Johnson, Carole Mander, William Mann, Darren Tansley and Sarah White

The River Stour forms the border between Essex and Suffolk and the catchment includes a number of substantial tributaries which drain south into the river from the Suffolk side. This was the first 'Essex' catchment to be re-colonised by otters during the late 1980s although only two sites were found to be positive during a survey in 1991. By 1996, 66% of the catchment was occupied. That year the Environment Agency reported that otters were breeding at Flatford.

This river continues to provide good habitat for otters which in the mid reaches have made use of the invasive American signal crayfish and Turkish crayfish as a food resource. Many spraints in this area are comprised almost entirely of crayfish and the remains of claws and carapaces can be found on the river banks. There are good holt sites along much of the main channel but road casualties are still generally higher on this river than any other in the county.

2009

The 2009 survey coverage was excellent with only one point left unsurveyed throughout the whole catchment and tributaries. The main channel showed 96% occupation with just one point on the Estuary mouth (Shotley) failing to show positive signs. Shotley peninsula, on the Suffolk side of the Stour, is a tidal stretch. In such habitats it can be quite challenging to find otter signs especially if there are no obvious side channels to search. These results confirm that otters have now reached every part of the River Stour and are breeding successfully in spite of the level of road casualties. Bill Johnson reported a lengthy sighting of a male otter at Stratford St Mary in April in the middle of the day, illustrating that persistence pays off. This was his first sighting in six years of surveying the Stour.

The levels of occupation on the tributaries were also impressive with the Brett still showing 75% occupation, the Glem up from 50% to 60% and the Chad Brook up from 40% to 100%. These were exceptional results and show just how important the Stour is for this species.

2010

Again there was good coverage with all the main channel surveyed. Unfortunately less than half the points on the Glem and Chad Brook were surveyed but the Brett and Box were completed in their entirety. The main channel still showed very good occupation with 23 positive sites and 2 further possibles. River connectivity was improved in February 2010 by the creation of an eel passage around the Bures flood control structure linking the downstream and upstream habitats for migratory fish (see photos opposite). It is hoped that this will encourage fish populations to expand, in turn providing further food resources for otters.

River Stour eel pass (before and after)
The creation of a bypass channel around the Bures Mill flood control structure in February 2010 has made 52km of upstream habitat accessible for fish such as eel, a favoured prey species of otters. Photos: Darren Tansley

While only 2 of the 5 Chad Brook sites were surveyed, both were positive. The Glem, where only 4 of the 10 sites were investigated, showed 2 positive and 2 negative. Both these limited river surveys reflected similar percentages to the complete surveys from 2009 and would possibly have provided more positive results if the other sites had been visited.

The Brett yielded 7 positive records which is slightly down on the 9 recorded in 2009 but remains within the typical range of 7-9 recorded since 2006. The Box was up to 4 out of 6 positive sites which is slightly higher than the usual 2-3, although 4 were recorded in 2003.

Otter spraint with crayfish remains
Otters on the Stour are now feeding more regularly on non-native crayfish. Photo: Martin Pugh

The River Colne and Tendring Peninsula
(Bourne Brook, Roman River, Hamford Water, Holland Brook, Salary Brook, Tenpenny Brook)

Surveyors:- David Aldridge, Stephen Clarkson, Les Cousins, Sonya Lindsell, Peter Margetts, Roy Read, Roger Smith, Darren Tansley, Ernie Wells, Sarah White and Jim & Sarah Young

The River Colne was one of the first rivers to be re-colonised by otters after their extinction in the 1970s and 1980s. Until 2003 the number of positive sites fluctuated, but breeding is now taking place and the population appears stable despite the number of road deaths each year.

The Tendring Peninsula, while one of the last areas to retain its otter population in Essex, has remained otter free in the intervening decades (apart from the deliberate release of two pairs in 1996). However, 2010 may prove to be the turning point for this area.

2009

In 2009 there were only 10 positive sites on the River Colne, considerably fewer than the 15 found in 2008, but this was partially due to a drop in survey coverage along the main channel. In 2008, 24 of the 26 main river sites were surveyed but only 19 were visited in 2009. As a number of these unsurveyed locations had proved positive in 2008 it is possible that otter distribution actually remained relatively stable.

