



Fifth otter survey of England 2009 - 2010

Summary report

We are The Environment Agency. It's our job to look after your environment and make it **a better place** – for you, and for future generations.

Your environment is the air you breathe, the water you drink and the ground you walk on. Working with business, Government and society as a whole, we are making your environment cleaner and healthier.

The Environment Agency. Out there, making your environment a better place.

Published by:

Environment Agency
Rio House
Waterside Drive, Aztec West
Almondsbury, Bristol BS32 4UD
Tel: 0870 8506506
Email: enquiries@environment-agency.gov.uk
www.environment-agency.gov.uk

Author - Andrew Crawford
(Environment Agency)

Project Manager - Graham Scholey
(Environment Agency)

Main survey contractors - Elizabeth Andrews, Hilary Marshall, John Martin, Robin Roper, Andy Rothwell, Mark Satinet.

© Environment Agency

All rights reserved. This document may be reproduced with prior permission of the Environment Agency.

Further copies of this report are available from our publications catalogue:

<http://publications.environment-agency.gov.uk> or our National Customer Contact Centre: T: 08708 506506

E: enquiries@environment-agency.gov.uk.

Fifth otter survey of England 2009 - 2010

The return of the otter to most of England is one of the major conservation success stories of the last 30 years. The main reason for this increase has been the reduction in levels of toxic pesticides, but the general improvements in water quality and consequent increase in fish stocks have probably played a significant part.

This document has been produced in partnership with:



Introduction

The European otter (*Lutra lutra*) is widely recognised as an emblem for nature conservation in the UK because it is a top predator and an important biological indicator of the health of our rivers and wetlands. Monitoring the status of the otter therefore gives us a valuable measure of the state of our water and wetland ecosystems. In England it is a largely nocturnal animal and is rarely observed in the wild. It is however possible to detect its presence by searching for faeces (spraints) and footprints. The otter suffered serious declines throughout most of its European range, and by the mid 1970s the UK otter population had been reduced to such an extent that it only survived in Scotland, parts of Wales and the West Country, with a few remnant populations in other parts of England.

Monitoring otters

The first otter survey of England was carried out in 1977-79 covering alternate 50km squares across England. Together with surveys in Wales, Scotland and Ireland, it provided a baseline for the distribution of otters. Of the 2,940 sites surveyed in England in 1977-79, only 170 (5.8%) showed evidence of otters. This confirmed the results of the analysis of hunting records and the impression of many naturalists. The survey showed that the only significant populations of otters remaining in England were in the south west and along the Welsh border, with small and fragmented populations in East Anglia and in northern England. Otters were absent or only sparsely distributed in much of lowland and central England. Subsequent surveys and research have demonstrated that this was probably the low point of the decline which began in the late 1950s, and was primarily caused by the introduction of the persistent organochlorine pesticides dieldrin and aldrin.

Trends

National surveys were repeated in 1984-86, 1991-94, and 2000-02 using the same method and visiting the same sites. The fifth survey (2009-10) included 3,327 main survey sites, and additional spot-check visits for the alternative 50km squares not covered previously. This provides comprehensive coverage of the whole country for the first time. Direct comparison of positive records from the 2,940 sites used in all five national surveys reveals that otters have recovered from virtual extinction in most of England during the early 1970s. Positive site records increased from 5.8 per cent in 1977-79, to 9.6 per cent in 1984-86; 23.4 per cent in 1991-94 and 36.3 per cent in 2000-02. The figure for the fifth otter survey, carried out between July 2009 and March 2010, was 58.8 per cent.

This latest survey reveals that recovery has continued in all but the very south-east where no signs were found in Kent or most of Sussex. Re-colonisation from strongholds in south-west and northern England and Wales has now been consolidated across much of the country and continues to drive recovery.

