



What's Next for the Scottish Mink Initiative?

The Scottish Mink Initiative has been very successful over the last two and half years and, although the current phase is now drawing to a close, SMI will continue with future work largely being supported through local organisations rather than Mink Control Officers. The work of these organisations will be guided by the SMI Project Coordinator, Ann-Marie MacMaster, who will be based in North Tayside. The contact person and organisation in your area is given in the table below together with the contact details of the SMI Project Coordinator.

This organisational change was one of the key objectives of the current project phase. Local organisations are assuming responsibility for mink control in order to enable the work of the SMI to expand geographically, as well as to ensure long term sustainability of mink management. Control and eradication of breeding American mink and other invasive non-native species requires long-term effort, otherwise re-invasion from areas with little or no control is likely to occur. As such the SMI management partnership is committed to continue to seek resources to support the invaluable work being undertaken by the SMI. We look forward to another productive phase of the SMI!

Name	Contact	Fisheries Trust	Area
Ann-Marie MacMaster	ann-marie@rafts.org.uk Tel: 07825 186043	RAFTS	North Tay catchment & Project Coordinator
Shona Marshall	wsft@btconnect.com Tel: 01971 502259	West Sutherland	Coigach to Durness
Peter Cunningham	info@wrft.org.uk Tel: 01445 712899	Wester Ross	Loch Hourn to Loch Broom
Lynn Brydon	cromartyfish@hotmail.co.uk Tel: 07887 845648	Cromarty Firth	Connon, Black Isle and Dornoch Firth
Keith Williams	nbft@btconnect.com Tel: 01463 783505	Ness and Beaully	Locations within the Ness and Beaully catchments
Bob Laughton	director@fnlft.org.uk Tel: 01309 611220	Findhorn, Nairn and Lossie	Locations within the Findhorn, Nairn and Lossie catchments
Polly Burns	p.burns@speyfisheryboard.com Tel 01340 810841	Spey Foundation	Locations within the Spey catchment
Robin Vasey	robinvasey@deveron.org Tel: 01466 711388	Deveron, Bogie, Isla Fisheries Trust	Locations within the Deveron, Bogie, Isla, Philorth and Ugie catchments
Jamie Urquhart	biologist@riverdon.org.uk Tel: 01330 830080	River Don	Locations within the River Don and River Ythan catchments
Lorraine Hawkins	info@riverdee.org Tel: 01339 880411	River Dee	Locations within the River Dee catchment
Nigel McMullen	ngmcm1@aol.com Tel: 07786 060431	Esk Rivers	Locations within the Lunan Water, South Esk, North Esk and Bervie Water catchments