An otter was sighted under the road bridge at Earls Colne during mink control work but once again the Colne suffered a road casualty during the winter floods. A young female was knocked down at Ford Street after tracking along a water-filled side ditch and arriving at an impassable culvert under the road.

The Bourne Brook, a tributary of the Colne which threads south around Halstead, was mostly unsurveyed in 2009, however there was spraint under the bridge at Nightingale Hall. This suggests that there may have been more evidence had all the other sites been looked at, as in 2008, when there were otter signs throughout. Mink signs were also found as part of a mink control effort and non-native signal crayfish were seen in the channel.

The Roman River was not surveyed in its entirety, however the site near Fingringhoe Mill once again proved positive. Otter signs have been found on Abberton Reservoir so once again it appears that a lack of survey coverage, rather than otter presence, has influenced the distribution map.

In 2009 the survey site at the downstream end of Salary Brook was positive. This site was mistakenly identified as Tenpenny Brook in previous surveys. This evidence backs up sightings on the Ardleigh Reservoir and spraints found on a mink monitoring raft on a pond just off the Salary Brook near Ardleigh in 2008.

The Tendring Peninsula continued to provide no direct evidence of otters during the survey and no signs of otters were found on Hamford Water or the Holland Brook. This was unfortunate as in 2009 the results from RIVERSEARCH were provided to the Environment Agency as part of the National Otter Survey. Had this survey been undertaken a few months later the picture would have been very different.

Otter footprints on a monitoring raft
Otter tracks appeared on a monitoring raft on Holland Brook in 2010 shortly after a nearby artificial otter holt was excavated by an animal. This was the first time the holt had been used since the 1970s. Water voles are also regular visitors. Photo: Peter Giles

2010

Once again a number of sites on the main channel were not surveyed but of the 18 sites checked, 11 proved positive. This continues to be a good river for otters with more footprints recorded on monitoring rafts, including one at an off channel lake in White Colne. Otters often explore small side channels and were recorded visiting sites along the Peb Brook.

Spraints were found at two sites on Bourne Brook but this was also an area of heavy mink activity with over 20 trapped near the confluence with the River Colne. The Roman River once again supplied only the one positive site at Fingringhoe Mill. Further survey work is planned in 2011 as part of the Roman River Living Landscape project.

In the Tendring Peninsula there was an unconfirmed anecdotal sighting of an otter at Howlands Marsh EWT Reserve, St Osyth in February 2010. No supplementary evidence could be found but in March the first positive signs of otter activity were recorded in the district by David Aldridge (Dovercourt tip of Hamford Water) and Stephen Wilkinson (Holland Brook). Further signs were discovered later on by Peter Margetts and Jim & Sarah Young and an old artificial holt on Holland Brook was excavated by an otter that helpfully left its footprints on the adjacent monitoring raft (see photo). Otter prints have also appeared on another monitoring raft near Beaumont.

These records are important as they illustrate the ability of Essex otters to disperse along the coast via tidal areas and borrow dykes to re-colonise their previous territories.

The River Blackwater
(Pant, Brain)

Surveyors:- Colin Butler, Les Cousins, Renee Hockley-Byam, Hilary Jones, Sue Manning, Alec Martin, Martin Pugh, Adam & Jo Taylor, Stephen Wilkinson and Peter Wilson

The Blackwater (known as the Pant in its headwaters) has the largest number of survey points of any of the Essex rivers. The only tributary of note is the Brain which flows south through Braintree and Witham.

2009

Survey coverage was much better in 2009 than previous years with 26 of the 29 sites covered. Of these, 11 were positive, almost double the number of sites in 2008. For the first time the Blackwater had more positive sites than the Colne: however it should be noted that survey coverage of the two rivers was not directly comparable.

Otters appear to be consolidating their population on the Blackwater with good signs around Maldon, Kelvedon, Coggeshall, Braintree and up into the headwaters as far as Little Samford. In 2009 Martin Pugh, an ecologist working on crayfish surveys, was able to provide some evidence of spraints that may otherwise have been missed from bankside surveys. However the majority of sites were also surveyed using the normal methodology and provided very good evidence of activity.