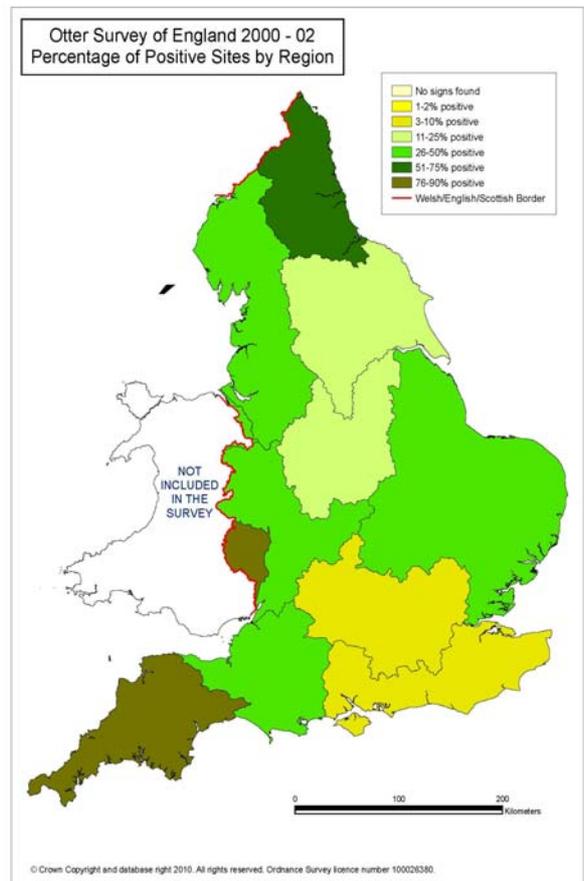
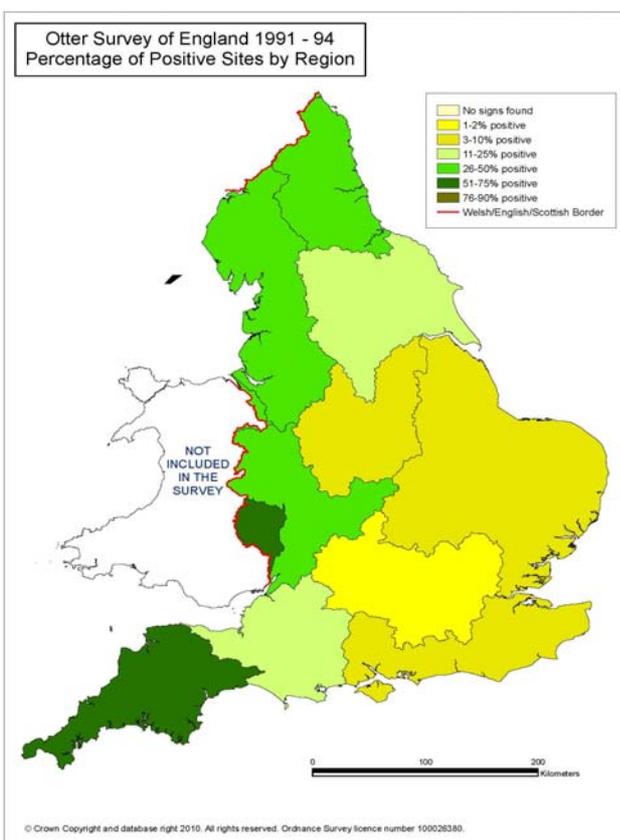
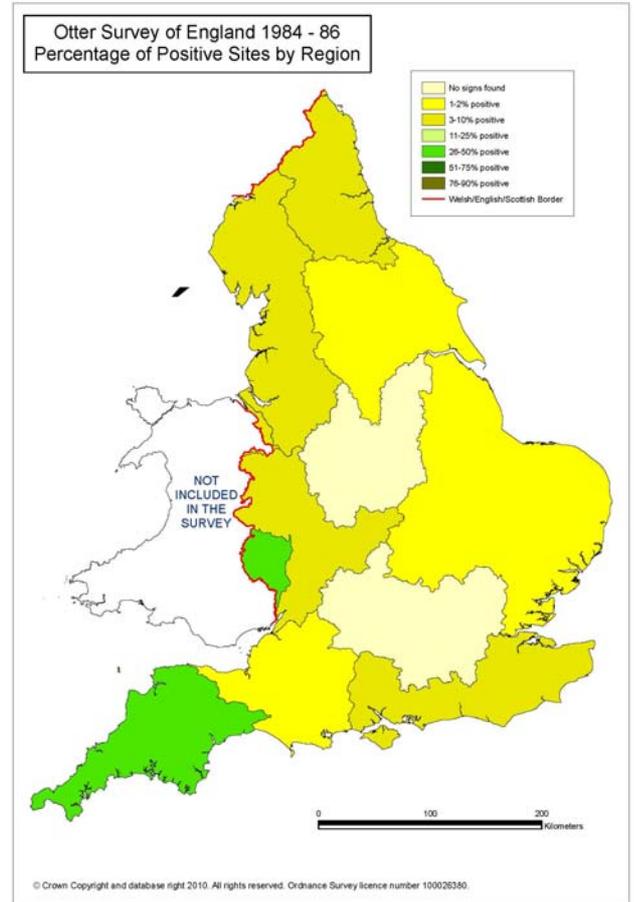
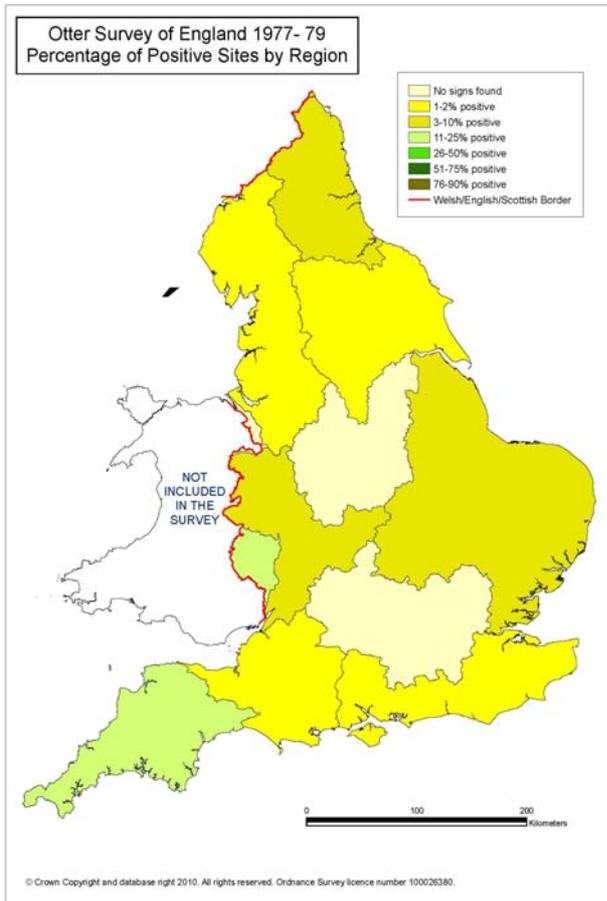
Geographical patterns