Achievements of the Scottish Mink Initiative

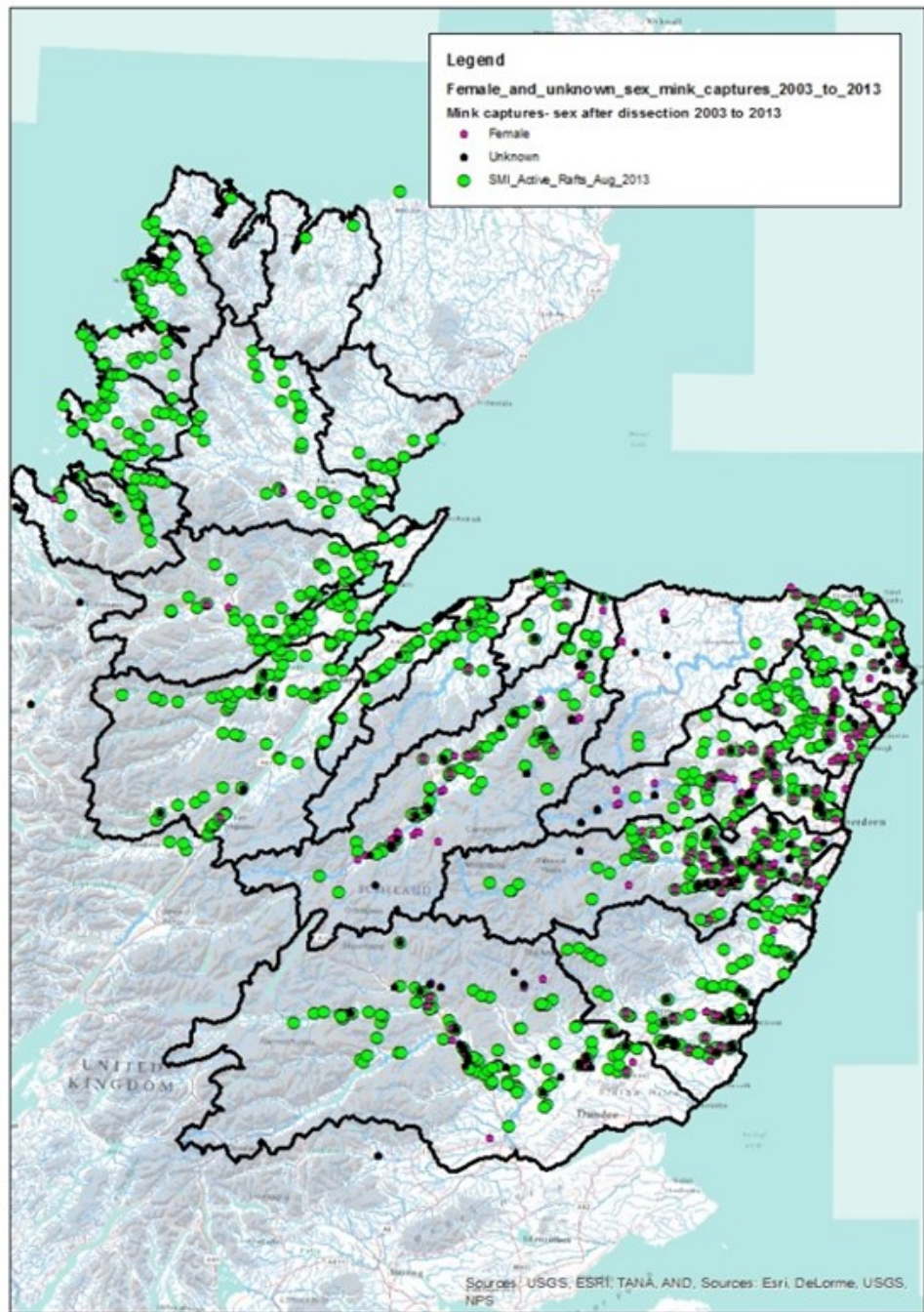
With the help of a 550-strong network of volunteers, the Scottish Mink Initiative has achieved great things across north Scotland over the last two and a half years.

There are currently over 900 mink monitoring rafts and tunnels across the project area - a mere 30,000 km² !

Dedicated volunteers have helped to remove 472 American mink since April 2011, using live capture cage traps. Many of these captures were female mink which is key in reducing the reproductive potential of this invasive non-native species.

There are 24 major river catchments across the project area and 15 of these are now showing signs that they are breeding mink free. This is defined by the absence of female mink captures for at least 6 months.

Active mink rafts/ tunnels and female and unknown sex mink captures



The Scottish Mink Initiative originally aimed to create a safe haven for native wildlife within 20,000 km² in North Tayside, Aberdeenshire, the Cairngorms, Moray, and the North Highlands, protecting native wildlife such as water voles, ground nesting birds and economically important populations of salmon and game birds.

The work of volunteers has been vital in order to achieve these aims, and equally important has been the involvement and cooperation of the general public. SMI's promotion of key messages such as the negative impact American mink have on local native wildlife, the need for local organisation and community support and explaining how vital the work is has really helped the project meet its objectives.

The Scottish Mink Initiative has increased public awareness both locally and nationally, presenting to over 1,000 individuals at 49 events and attending a number of local events. The SMI has also featured in 149 local media items and 34 national media items including radio, TV and newspapers.

North Highland - Gunnar Scholtz

While this year's early spring season was unusually quiet, mink sightings on the west coast really picked up after the end of the denning season.

In Wester Ross, the Applecross peninsula and Loch Ewe area have had a lot of mink reports coming in from locals and visitors alike. Despite this the catches this year are well below that of last year, with 5 mink removed so far. 2 in Dundonnell and one from each of the following 3 places: Isle Ewe, Lochcarron and Kyle Bridge.

