



Waterlife Recovery East

a mink-free East Anglia

NEWSLETTER 1: April 2021

A new initiative

This is the first newsletter of Waterlife Recovery East (WRE), a partnership of people and organisations with a common purpose and vision: the freeing of native wildlife from predation by American mink - first in the East of England and then, hopefully, throughout Great Britain. Future editions of this newsletter will appear quarterly, and be circulated to volunteers, donors, staff and interested others both regionally and nationally. Its aim will be to inform, unite and inspire, bringing news from WRE partners and from the many hundreds of citizen conservationists working towards a mink-free East Anglia. Please pass on to anyone who may be interested; they can join the mailing list via our website waterliferecoveryeast.org.uk.

For those not familiar with WRE, please visit our website to see who we are, what we're doing and why we're doing it. This is a young organisation, but one that is growing rapidly in capacity and prominence, as shown by our successful application to the Government's Green Recovery Challenge Fund (GRCF) at the end of 2020. Despite the fund being heavily over-subscribed, we were awarded £229k (through our host charity Norfolk Rivers Trust) to greatly enhance mink control capacity within the WRE Core Area of Norfolk and Suffolk, and in adjacent Cambridgeshire. This award is a game-changer, and has already transformed our field operation through financing the employment of staff and purchase of equipment. Awards from water companies, and contributions from internal drainage boards and other donors mentioned below, have been equally important in allowing us to make immediate progress on a coordinated regional strategy.



The shape of things to come

The injection of significant new funding, together with an expanding network of partner organisations and growing experience of using smart (i.e. electronically monitored) traps, has re-focused our collective minds on our objectives and how best to achieve them. Responding to requests for advice, and the need for staff to have a unified approach, the WRE Steering Group recently agreed a series of Best Practice documents which are now available to all via the project website. These cover a variety of topics from assembling and testing traps and rafts to handing air weapons, and will be revised at intervals to keep them current.

The most recent Steering Group meeting also made a landmark decision - to set up a new charity. This will increase fund-raising capacity, unify an ever-growing and increasingly complex operation across seven counties, and bring enhanced recognition of what we're doing and why we're doing it. Our Vice-Chair, Simon Baker, is leading this exciting development, and we expect to be up and running before long - once Simon has negotiated the many bureaucratic hurdles involved in such a venture.

New staff, new horizons

The GRCF grant, which came through DEFRA and the Heritage Lottery Fund, has financed four posts - one full-time and three part-time. WRE cannot yet employ anyone directly, but three partner organisations (Norfolk Rivers Trust, Countryside Restoration Trust and Suffolk Wildlife Trust) offered to act as employers, and this arrangement has worked to mutual advantage. In recognition of Norfolk being at the core of our eradication trial (and so large!) it was awarded the full-time post through the Norfolk Rivers Trust, and Stephen Mace was recruited. Stephen lives near Yarmouth, and has long experience of the work as a contractor/volunteer for the Norfolk Mink Project, reporting to Simon Baker. A man of many talents, Stephen has also developed the WRE website and is now forging ahead in recruiting volunteers and deploying smart rafts across a vast swath of the county.



Emily Coleman demonstrating use of a smart trap to new volunteers in Cambridgeshire. Citizen conservationists are at the core of this project; recruiting and training them is a major focus for the newly appointed Project Officers.

The Suffolk Wildlife Trust (SWT) has been controlling mink under the watchful eye of Penny Hemphill for many years, so it was a natural host for the new Suffolk post. Alice Wickman was selected, and trained under Penny's guidance until the end of March, when Penny retired. Supported by Stephen, who lives just over the county boundary, Alice is now busy taking the new equipment out to volunteers who have achieved miracles with the older-style rafts but who will now do even better, with much less effort. In partnership with two other established SWT trappers, Alice will soon be filling in gaps in coverage across Suffolk, and recruiting new people to manage traps.

Mink control in Cambridgeshire had been patchy until the beginning of 2021, but the recruitment of two part-time staff through the Countryside Restoration Trust (CRT) has rejuvenated trap coverage in areas previously neglected. Vince Lea manages this effort, and with new Project Officer Emily Coleman is finding worryingly high numbers of mink in the west of the county, especially. Emily lives in Thetford, across the border in Norfolk, and is also rolling out smart rafts in this region, providing much needed extra capacity in an area that is well over an hour's drive for Stephen Mace.



For Vince Lea, working in this project is all about the glamour.

Further welcome help in west and north Norfolk is being provided by two recent recruits - Max Stuart and Tony Moverley. Max and Tony are not formally employed, but contribute much-valued outreach to the farming and game-keeping community, finding and training volunteer trappers in potentially prime mink habitat.

Although the project officers are at the pointy end of the project, I'd like to acknowledge here those who have contributed support and management work, without which staff recruitment and employment could never have happened. Marie-Anne (Mazza) Edwards, Simon Baker and several SWT staff have all played an important part in this process. David Diggins and Jonah Tosney also deserve thanks for kindly agreeing to allow the GRCF bid to be hosted by NRT at a time when we mink folk approached them out of the blue.