There was a very high percentage increase in the Thames catchment where there has been both consolidation of the population in the upper part of the catchment as well as re-colonisation eastwards.

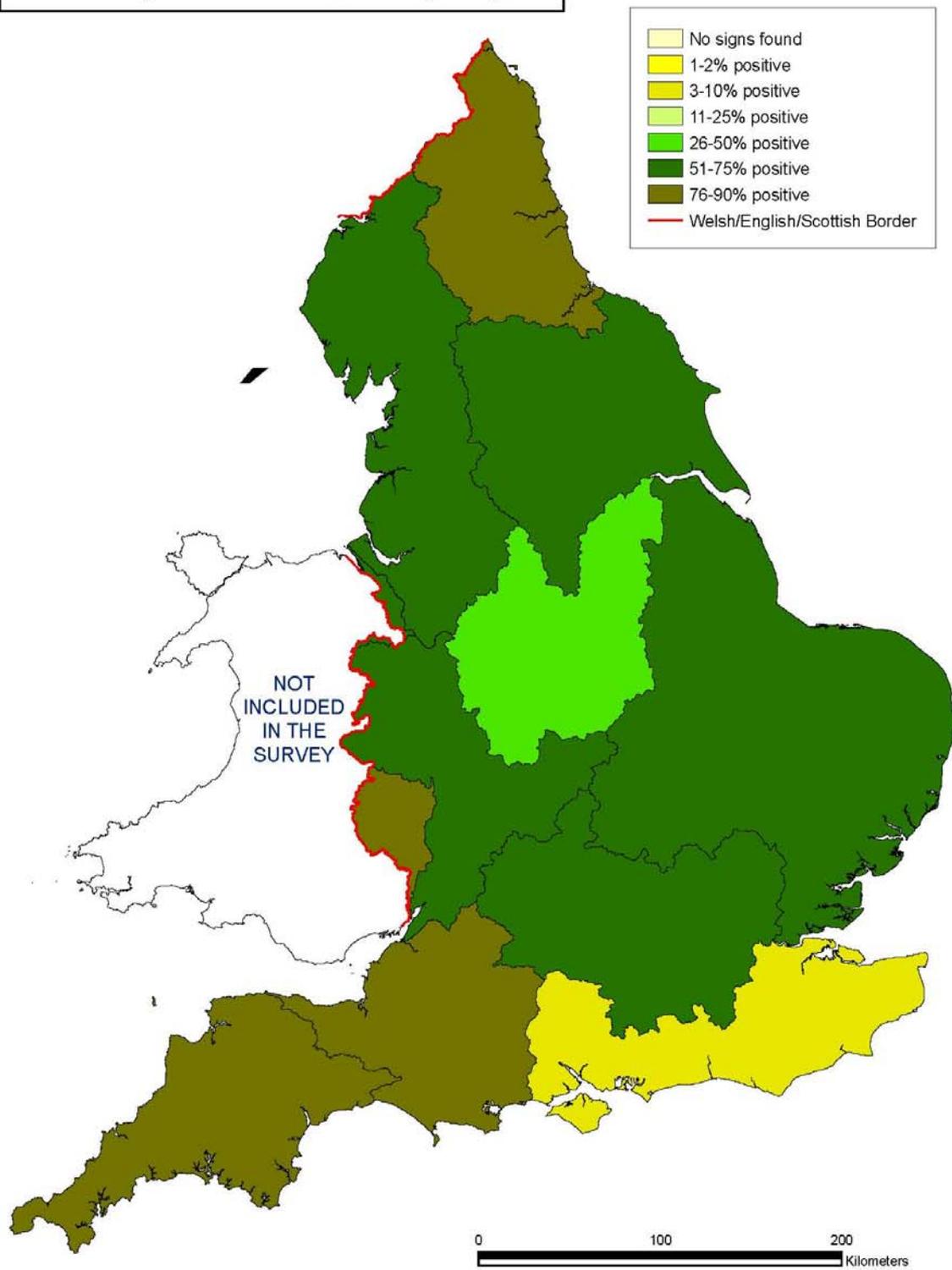
The expansion in Yorkshire, Wessex and Severn regions has been a consolidation of the population in the core areas combined with re-colonisation of areas which were previously without otters. There are now few parts of these regions which are wholly without otters but the population is probably low in some areas.