Although the current phase of the Scottish Mink Initiative is coming to

an end, local fisheries trusts will continue the mink work in the next phase. Wester Ross, West Sutherland, Cromarty and Ness and Beaully Trusts will be the point of contact for mink work across the North Highland area.

All that remains for me to say is a massive 'thank you' to everyone who has given their time, help and advice so generously, over the last few years. There are way too many people to mention each by name - you know who you are, and I thank you from the bottom of my heart!

Please continue your fantastic work

– undoubtedly the native species are, and will continue to, benefit from it.

Cheerio!



Gunnar Scholtz

www.scottishmink.org.uk

Cromarty Firth Fisheries Trust—Lynn Brydon

After a very quiet spring there has been a flurry of sightings of a lone mink around the Conon Blackwater junction. This area is well covered by mink rafts, and traps were quickly deployed however there were no captures or further sightings reported. Traps have also been deployed in the Dornoch area after a number of mink sightings in the Ospisdale area.

During a recent electro-fishing survey a water vole was seen on the Ussie Burn near Conon Bridge. Water voles are regularly sighted in the upper tributaries of the Conon catchment so it is very encouraging to see them return to an area previously impacted by mink.

Earlier this year Cromarty Primary entered a competition run by SNH and judged by the Scottish Council for Development and Engineering, in celebration of science.

The children had to research invasive non-native species (INNS) in the Highlands and select one to study in detail. Specifically they studied monitoring and distribution of their chosen INNS and in addition they had to make a public awareness campaign. Mrs Milne's class primary 6 and 7 chose the American mink as their subject and I went along to talk to the children about American mink. I was amazed by the children's knowledge - there wasn't a great deal that they didn't already know! The children performed their mink rap and acted out their TV commercial. They also made a web page on the school website - click [here](#) to see the website. All were very well made and really demonstrated their wealth of knowledge.



The children volunteered to look after a mink tunnel which was placed at the side of a burn close to the school grounds. Monitoring the tunnel became part of their school week.

I wasn't surprised to learn that the children of Cromarty Primary walked away with first prize for their hard earned efforts. Well done to you all—it was a pleasure working with such enthusiastic children.

Lynn Brydon

Lynn Brydon, Cromarty Firth Fisheries Trust, 07428 189161, lynn.brydon@hotmail.co.uk

Ness and Beaully Fisheries Trust - Keith Williams

The spring and early summer can be characterised by a number of mink sightings within the Ness & Beaully Fisheries Trust area but with frustratingly few captures.

Trust staff monitor a mink raft close to our office and this usually produces signs of mink activity during spring. A mink was reported to the Trust by a member of Beaully Angling Club with a further sighting reported by a Beaully ghillie. Traps were run in the lower Beaully for four weeks during a period which broadly coincided with intensive trapping effort by Gunnar Scholtz further north, however no captures were made.

Trust staff have had a number of requests for traps from people who keep poultry and waterfowl and who were having birds killed by mink. We are pleased to report that a mink was trapped in the Bruiach area of the Beaully system as a result of one of the traps issued. On the River Enrick, a volunteer has been trapping since November after a mink was seen destroying chickens but as yet the mink remains at large.

On the Ness catchment a member of Inverness Angling Club managed to film a mink on Holm Weir catching a salmon and we have subsequently deployed a raft in that area which has recorded mink prints. On the side of Loch Ness, a mink was sighted on the River Farigaig during a routine electro-fishing survey by Trust staff.



Lots of mink activity has been reported at Dog Pool on the River Garry (photographed).

More recently, discussions have been taking place with a number of conservation organisations to provide improved coverage in the Loch Garry area of the Ness catchment and the Aigas area of the Beaully catchment.

Keith Williams

Keith Williams, Ness & Beaully Fisheries Trust, nbft@btconnect.com, 07720 890711

Cairngorms and Moray - Hollie Walker

Only 1 mink capture has been reported on the Spey this year and it was caught on Rothiemurchus Estate in May. There have been 2 mink sightings to date - one in April in the Inchberry area, where traps were set immediately, however nothing was caught. The other sighting was reported at the beginning of August in Grantown-on-Spey. Volunteers in the area were notified by SMI and the Spey Foundation and traps were duly set, however there are no captures to report as yet.