Project status and progress

After a hectic start to 2021, it's refreshing to stand back and take stock of where we are now, just into the second quarter of the year. The most obvious change over the past few months is simply the pace of progress. The steady trickle of site visits and volunteer recruitment has become a surge. We're ordering, assembling and deploying rafts at pace, and the removal of mink has accelerated in areas that had previously not been trapped. The website is being increasingly used by the general public to report sightings and captures, and now we're even receiving DNA samples in the post to augment those taken routinely from every mink taken in WRE traps; more on this below.

Other changes are apparent in the way we work, resulting from increased experience with equipment and how best to catch mink. Even simple changes, like placing the electronic monitoring box on the top of the trap, rather than on the end, have yielded big benefits - in this case by reducing the number of false alarms and wasted volunteer journeys. Recognition that scent plays a large part in attracting mink to a raft has also allowed us to catch some animals that might otherwise have



We are learning that scent lures in traps can entice mink that might otherwise pass by. Practice golf balls are used to hold cigarette filter tips impregnated with eau de mink.

passed by; even a 10% improvement each year will mean that almost half as many again will have been captured after just 4 years. Greater efficiency will reduce the time needed to eradicate mink, and reduce the cost of doing so. In this particular case, considerable anecdotal evidence of one mink following another into a trap within a few days was backed up by the fact that, on twin-tunnel rafts, every single subsequent mink that was captured after the first was found in the same side, even four months after the previous capture. Not only is scent a powerful lure, but it clearly remains potent for a considerable length of time.



Non-target creatures sometimes wander into our traps. Not all receive a ring like this young water rail did, but all are released promptly and without harm, thanks to the reliability of the electronic alarm units.

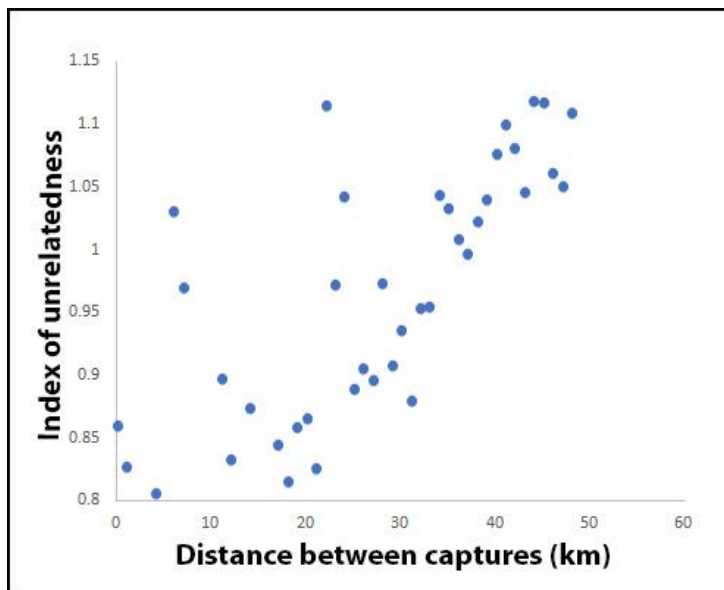
Another important step forward has been the completion of a study that looked at the reliability of trap alarm units, and found them to be faultless. With over 100 traps in operation and a cumulative total of more than 30,000 trap nights in the Fenland trap network, not once did the door close on an alarmed trap

without the manager being informed. This proven reliability of our equipment means we can be confident that any non-target captures (water voles, water rails etc) will be released promptly and without harm; important for the creatures involved and reassuring for project volunteers, supporters and donors.

The power of DNA

Bill Amos, Professor of Evolutionary Genetics at Cambridge University and WRE Steering Group member, has been busy processing and analysing the first 190 tissue samples received from across the region and beyond. Bill is in the early stages of this study, and is still working out how to streamline and improve his analytical techniques, but early results are both very interesting and encouraging. Firstly, molecular sexing works well and there is (generally) very good agreement between the sex assigned to the animal in the field and the sex indicated by the DNA. This is really important, because often we either don't see the carcass, or the person collecting the animal is uncertain about its gender. Secondly, Bill has found a very clear trend

of isolation by distance. In other words, the further apart two animals are sampled, the less similar they usually are genetically. This is encouraging for several reasons: (a) it suggests that movements between catchments are unusual; (b) as a result, repopulation of an area that has been cleared may be slower than originally expected; (c) it means dispersing animals are more identifiable as dispersers (they don't fit genetically with where they were caught) and that we have a good chance of working out where they came from.



By analysing DNA from every mink encountered, we are better able to understand the population as a whole. This graph shows that mink caught near each other are likely to be more closely related, which means that most stay closer to their natal territory than expected. This is consistent with experience that catch rates rapidly diminish in any area; we really can quickly get on top of a mink problem once traps are in place.

With larger sample sizes Bill hopes to learn more about the conditions under which dispersal tends to occur: do animals trapped a long way from 'home' often come from areas where mink density is unusually high, and can we start to identify preferred dispersal routes? Of crucial importance for the management of this project, we should soon be able to tell whether an animal found within the WRE Core Area was bred there or has come in from elsewhere. The value of

these results, and what we can learn from them, increases with every sample received, and even a mangled carcass on the roadside will contribute. Please go to the WRE website to find out how to take a tissue sample quickly and simply, and how to send it to us free of charge.