Otter at Bradwell
On two occasions an otter has been seen on the Blackwater at Bradwell. Sprainting regularly occurs here. Photo: Renee Hockley-Byam

This survey was the first with a recorded road death in the catchment; a female collected for post mortem from Little Samford in the headwaters. This illustrates that otters are moving far upstream from the traditional hotspots to the south.

On the Brain, 3 of the 5 sites were surveyed with 2 proving positive. This was significant as in previous surveys the only otter signs found were in Witham. Now we have evidence of otters as far upstream as White Notley.

2010

A combination of few surveyors in the upper reaches and the poor weather resulted in 16 of the 29 sites being left unsurveyed in 2010. This makes comparisons with 2009 rather difficult, but 5 sites proved positive, one had probable signs, and an otter was observed at Bradwell on two occasions by Renee Hockley-Byam as it visited the section of river backing onto her garden. Interestingly this otter is not using the monitoring raft located here even though mink are regular visitors. A full survey of the Blackwater will be a priority for 2011 to assess the true extent of otter distribution, but it does appear that otters are well established in the catchment.

Again only 3 of the 5 sites on the Brain were surveyed, yielding one positive site at Witham. This river has been the subject of night time motion capture filming by Sue Manning which has resulted in exciting footage of a mother and two cubs regularly passing through Witham, with some good displays of play, fishing and diving behaviour. Water voles have also been caught on camera as well as mink.

Further sprainting sites were located upstream by consultants working on a road bridge and it seems likely that the true distribution of otters on this catchment is not being reflected by the distribution map.

IR Camera trap on the River Brain
An otter and her cubs are regular visitors to Witham along with water vole, mink, heron and muntjac. Photos (from video footage): Sue Manning

The River Chelmer & Chelmer Navigation
(Can, Wid, Sandon Brook, Stebbing Brook and River Ter)

Surveyors:- Patricia Clegg, Adrian Halliday, Graham Hart, Graham Littlewood, Sue Manning, Alan Roscoe, Adrian Wall, Elizabeth & George Wiley, Stephen Wilkinson and Peter Wilson

2009

As with the Blackwater the number of positive sites along the main channel and the tributaries increased significantly in 2009. This is perhaps to be expected as the two catchments are linked, providing excellent connectivity throughout the greater Chelmer/Blackwater river system.

In 2009, 10 of the 16 surveyed sites on the main Chelmer were positive, up from 7 in 2008; the highest number on the survey so far. In addition across the tributaries there were another 12 positive sites with 75% positive (6 out of 8) on the Wid, and 100% on the Can and Sandon Brook. Two survey points have been added to the Can this year increasing the number of sites from 2 to 4 so it is not easy to make a direct comparison with previous years based on total numbers of positive sites. However this does give us a more accurate record of otter distribution on this river.

The Ter was surveyed in its entirety in 2009. It was only in 2008 that the first signs of otters appeared on this river and this was at just one site near its confluence with the Chelmer Blackwater navigation. In 2009 three sites proved positive but more importantly these were distributed throughout the river from Hatfield Peverel to Moulsham Hall, a significant extension of otter distribution.

Unfortunately there were 4 deaths across the catchment, 2 from road traffic collisions and 2 drowned in an illegal crayfish trap on the Wid. This was equivalent to the expected annual casualty rate for the whole of Essex.

2010

Of the 18 sites on the Chelmer only the 9 downstream of Chelmsford were surveyed, yet all of these proved positive. Stephen Wilkinson reported seeing 3 otters on the same day of surveying with good views of a pair followed by another swimming in the same direction as if it was trying to catch up. Could this have been a mother following her two sub-adult cubs? Stephen reported finding 68 spraints at 31 sites between Moulsham and Hoe Mill which certainly indicates a high level of activity in this area.

Mink are ever present in large numbers, often being sighted in Chelmsford itself or at the various locks along the navigation.

The Ter continued to provide good otter signs with 4 positive sites, the third consecutive increase since the first spraints were found in 2008. This was the first year no signs were located at the confluence but the mid section from Lyons Hall Bridge to Little Leighs was well utilised.