I welcomed four new volunteers between March and July, 3 of these were farmland owners recruited through the Scottish Rural Development Programme. For more details please see the regional update on the SMI website <http://www.scottishmink.org.uk/category/regional-updates-cairngorms-and-moray/>

23 new rafts and traps were deployed between March and July. 15 of these were set up by Gunnar Scholtz (North Highland Mink Control Officer) in order to check key areas where mink have been caught or seen in the past (mainly on the Dulnain). These rafts were *in situ* for just under 2 months and no signs of mink were recorded. The 8 remaining rafts are still in place.



The photo opposite was taken when I went to replace a raft that didn't have an easy life!

I would like to thank the dedicated volunteers on the Spey, a number of whom have been volunteers since 2006! I am sorry it wasn't possible to meet all of you during my time assisting on the Spey catchment however I have really enjoyed meeting new volunteers and as well as those who requested replacement equipment.

Hollie Walker

Deveron, Bogie and Isla Fisheries Trust—Robin Vasey

Things have been very busy with the Bogie, Deveron and Isla Fisheries Trust.

Since September 2012 26 mink have been caught in the following areas:

- 10 - Lower Deveron
- 5 - Forgue Burn
- 7 - Middle Deveron
- 2 - Bogie
- 1 - Isla
- 1 - Water of Troupe

The first mink trapped on the Forgue Burn was caught less than 24 hours after the trap was first set!

Sites on the Bogie and Isla tributaries are showing dramatic reductions in mink captures - 5 traps have had no captures so far this year.

It was thought that a mink may have been causing havoc killing domestic hens and ducks on the Isla however on closer inspection the suspect was more likely to be otter.

And finally I am pleased to report that no evidence of mink has been recorded on the Boyne Burn rafts near Portsoy since May 2013!



Robin Vasey

Robin Vasey, Deveron, Bogie & Isla Fisheries Trust, 07771 874 579, robinvasey@deveron.org

www.scottishmink.org.uk

Aberdeenshire - Jim Mann

As my involvement with the Scottish Mink Initiative draws to a close I would like to say a massive heartfelt thanks to all the Aberdeenshire volunteers without whom last year's phenomenal success would not have been possible.

Between March and July 2012, 51 mink were removed from across Aberdeenshire. A further 40 mink were removed in August 2012 alone and as a result there has been a huge reduction of both mink sightings and captures this year - 5 captures for March - July 2013. The scarcity of mink has perhaps resulted in an increase in water vole sightings across the region, most notably on the Ythan catchment where numerous sightings have been reported to both myself and the local press.

A lot of mink were captured on the lower Don catchment some of which were no doubt destined to reach the upper river. In March this year I began a large survey of the upper Don and its tributaries including monitoring all the way up to Cockbridge. This would appear to be prime mink habitat with plenty of prey species available including rabbit. I am pleased to report that I recorded no signs of mink.

Although the dispersal season may yet reveal the presence of mink in Aberdeenshire, I firmly believe we have dealt the population a massive blow and have had a major impact on them.

Please continue to keep up the good work and support your local fisheries trust which will be responsible for taking the mink work forward from 1 September 2013.

A huge WELL DONE TO YOU ALL!



Jim Mann

North Tayside - Ann-Marie MacMaster

During the period March to July (inclusive) 5 new rafts have gone out on the Bervie Water (1), Lunan Water (1), River Tay (2) and River Tummel (1) catchments. The raft on the River Tummel went out following a reported mink sighting. Linda Cawood was watching ospreys when she managed to photograph the mink opposite! Please see the North Tayside update page on the SMI website for more photos - <http://www.scottishmink.org.uk/category/regional-updates-north-tayside/>.

Also of interest, a mink was recently filmed on a raft and you can see this footage on the Mink Channel on the SMI website - <http://www.scottishmink.org.uk/mink-channel/>.