News from around the region

After a relatively quiet start to the year, mink began to appear in ever-increasing numbers, as the reproductive juices started flowing and both sexes travelled in search of romantic liaisons. By the start of April, record numbers had been captured in **Cambridgeshire**, especially, largely due to increased effort north and south of the Nene Washes and in the far west of the county. Following the pioneering investment in smart traps by internal drainage boards in the Ely and Downham Market areas, where wildlife is now almost free of mink predation, other IDBs in the Middle and North Levels have followed suit,

and are finding mink to be relatively abundant in their waterways. Fine work at a nature reserve beside the Gt Ouse, close to the Beds border, is still in the process of removing what we now know to have been

substantial mink predation pressure there. The constant flow of mink suggests that this complex of flooded gravel pits may be attracting animals from the nearby river; if so, maintaining trapping effort there in what is effectively an 'ecological sink' will have the effect of freeing a large area of mink and keeping numbers low in the longer term.

Consistent with what we're learning from the genetics work, mink captures in SE **Lincolnshire** have dropped since last autumn, and it appears that the worst may be over for native wildlife in the area managed by the South Holland IDB. However, we know that mink are abundant over much of Lincolnshire, so it's important that other water management bodies follow the South Holland lead, and there are hopeful signs that this may soon happen.

Norfolk has benefitted from trapping effort coordinated by the Norfolk Mink Project for many years, so catches have been steady but modest across the county in 2021, although the Broads continue to generate a steady stream of mink, showing that there is much work still to do. The King's Lynn IDB has recently invested in smart traps to protect wildlife in its large catchment, and the Fens south of the Wash are now benefitting from an excellent, coordinated approach, under the supervision of Caroline Laburn of the Water Management Alliance. The area between here and the Cambs border is covered by the Wissey conservation-

friendly farmers group and the Downham group of IDBs, so west Norfolk is now becoming a protective wall, stopping mink moving into the core of the county. This is a major step forward for the WRE eradication strategy.

In **Suffolk**, Alice Wickman is making good progress in contacting the many volunteers who have tended clay-pad-style rafts over the years, and setting them up with much more effective and less labour intensive smart rafts. Meanwhile, in his wonderfully extended and enhanced Carlton Marshes SWT reserve in the northeast of the county (well worth a visit during the spring and early summer, especially), Matt Gooch continues to keep mink at bay, knowing that a single animal could, in a single night, wreak havoc with the avocets and other waders breeding there. Matt has used trail cameras to better understand mink behaviour, and his results are of great value to the whole project.



Trap being prepared for deployment on the North Level Main Drain in Cambs. This unit, on the flailed side of the drain, subsequently caught one mink, whereas another, on the uncut side opposite, caught four. We are learning what habitats are preferred by Fenland mink.



New batch of smart traps funded by Environment Agency support. The white box on each trap contains the electronic wizardry that lets us know as soon as a trap door closes.



Mink work in **Essex** was substantially hampered by Covid shutdowns, but several bird reserves on the north bank of the Thames have been enhancing their mink defences with smart traps and providing the WRE project with DNA samples from their captures. The southern boundary of Essex is of real strategic importance to this project, and we greatly welcome the contribution of reserve staff to our joint work. Ground-nesting birds on these reserves will benefit greatly this spring.

Last, but certainly not least, mink control in **Hertfordshire**, immediately to the west of Essex, has been strengthened both by a committed citizen conservationist (who came to see the sand martin colony in my garden and left with mink rafts for use around Hatfield) and by the Herts and Middlesex Wildlife Trust. Between them, nearly 20 smart rafts are now active in defending both local wildlife and the WRE project area from ingress from the southwest, and this is a major accomplishment.

In summary, the past few months has seen huge progress in collaboration between many different individuals, partnerships and organisations, resulting in trap coverage never before seen in this region. Trapping effort is the measure by which we must judge the progress of the WRE project, and this has grown enormously, both in terms of geographical scope and number of trap nights. We don't yet have the new WRE database up and running to be able to give numbers across the whole area, but a flavour of what we're achieving is available from the Fenland network that I oversee. This has just passed the 31,000 trap nights (86 trap years) mark, and WRE will collectively be leaving such numbers in the dust over the next year or two. This partnership is going places.

And, finally, this is the appropriate place to acknowledge the welcome and greatly valued financial support provided to WRE and its component organisations by a number of donors, both corporate and private. Without them, the huge progress we've made over the past few months would not have been possible. In particular, we thank the Environment Agency, Anglian Water, CCF, Essex and Suffolk Water, Natural England, Norfolk FWAG, Heritage Lottery Fund and an inspirational private donor based in Edinburgh.

With my best wishes,

Tony Martin

Chair of the WRE Steering Group

STOP PRESS: Work still to do - these mink were recently photographed in nature reserves in our region The right-most image is from a trail cam at night.