Locks as sprainting points
The Chelmer provides a number of easily accessed locations for surveyors to search. Where otters haul out to find their way around lock gates there are often obvious spraints as illustrated in the circled example here. Photos: Darren Tansley

River Roding
(Cripsey Brook)
Surveyors:- Catherine Anderson, Rebecca Banks, Les Cousins, Marcus Dain, Paul Day, Norman Lee, Henriette Monteiro, Louise Wells and Paul Worham

The Roding has not consolidated its population in the way that the Stour and the Colne have. In 1999 there were 9 positive sites after which the number dropped to 4 in 2001 and 3 in 2002. From 2003 the number of positive sites did not exceed 2 until 2008.

2009

The only point not surveyed out of 17 possible sites on the Roding was at Barking Creekmouth, an area very close to the River Thames. Only 6 points proved positive in 2009, down from 9 in 2008, but still much higher than the usual 1 or 2 positive sites during the previous 5 years.

While the number of positive sites decreased, their distribution widened to include sites such as Ilford in the south and Aythorpe Roding in the rural headwaters. Unfortunately the Cripsey Brook was not surveyed in 2009 but in 2008 both survey points were negative.

2010

In 2010 there were 6 positive sites, the same number as the previous year, again with a wide distribution from Aythorpe Roding in the north, to Chigwell in the south. However the majority of activity was in the rural upper section. These findings were confirmed in "The Water Vole and Otter Survey of the River Roding 2010" by Rebecca Banks, commissioned by the Thames Environment Agency through Water for Wildlife.

"*The discovery of otter spraints along much of the upper reaches from [Canfield End], the first suitably wet site in the top reaches, to [Little End, Chipping Ongar] is positive.*" (Banks, 2011)

During the commissioned survey, (which covered different locations to the RIVERSEARCH points) positive otter signs were found at 5 locations consisting of well marked spraints and, in one case, a possible footprint. Evidence of signal crayfish was also present at three sites. Crayfish burrows, crayfish remains and shell fragments in otter spraints were all recorded.

An additional 14 surveys were undertaken by Rebecca Banks on tributaries of the Roding, including 5 sites on the Cripsey Brook, but no further otter signs were found.

West Essex Border
(Lee/Lea, Stort and Cam)
Surveyors:- Kevin Radley, Bob Reed, Adam Rochester and Tommy Root

2009

Due to bad weather and the loss of a regular surveyor only 6 of the 10 sites on the Lea were surveyed. Positive sites were down from 4 to just 1 at Cheshunt but lack of survey effort may be to blame for this poor result. The Stort surveys identified 2 positive sites out of 9 surveyed. Otter signs are regularly found at Eastwick but the extra positive site at Spellbrook Lock was welcome.

By contrast, the Cam bounced back from a dismal result in 2008 when no signs were found on the river for the first time since 2003. Of the 6 sites, 3 provided positive results, equivalent to the 2007 survey. It is possible that an otter died in 2008 and the territory had not been re-colonised until 2009.

2010

The Stort had the best survey coverage of this area with 8 of the 9 points checked several times during the year. Once again Eastwick proved positive but no spraints were found elsewhere.

The other catchments in the area proved problematic due to a lack of surveyors. Only half the sites on the Lea were visited and all 5 proved negative. This is the first year that no signs of otters have been found (with the exception of 2005 when it was not surveyed). Only 2 sites on the Cam were visited but in this case both proved positive, giving some cause for optimism.

Otter on the Lee
Otter signs have been sporadic on the Lee for the duration of the Essex Otter Survey. Photos such as this one, taken in the 1990s, are rare.

South Essex
(Mardyke, Ingrebourne, Dengie and Crouch)
Surveyors:- Karen Bigmore, Carlos Boullon, Sonia Cassau, Norman Edney, Chris Govus, Graham Hart, Tim Love, Judy Merchant, Sue Portsmouth, Adam Rochester, Stephen Wilkinson and Peter Wilson

2009

Sites in this part of the county continued to remain steadfastly negative in spite of good survey coverage. There were unconfirmed reports of otters on the Crouch, Roach and from small streams in the area, but in the absence of definite evidence these were impossible to verify. Both seals and mink could easily be mistaken for otters, especially when glimpsed at a distance, so could account for some of these sightings.

In addition to the usual surveys a number of extra points were covered by the Essex Water for Wildlife Officer as part of the National Otter Survey 2009-2010. These also proved to be negative for otters but this part of the county continues to be the real stronghold for the beleaguered water vole that has been driven to virtual extinction across much of Essex.