In the Anglian region the increase has mainly come from consolidation of areas which in 2000-02 had a sparse or very sparse otter population. Otters are present in nearly all areas, only southern Essex still remains without otters.

Geographical patterns



Otter Survey of England 2009 - 2010 Percentage of Positive Sites by Region



In the North West there has been a major consolidation in the core areas in the north and the southern fringe combined with re-colonisation of much of the centre of the region. The otter population in the centre of the region remains very small and scattered.

Southern region showed a small but significant increase in positive sites between 2000-02 and 2009-10. The increase was entirely in the western end of the region where there has been considerable expansion in range and an increase from 9 to 25 positive sites (64%). This was partly balanced by the complete loss of the population(s) in the eastern end of the region. Southern is the only region where the otter's range has declined between the two surveys. The reasons are not clear but it is likely that the population(s) in the east were too small to be self sustaining and they were too far from other populations to be sustained by immigration. The future of the population at the western end of the region looks secure and further eastward expansion would be expected.

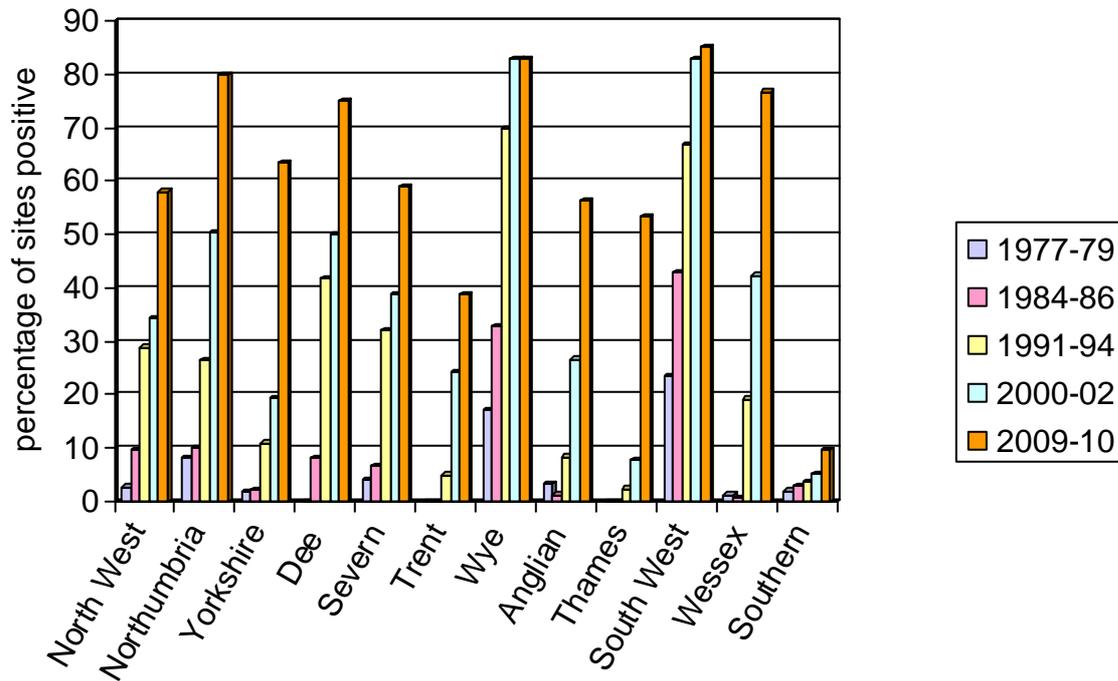
The Trent catchment has shown a disappointing level of increase since 2000-02. There has however been considerable consolidation and re-colonisation.