23 mink were removed from the following catchments between March and July: Bervie Water - 1 x M; Isla - 6 x F, 1 x M & 3 U; Lunan Water - 1 x F & 1 x M; River North Esk - 1 x F & 3 x M; River South Esk - 1 x F & 1 x U; River Tay - 2 U; and River Tummel - 1 x F & 1 x U. (*M=male, F=female and U=unsexed).

The majority of sightings in North Tayside are reported from the River North Esk catchment (8 sightings reported from May - July inclusive). This is not surprising given that the main river stem is prone to spate conditions and rafts do not last (as ever, rafts are

better on the tributaries). In addition it has been a difficult area to recruit and retain volunteers. We need all the help we can get on the River North Esk catchment so if you can lend a hand please get in touch.



From 1 September the Esk Fisheries Trust will take over the management of mink work on the Bervie Water, River North Esk, River South Esk and Lunan Water catchments. I will continue to coordinate the mink monitoring and trapping on the Garry, Tummel, northern Tay, Erich and Isla catchments (as before). In addition, my role will also include Project Coordinator and as such I will be assisting and supporting the fisheries trusts with mink work across the project area. My contact details will remain the same.

Ann-Marie MacMaster

Ann-Marie MacMaster, 07825 186 043, ann-marie@rafts.org.uk

Submit Your Mink Data On-line

Following a successful trial, we would now like to invite ALL volunteers to submit mink sightings and raft check data (including absence of mink signs) directly on a new web portal called 'MinkApp'.

You will receive further information about the MinkApp and login procedures from your local contact. Any feedback on the system itself can be e-mailed to minkapp@abdn.ac.uk

We are also looking into new ways of informing you about how your data contributes to mink control across Scotland. To this end, there may be variation amongst volunteers in the MinkApp interface.

Please note that the use of MinkApp is not obligatory. But if you are willing and able to submit your data online, this will really help SMI to collect and analyse your valuable data in the most efficient way.

The MinkApp team
dot.rural,
University of Aberdeen



Natives, Aliens & Reintroductions Conference

On Saturday 22 June our North Tayside Mink Control Officer, Ann-Marie, attended the Glasgow Natural History Society's 'Natives, Aliens and Reintroduction Conference'.



There were some interesting presentations and posters. The SMI information boards were on display together with other poster presentations - including posters made by an S2 biology class from Lourdes Secondary School, Glasgow. Working in groups, the class were tasked with producing posters on the conference theme.

One group chose the American mink and made an excellent job of their poster! Their poster can be seen on the SMI website under the North Tayside updates section - <http://www.scottishmink.org.uk/category/regional-updates-north-tayside/>

Double Trouble

The American mink is not the only invasive non-native species affecting watercourses in Scotland. The American signal crayfish also causes much concern.

Drs Yolanda Melero and Xavier Lambin from the University of Aberdeen, have been looking at the possibility that where these species coexist, their impact on ecosystems is even worse - as is the case in many parts of Europe.

Invasive crayfish are capable of reaching very high densities. Mink feed voraciously on crayfish, in fact where crayfish are superabundant, mink prey almost entirely on crayfish. After completing a review of all published studies of mink ecology, it was noted that where mink and invasive crayfish coexist, mink have very small, tightly packed territories. This results in high densities of breeding female mink which in turn results in the production of numerous juveniles. So much so that it becomes much more difficult, and prohibitively expensive, to control mink in these areas.

The work will soon be published in the scientific journal *Oecologia*.

Why So Slow?

The distribution of American signal crayfish is currently restricted in Scotland, with only a few isolated populations present within the SMI area. Invasive non-native species should be dealt with as soon as possible and before they spread and costs escalate, however action is slow when it comes to the invasive crayfish!

Effective removal of invasive crayfish is extraordinarily difficult and removal from rivers is unprecedented. The tools available are expensive, often ineffective and could damage other parts of the ecosystem. Discussions have taken place and some control attempts made, however populations of invasive crayfish remain in northern Scotland.

Rupert Haughton will begin a PhD in August 2013. Looking at the invasion of northern Scotland by the invasive crayfish, Rupert will research the barriers to decisive action when dealing with issues that are presently minor but have the potential to become serious if nothing is done.

Rupert will be supervised by Drs Xavier Lambin and Doerthe Tetzlaff (University of Aberdeen), Colin Bean (SNH) and Bob Laughton (Nairn Fisheries Trust).