2010

Coverage was good for the survey sites in this area with every site being surveyed at least once. Unfortunately no positive evidence could be found. With the re-colonisation of the coastal fringe in the north of the county, and the discovery of otters in Kent for the first time in decades, the possibility still remains for expansion here via the coastal route.

Water vole stronghold
While otters appear to be absent, south Essex still has strong populations of water vole; a species that is virtually extinct elsewhere in the county.
Photo: Shirley Field

Summary of the Essex Otter Survey 2009-2010

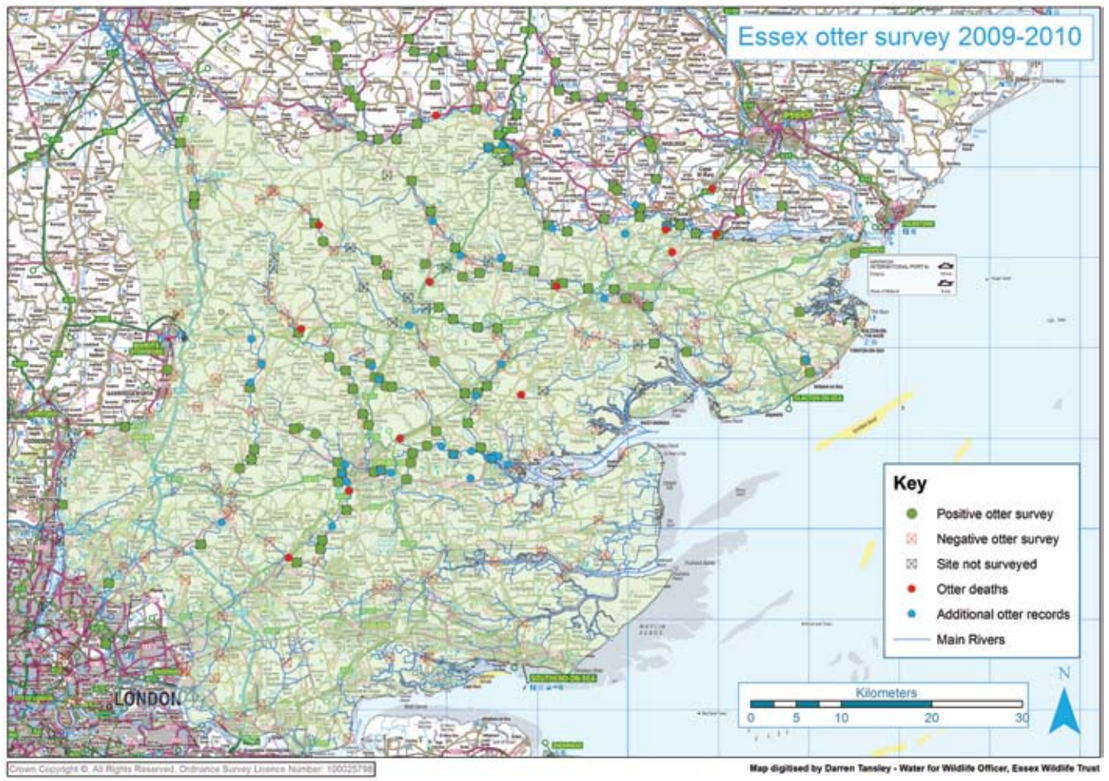
Positive sites have increased dramatically since Essex University recommended that an annual survey should be conducted at the conclusion of their 7 year funded project (Mason & MacDonald, 2002).

In 2009 the number of positive sites exceeded 100 for the first time and the number of negative sites dropped to its lowest level despite an increase in the number of sites surveyed. It is probable that the same result would have been achieved in 2010 if it had not been for some of the worst weather to hit the UK for decades. Early snowfall in November followed by further snow and flood water hampered efforts to survey sites not visited earlier in the year.

However the actual distribution of otter signs has spread both within catchments and into previously unoccupied areas. There has been a particularly noticeable consolidation of the greater Chelmer/Blackwater river system in the centre of the county. In 2009, for the first time, there were as many records from this area as in the north, the traditional stronghold for otters in Essex. The coastal area of the Tendring Peninsula provided this year's new expansion of range, with signs on the sea wall and the Holland Brook. This was particularly welcome news after the absence of a natural population since surveys began.

