

Spring spawning herring rediscovered to the west of Gairloch

During February, the Scottish Pelagic Fisherman's Association [SPFA], in collaboration with the Scottish Government and other partners, led a survey of winter and spring spawning herring in and around the Minch and Outer Isles¹. On 17th February 2018, large shoals of herring were encountered by the pelagic trawler 'Unity' to the west of Melvaig just outside Loch Gairloch, estimated at between 3000 and 4000 tonnes. Samples of these fish indicated that they were very close to spawning, and may indeed have been on spawning grounds.

A follow-up video survey of the seabed where Unity recorded the herring marks was undertaken by the Skye and Wester Ross Fisheries Trust and the Scottish Natural Heritage Marine survey team on 26th February 2018 but failed to find herring eggs.

So, there was much excitement earlier this week when a team of local scallop divers reported finding herring eggs covering a large area of seabed to the west of South Erradale, just outside Loch Gairloch.

The report below is from dive boat skipper, Ruairidh MacLennan, who describes the underwater scene on 20th March:

'I'm Ruairidh, the skipper of the Atlantia and who did the video diving today.

There are 4 videos; they should give you a pretty good look at it although I really don't think they will portray the sheer scale and volume of eggs that are present. It's incredibly dense in places with 100% coverage across the sea floor and a variety of habitats.

I think my interpretation from diving today would be they [the herring] were definitely aiming for the maerl beds. The closer to Port Henderson, where the ground goes sandier the density reduced. Towards Red Point on dive 4 it was still incredibly thick and still maerly ground, I would guess as you hit the sandier ground south of dive 4, there the density would reduce also.

Dive 3 was done on the open dredge ground. You could tell it was old dredge ground and the density of spawn was low here.

Yes there were eggs on kelp- there were eggs everywhere! I tried to illustrate this in the videos- eggs on kelp, rocks, scallops, etc it was literally a blanket over everything. The sea bed looked brown due to the density.

There were eggs from 14m to 22.5m that we saw probably shallower too.

¹ See http://www.scottishpelagic.co.uk/news_views/index.htm

Apologies in advance for my camera skills - I tried my best but realise I'm not ready to contribute to Blue Planet just yet.'

The area with herring spawn is at least 2.5km long by up to 0.8km wide.

This is the first record of large numbers of herring spawning in the Gairloch area for many years.

In 2017 herring eggs were seen in the same area by a scallop diver but not reported. On 26th March 2017 large numbers of fish fry were seen in the water around Melvaig; these may have been young herring from a nearby spawning ground².



In addition to supporting fisheries potentially worth £ millions, juvenile herring provide food for many other fish including salmon, sea trout, haddock and cod; iconic Scottish sea birds such as puffin, gannet and guillemot; and the whales and dolphins upon which the marine wildlife tourism industry depends. If stocks recover, the herring could once again become Scotland's most important fish.

These observations highlight the importance of protecting areas of suitable habitat upon which the herring eggs can incubate most successfully, perhaps especially maerl beds.

Herring eggs which fall into a maerl bed may be better oxygenated so have higher rates of survival and may also gain some level of protection from predators. Predators of herring eggs include haddock, which, when they are abundant, can consume a large proportion of the spawn.

In 2017, the International Council's for the Exploration of the Seas [ICES] recommended that under precautionary considerations, that activities that have an impact on the spawning habitat of herring should not occur, unless the effects of these activities have been assessed and shown not to be detrimental³.

Notes for editors:

The waters around Wester Ross have long been famous for their herring fisheries. In 1788 the British Fisheries Society developed the port of Ullapool as a base for the herring fishery; as recently as the 1950s, Ullapool was the most important herring fishing port in the United

² See <http://www.wrft.org.uk/news/newsitem.cfm?id=205>

³ See <http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2017/2017/her.27.6a7bc.pdf>

Kingdom. Gairloch was also an important base for the Minch Herring fishery. However, following a collapse in fish stocks in the 1970s; the Wester Ross herring fishery has never recovered.

In 2017, [ICES] advice to governments was based on an estimate that the herring stock within ICES management area VIa (waters around west of Scotland – Northern Ireland) was near an all time low.

<http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2017/2017/her.27.6a7bc.pdf>

Former herring fishermen, when interviewed by Sue Pomeroy for Wester Ross Fisheries Trust and Two Lochs Radio in 2012, highlighted the importance of ‘coral’ (local fishermen’s name for maerl) as a spawning habitat for herring, and in particular the area around Melvaig. Ruby Neervoort’s thesis ‘The fish that did not get away’ provides more details and was based on information provided by former fishermen. It can be found here:

[http://www.wrft.org.uk/files/final%20report%20Ruby%20Neervoort%201898558%20\(1\).pdf](http://www.wrft.org.uk/files/final%20report%20Ruby%20Neervoort%201898558%20(1).pdf)

Maerl is a coralline [coral-like] sea weed, which grows very slowly and can form a shallow fragile reef-like structure full of spaces in which small animals can live. It is a preferred spawning habitat for herring. More information about maerl can be found here:

<https://www.nature.scot/landscapes-habitats-and-ecosystems/habitat-types/coast-and-seas/marine-habitats/maerl-beds>

Maerl is one of the Priority Marine Features for which the Wester Ross Marine Protected Area was designated. The Scottish Government has yet to complete a survey of maerl beds around Scotland.

The importance of protecting herring spawning grounds was recognised by herring fishermen in Scotland as long ago as the 1880s who successfully lobbied the Government to establish a 3-nautical mile limit to prevent damage from mobile gear to spawning grounds. The 3-mile limit was repealed by the Inshore Fisheries Act 1984 following pressure from the demersal fishing industry during a time when demersal finfish landings were in decline.

<https://www.legislation.gov.uk/ukpga/1984/26/schedule/2>

Loch Gairloch and the area outside the loch between the island of Longa and Red Point within which the herring eggs have been found remains officially closed to mobile gear, so there has been less damage to maerl beds here than elsewhere.

Contacts:

Peter Cunningham Biologist, Skye and Wester Ross Fisheries Trust. tel: 01445 712 899

Alasdair Hughson Director at Keltic Seafare (Scotland) Ltd. tel: 07801 659 618