In the Northumbrian region the increase in percentage terms has been fairly low but this is because otters were very widely distributed by 2000-02 and the increase has largely been as a result of consolidation within an existing range. Otters are now present throughout the region.

The increase in positive sites in the Dee catchment has been small. However otters are now present across most of the catchment.

The increase in positive sites in the South West has been very small and on the Wye catchment there was no increase. In both cases this is due to the high level of positive sites in 2000-02. It is likely that both these catchments have reached carrying capacity.

Change in percentage of positive sites for otters by region



Otters were shown to be present in 102 out of 115 subcatchments (88%) in England. An increase in otter distribution cannot be directly translated into an increase in otter numbers but such an increase in distribution must represent a significant increase in the number of otters on England's rivers and wetlands.

The tolerance of otters to apparently high disturbance situations such as city centres is far higher than was thought. They appear to select low disturbance habitats where possible but at least some otters are willing to tolerate high levels of human disturbance under some circumstances. It is likely that there is a variation between individual otters in the tolerance of human disturbance.

Environmental trends

There have been major improvements in general water quality leading to more sustainable fish populations on many rivers. Serious pollution incidents, resulting in major fish kills, have also decreased markedly since the last survey. However such incidents do still occur.

There are still concerns about the level of some environmental toxins, particularly those which can accumulate through the food chain. Environmental surveillance, partly through the existing programme of otter post-mortem and ecotoxicological analysis, needs to be maintained to address these concerns.

The increases in otter range in England have taken place within the context of river habitats which have been in many cases highly modified, causing damage to the ecology. The requirement under the Water Framework Directive to bring all watercourses up to good ecological status (or full ecological potential for artificial and heavily modified watercourses) will create the conditions necessary to allow sustainable fish populations to develop. This in turn is a pre-requisite for a healthy otter population.

Other issues

One of the consequences of this recovery has been the increase in reported road deaths, and the number of accidental deaths of otters remains a cause for concern. Nearly 1,000 otters are known to have been killed on the roads since the last survey in 2000-02 and this is certainly an underestimate. Deaths in fish and crustacean traps remain a concern and with higher numbers of otters using coastal habitats, deaths in lobster and crab pots may become a serious issue.

Another consequence of the recovery of otter populations has been increased concern about predation, particularly on specimen fish in still water fisheries and rivers. This creates a challenge to all those involved in river, wetland and fishery management to ensure that the successful return of our top freshwater predator is not seen as a long-term problem for fisheries but as a symbol of a healthy ecosystem.

Conclusions

Recovery has been in response to three main factors, the ban on pesticides that caused extinction of otters from many parts of England in the 1960s and early 1970s, legal protection for the otter since 1978, and the significant improvement in water quality in previously fishless rivers since the 1970s. Re-introduction programmes of captive bred and re-habilitated otters in certain parts of the country are likely to have speeded up the recovery locally in East Anglia, Yorkshire and the upper Thames. However the majority of the recovery has been the result of natural expansion from the remnant populations. The prospects are for full recovery across England probably within the next two decades or so. This represents a major success story for pollution control, as well as investment by the water industry and efforts by landowners and river managers to improve river and riparian habitat. Tracking the otter's recovery has demonstrated the benefits of long-term monitoring and the use of this iconic species to raise awareness of pollution problems and the benefits of action to improve the environment.

**Would you like to find out more about us,
or about your environment?**

Then call us on

08708 506 506* (Mon-Fri 8-6)

email

enquiries@environment-agency.gov.uk

or visit our website

www.environment-agency.gov.uk

incident hotline 0800 80 70 60 (24hrs)

floodline 0845 988 1188

* Approximate call costs: 8p plus 6p per minute (standard landline).
Please note charges will vary across telephone providers

GEHO1010BTDJ- E-E



Environment first: This publication is printed on recycled paper.