In 2003 there were 31 positive records, a figure that nearly quadrupled in 2009 to 110 positive sites and one probable. Half of the rivers surveyed produced the highest, or equal highest, number of positive records since 2003 (Blackwater/Pant, Chelmer, Brain, Brett, Can, Chad Brook, Glem, Sandon Brook, Stort, Stour, Salary Brook, Ter, Wid). Where there were drops in the number of positive sites (Colne, Roman River, Lea) these may have been affected by reduced survey effort rather than a genuine retraction of range.

It was disappointing that the number of surveys undertaken in 2010 dropped to 192, which inevitably resulted in fewer positive sites being identified. However there were still slightly more positives than in 2008 when 26 more surveys were undertaken, so the trend still remains upward.



Map 1. Otter distribution 2009-2010
This map shows all the points that were surveyed by the RIVERSEARCH survey team in 2009 and 2010 with positive sites in green. Additional records gathered from otter deaths, independent sources or by RIVERSEARCH surveyors outside the official survey sites are also included. Otter casualties are collected by Essex Wildlife Trust and the Environment Agency for post mortem.

Interpreting what is happening to a population from field signs such as otter spraints must be treated with caution as this cannot be used as a direct surrogate for numbers of individuals. Until we have a reliable method of identifying individuals from these signs we are left to speculate at the number of otters that inhabit our river systems.

A good example is the River Roding, where the distribution of field signs alters year on year. In 2009 the field signs were concentrated in the lower and middle reaches, but in 2010 a number of positive sites appeared in the upstream rural section, confirmed by the independent "Water Vole and Otter Survey of the River Roding". It would appear that at present otters are holding territories upstream but may be venturing south on occasions. If breeding occurs then it is likely that territorial range will expand to downstream areas: however the section from Ilford to Barking Reach offers few, if any, suitable holt sites.

The 2009 survey was unable to confirm any expansion of range into the eastern coastal margin stretching from Tendring in the north, to Dengie and the Thames marshes in the south. But an anecdotal otter sighting at Howlands Marsh Essex Wildlife Trust Reserve by a birdwatcher in February 2010 led to speculation that otters had returned. This hope proved to be true when otter 'tarring' was discovered on Hamford Water by David Aldridge on 23/10/10, followed by a positive site survey by Stephen Wilkinson on the Holland Brook just three days later.

The discovery of otter tracks on a Holland Brook mink monitoring raft later in the year confirmed the identity of the animal excavating an old artificial otter holt just a few metres away. It is hoped that the return of otters to this key Tendring water course heralds the start of a natural re-population of the area after an absence of over 30 years.

Otters are moving along estuarine stretches of the River Stour as demonstrated by tracks on another mink monitoring raft at the Essex Wildlife Trust Nature Reserve in Wrabness in January 2011. This is further evidence of the species' ability to utilise our coastline for dispersal and it is possible that this will be the route by which some animals will eventually find their way to the south of the county.

Otter presence has also just been confirmed in Kent, although their distribution has not yet been fully explored, so in the future, the Thames Estuary may be the conduit for dispersal of otters between the two counties.

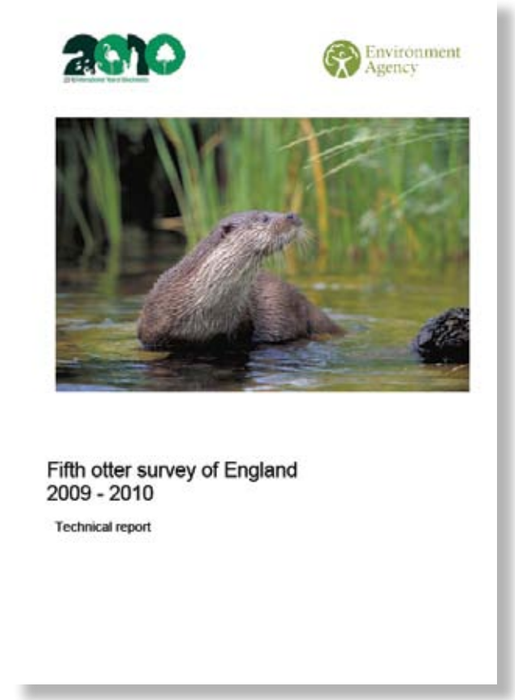
The national otter survey 2009-2010

In 2009 Essex Wildlife Trust's Water for Wildlife Project was approached by the Environment Agency to take part in the fifth otter survey of England. RIVERSEARCH was seen as an ideal way of delivering the bulk of this work so surveys undertaken that year, in the selected 50km squares, were compiled to inform the national dataset.