Invasion of Scotland

The invasion of Scotland by the American mink has been a slow affair. Using DNA technology and 500 mink carcasses, supplied by volunteers, Elaine Fraser researched how that spread took place.

Elaine found that mink spread from two places in SW and NE Scotland. The low lying farmland areas of NE Scotland were rapidly invaded however the pattern of spread was much affected by topography with mountains restricting, and valleys facilitating, dispersal.

The spread of mink spread along the west coast was much slower, progressing in a stepping stone manner. SW mink eventually moved up the Great Glen and met NE mink near Inverness. Mink of mixed origin contributed to the invasion of the Black Isle however a key result is that the invasion front on the west coast appears to be fed by SW populations *only*.

Therefore, when considering the management of NW mink populations, mink control should be focused on the west coast. This work will soon be published in the scientific journal *Biological Conservation*.

New Honours Project

Mink are versatile predators that prey on small mammals, birds, frogs and fish. An honours project carried out in 2009 at University of Aberdeen (using mink carcasses supplied by project volunteers) found that fish, mainly small salmonids, formed up to one third of the mink diet.

There is some evidence that the % of fish in the mink diet increases during winter, when cold water makes fish more sluggish and therefore easier to catch.

This autumn, Jennifer Paterson, an undergraduate student at University of Aberdeen, will revisit this subject using a much larger sample size. Jennifer will select from the 750 mink guts stored in freezers, those that can be related to fish abundance estimates derived from electro-fishing surveys.

Jennifer hopes to determine if there is a relationship between mink consumption of fish and fish abundance. Also, whether mink deplete young salmonids early in winter when there is competition for space, or later in winter when competition has run its course and the impact of mink on fish is likely to be greater.

Special thanks from Chris Horrill, Project Manager

There is no doubt, we could not have achieved what we have to date without dedicated commitment from volunteers, staff and funders alike.

We appreciate that for volunteers to go down to the water's edge to diligently check rafts and traps takes time and dedication, and that this can be even more challenging if there has been no sign of mink for many months. Fewer signs of mink is ultimately what SMI aims for - less signs = less mink and less mink = more native wildlife for everyone to enjoy!

The SMI staff have all worked extremely hard to build on and expand the networks of volunteers and rafts and in each of the four regions of northern Scotland. They have spent a lot of time training and supporting volunteers and providing the necessary feedback to maintain volunteer enthusiasm.

And last but by no means least, the work carried out by SMI volunteers and staff since April 2011 would not have been possible without the provision of funding and for this we are truly grateful.

Dr Chris Horrill, Project Manager

More Thanks!

Without raft manufacturers Wood RecyclAbility and Ayrshire River Trust, and our main trap supplier Bethel Rhodes & Sons, we would not have the necessary tools for mink monitoring and control across north Scotland.

These particular manufacturers went out of their way to produce equipment for the project, occasionally with very tight deadlines. On one occasion 120 rafts were produced by Wood RecyclAbility and 150 by Ayrshire River Trust, both in just 3 weeks! SMI would like to thank all the suppliers that have contributed towards the project over the last 2 and a half years.



Cheerio Folks

At the end of August 2013 we say goodbye to Hollie Walker (Project Coordinator), Gunnar Scholtz (North Highland Mink Control Officer) and Jim Mann (Aberdeenshire Mink Control Officer). All of the staff have worked hard to make SMI the success that it is today and we wish them well in whatever the future holds for them.

We also say goodbye to Jonathan McAllister, Field Technician at University of Aberdeen, who left in June to take up a new post. Jonathan was responsible for the mink dissections during his time at the University.



Events

Cromarty Firth Fisheries Trust

- **Seashore Road Show**—7 September - Laide Campsite, Aultbea, from 11am- 5pm. Part of the Highland Seashore Project, see www.highlandbiodiversity.com/seashore.asp which aims to raise awareness and inspire people to enjoy our marine environment. Rock pooling sessions with expert James Merryweather, family activities (e.g. beach art and crabbing), Marine Conservation Society activities and touch tables, willow fish making, canoe trips, RSPB sea eagle display and lots more—including good seafood on the BBQ!



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