

Northern Sea Fan Project

Firth of Lorn

Interim Report



Why record sea fans?

Northern sea fans (*Swiftia pallida*) form slender colonies up to 20cm tall but usually 7-10cm. Unlike their southerly cousin *Eunicella verrucosa*, *Swiftia* are neither protected under the Wildlife and Countryside Act nor subject to a Biodiversity Action Plan. However, in common with pink sea fans, *Swiftia* play host to the sea fan anemone *Amphianthus dohrnii*, which is subject to a Biodiversity Action Plan.



Swiftia pallida (photo: Calum Duncan)

Where do northern sea fans occur?

Northern sea fans are filter-feeders and they will be found on rocks and boulders in areas with some current, often in association with Devonshire cup corals and axinellid sponges. They are normally found deeper than wave surge to avoid damage, in the range of 18-60m. The northern sea fan as its name suggests is found in the north of Britain, namely western Scotland and also some sites in western Ireland. In Scotland it has been recorded in the Firth of Lorn, more exposed western sites on the Isle of Mull, the mouth of Loch Sunart, small isles, around Skye and along the east coast of the western isles. However, the comparatively low number of records will be largely due to the lack of data from exposed rocky sites.

The sea fan anemone

The sea fan anemone, *Amphianthus dohrnii* is a Biodiversity Action Plan species. This little anemone, which rarely exceeds 1cm across, generally attaches to the branches of sea fans, though it may also occur on other tall features such as hydroids and worm tubes.

A. dohrnii on *Swiftia* (photo: Rohan Holt)



Since *A. dohrnii* normally reproduces by basal laceration, where small fragments of tissue tear off from the anemone and regenerate into tiny anemones, its distribution can be patchy

and changeable. Where one occurs there will often be others nearby.

Although the sea fan anemone is thought to be very rare, because of its small size it can be easily overlooked. It has been recorded on *Swiftia* in the Firth of Lorn area, namely at Ardnoe Point at the entrance to Loch Crinan, southwest Insh Island, southeast Luinga and Sgeir Mhogalach, a rock east of Eilean Dubh mor.

Seasearch in Scotland is co-ordinated by the Marine Conservation Society Scottish Officer, a post part-funded by Scottish Natural Heritage since 2000.



To find out more visit www.seasearch.org.uk or contact MCS Scottish Officer and Seasearch Scotland co-ordinator Calum Duncan on 0131 226 6360 or scotland@mcsuk.org. UK Seasearch Co-ordinator Chris Wood can be contacted on 07776 142096 or email seasearch@f2s.com

Interim Survey Results

Summary

The survey was intended to pilot the Northern Sea Fan recording methodology; gather baseline information on *Swiftia* from known and new sites and to look for the sea fan anemone *Amphianthus dohrnii* on sea fan colonies.

During the weekend of 16-17 April, eight Seasearch divers measured and photographed *Swiftia pallida* at three sites in the Firth of Lorn, one of which had never been surveyed before. A total of 195 colonies were measured and *Amphianthus dohrnii* was re-recorded and photographed at the two previously surveyed sites.



Loading survey boats at Cuan slip (Calum Duncan)

Sgeir Mhogalach

Here silty surfaces of bedrock protrude through sediment on a 45 degree slope. Fewer *Swiftia* were seen than at southeast Lunga but some were very large: up to 30cm along the longest branch. Many colonies were examined for *A.dohrnii* and results varied: some divers saw none, others one, two or even more colonies with one or more sea fan anemones.



Firth of Lorn area (www.multimap.com)

South of Culanach Reef

At this site, *Swiftia* colonies were present at the lip of a small cliff that started at about 23m bsl and descended beyond 30m to an estimated 40m. Colonies were more common on horizontal ledges at the top of the cliff. Few fans were seen on the cliff proper itself and no sea fan anemones were present. This previously unrecorded site was about 500m

south of Culanach reef, where *Swiftia* colonies had been recorded on an MCS Firth of Lorn sublittoral survey in 1983.



A.dohrnii on *Swiftia* (Rohan Holt)

Many *Swiftia* grew here at a depth of 21.5m to 23m bsl on silted shelves of slate bedrock. The population had a large range of sizes, with many small colonies including some unbranched ones. Their condition was generally good with little fouling, although there was some die-back near the base of the colonies. *A.dohrnii* was confirmed with photographs taken on some colonies. The anemones had first been recorded here on an MCS trip in 1983 and a UMBSM/MNCR survey of Sound of Luing in 1989.

Southeast Lunga

Many *Swiftia* grew here at a depth of 21.5m to 23m bsl on silted shelves of slate bedrock. The population had a large range of sizes, with many small colonies including some unbranched ones.



Spiny lobster in aquarium (Calum Duncan)

Of conservation interest, three spiny lobster (*Palinurus elephas*) were seen at this new southerly site. The reef also provided a good example of the 'Caryophyllia smithii, *Swiftia*

pallida and large solitary ascidians on exposed or moderately exposed circalittoral rock' biotope. Prior to the present survey, this particular biotope had not been recorded further south than the Ardnamurchan peninsula (www.jncc.gov.uk/marine/biotopes).

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