In areas with no positive records, a number of additional surveys were undertaken by Water for Wildlife Officer Darren Tansley. These were chosen to infill gaps in the normal Essex repeat survey locations or to ensure that every effort was made to confirm otter absence in areas with challenging survey sites; for example tidal reaches of estuarine rivers.

The report has now been published and all the RIVERSEARCH surveyors who took part are credited in the document which can be downloaded in PDF format from:

http://www.ptes.org/files/1335_otters-_fifth_otter_survey_of_england_report.pdf.



Otter research in Essex

Water for Wildlife continues to support undergraduate and postgraduate research dissertations. Universities offer facilities not available at The Wildlife Trust so we were pleased to work with Les Cousins of Essex University with his study of PCBs and prey species in otter spraints.

We hope to publish a summary of his findings in the 2011 Essex Otter Survey and would like to thank all those RIVERSEARCH surveyors who took the time to collect spraints for the study.

Presence of mink

Surveying North American mink *Neovison vison* is not fundamental to the Essex Otter Survey but where evidence of this species was noted by surveyors this was recorded. In addition we receive records of mink from members of the public and through mink control efforts which form part of the Essex Water Vole Recovery Scheme. The map therefore represents only those records we have been able to verify and should not be considered as a full species distribution as no systematic mink survey of the county has ever been undertaken.

Currently mink signs are found almost everywhere that otters are present which indicates a level of co-existence that may at first appear surprising. However mink also inhabit off channel areas such as arable land, hedgerows and woodland and can therefore avoid direct contact with otters. Whilst otters can kill mink, they risk bite wounds or broken teeth that can lead to infection or a reduced ability to hunt and feed. This may eventually result in the death of the injured otter.

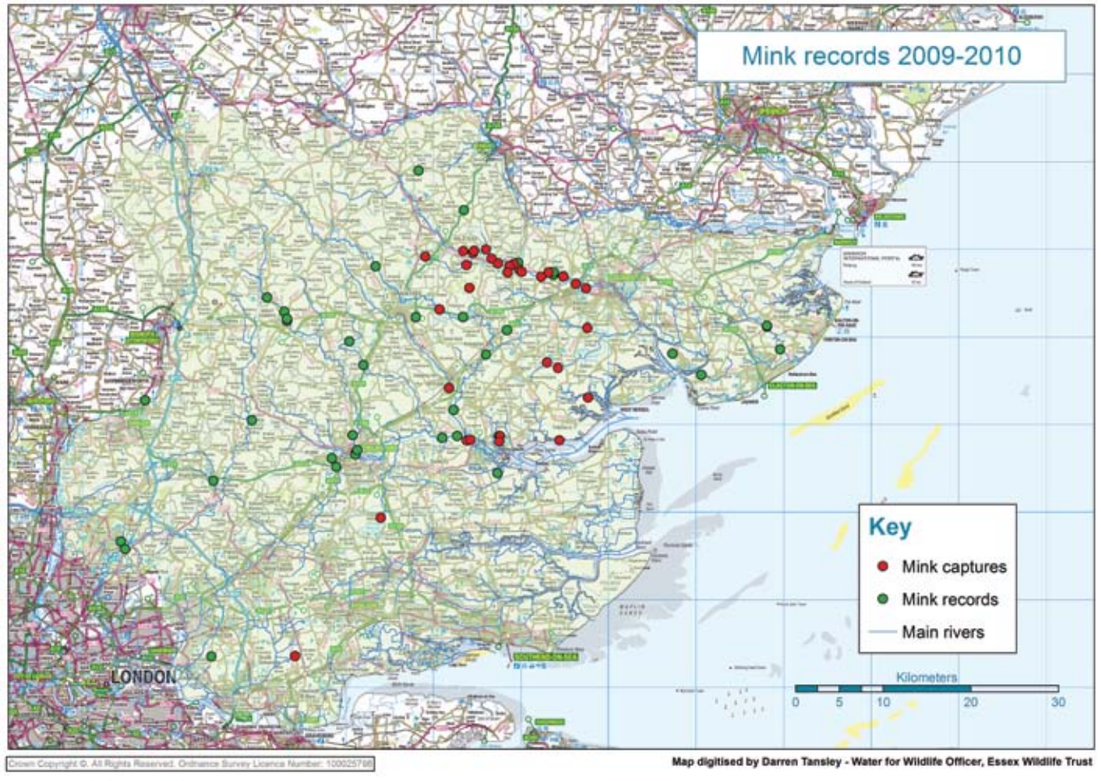
Recent mink control work in the River Colne has resulted in the capture of nearly 100 animals of varying ages, but re-colonisation remains a possibility while neighbouring rivers to the south remain uncontrolled.

At present, low numbers of mink are still being caught in the mink control zone, but these are well below the levels previously being recorded. Recent evidence from the RSPB at their Old Hall Marshes Nature Reserve shows that mink numbers have dropped since the co-ordination of mink control along the coast surrounding them. The exclusion of mink should result in the recovery of species such as water fowl and water vole as has been witnessed on the Holland Brook and nature reserves such as Abbotts Hall Farm.

Otter deaths

There are usually 3 or 4 recorded otter deaths in Essex each year but 2009 and 2010 showed wildly varying figures. Over the winter 2009-2010 period 8 otters were killed on the roads, with a further 2 killed in the Stour catchment but just across the border into Suffolk.

In addition in 2009 the Water for Wildlife Project was called in to investigate a case of otters drowning in an unlicensed crayfish net placed on the River Wid. Two otters were pulled from the trap and later identified at post-mortem as young female cubs, most likely from the same litter. This highlighted the risks to otters from the placement of these traps and the need to oppose their unlicensed use among 'wild food' enthusiasts.



Map 2. Mink records 2009-2010
This map indicates records of mink that have been passed to Essex Wildlife Trust but does not represent the full distribution of this widespread species. Red points indicate sites where mink have been removed to protect water voles and other native wildlife.

Although this rise in otter deaths is regrettable, the distribution of these incidents illustrates just how widespread the Essex population now is. Until 2008 the only deaths recorded were on the Rivers Stour and Colne, but now there are records from the Chelmer, Pant, Wid and Layer Brook too.

One particular accident blackspot, responsible for the deaths of at least 4 (anecdotally more) otters since 2002 is the A134 road crossing of the River Stour. Investigations are being conducted by Water for Wildlife Officers from Suffolk and Essex Wildlife Trusts, the Dedham Vale and Stour Valley AONB and the Environment Agency to determine whether appropriate mitigation can be put in place to reduce the risk to otters. It is hoped that in consultation with local residents and landowners, a suitable project can be funded to eliminate this particular risk.

Deadly crayfish trap on the Wid
Two young female otters were pulled from this crayfish trap placed in the River Wid without a licence. Crayfish traps must be licenced by the Environment Agency if used on a main river and a suitable otter guard fitted to prevent animals getting inside. Photo: Darren Tansley

Otter ledge near Halstead
A combination of a ramped ledge and suitable fencing, can allow otters to pass safely under a road bridge rather than risking high speed traffic. Photo: Darren Tansley

Conclusion

This has been a very productive two years for RIVERSEARCH and the Essex Otter Survey. Numbers of positive sites continue to increase, but more importantly the distribution of the species continues to expand, despite the obvious dangers these animals face in our crowded county.

While we still have no accurate way to assess the number of otters on our rivers, the volume of records, sightings and photographic evidence of their expansion in the county continues to grow. The appearance of otters in Tendring is very positive and we are now anticipating that the next new records in the county will be in the costal districts to the south and east.

Acknowledgements

I am extremely grateful to all those surveyors listed in this report for their time and effort spent recording otters and other wildlife on their rivers.

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The 2009-2010 Essex Otter Survey

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If you want to know more about the RIVERSEARCH volunteer training program or would like to take part in the annual Essex Otter Survey please contact:-
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