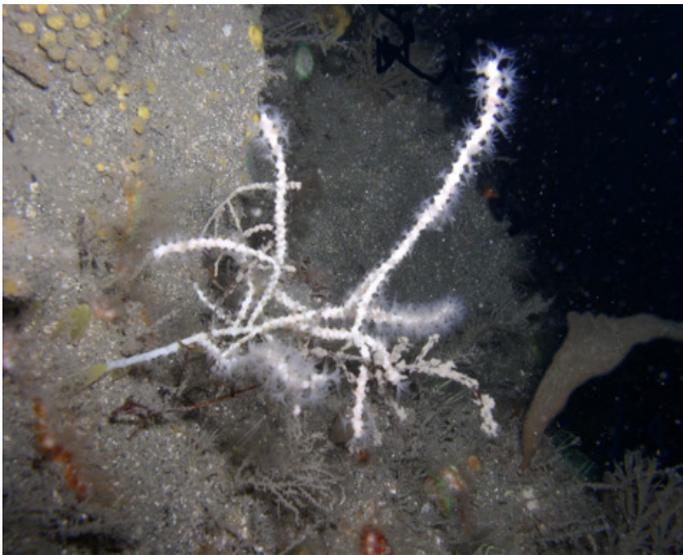


Northern Sea Fan Project

The Insh Island Sea Fans

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* is not protected under the Wildlife and Countryside Act but it is being considered for inclusion in the latest revision of the UK Biodiversity Action Plan. In common with pink sea fans, *Swiftia* play host to the sea fan anemone *Amphianthus dohrnii*, which is already 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, The 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 Lunga and Sgeir Mhogalach, a rock east of Eilean Dubh Mor.

The Northern Sea Fan Project

In April 2006 a group of eight seasearch divers visited three sites in the Firth of Lorne looking for Northern sea fans and the sea fan anemone. They measured a total of 195 colonies and found *Amphianthus dohrnii* at two of the sites. This report describes the results of the first sea fan survey carried out by members of Dalriada sub-aqua club in May 2007 using the Seasearch methodology pioneered in 2006.

The Insh Island Sea fans

On Saturday 5th of May 2007 a group of Dalriada SAC divers carried out a sea fan survey at the SW corner of Insh Island, Firth of Lorne. Previous surveys had recorded the northern sea fan along with the sea fan anemone at this site. The aim of the survey was to introduce the divers to the survey methodology and confirm the continued existence of the sea fan anemones at the site.

Two dives were carried out at the position shown on the chart. The dives were close together but duplication of effort was avoided by the first pair of divers swimming north after descending and the second pair of divers being dropped to the south of the first dive site. Positions were obtained using a GPS set to the WGS 84 datum

Dive 1 (56° 18.666 N 005° 40.596 W)

At this site the divers found a rock wall descending steeply to 30 metres with a boulder slope continuing downwards. Thirty four sea fans were surveyed occurring between 17 metres and 30 meters. However no sea fan anemones were seen. Cup corals were abundant and axinellid sponges were also present. A large Ballan wrasse followed the divers through much of the dive.

Dive 2 (56° 18.656 N 005° 40.608 W)

Just to the south of site 1 the divers found kelp forest on a steep rock face down to 18 metres then bedrock and very large boulders continued downwards. Shortly after descending a large area of bedrock jutting out at right angles to the island was found with large numbers of sea fans on the vertical south face at depths of 20 to 30 metres with many more visible in deeper water. Over 20 sea fans were surveyed on this rock face with no anemones found. However just to the north of this rock face a large, car sized boulder was also covered in sea fans and cup corals. On the southern face of this boulder one sea fan was recorded with 4 anemones on it. On the northern face a further three separate sea fans, each with one anemone were recorded within a space of half a metre.

In all 67 sea fans were surveyed, a fraction of

those present. As well as looking for sea fan anemones the divers also measured the length of the longest branch, the number of branches and colony condition.

Colony length

Many of the colonies were branched and the length of the longest branch was measured. All sizes were represented from very small, less than 5cm long to quite large, 20 cm long. From the collated data 15 % of those surveyed were less than 5cm long, 40 % were 5-10cm long and 45% were over 10 cm long

Number of branches

Of the 67 colonies surveyed, 42% had 5 or fewer branches, 33% had between 5 and 10 branches while the remaining 25% had 11 or more branches. Five colonies, around 7% had only 1 or two branches and were less than 5cm in length which may indicate the level of recent recruitment. The maximum number of branches recorded was 23 with a further 3 colonies having 17 branches

Colony condition

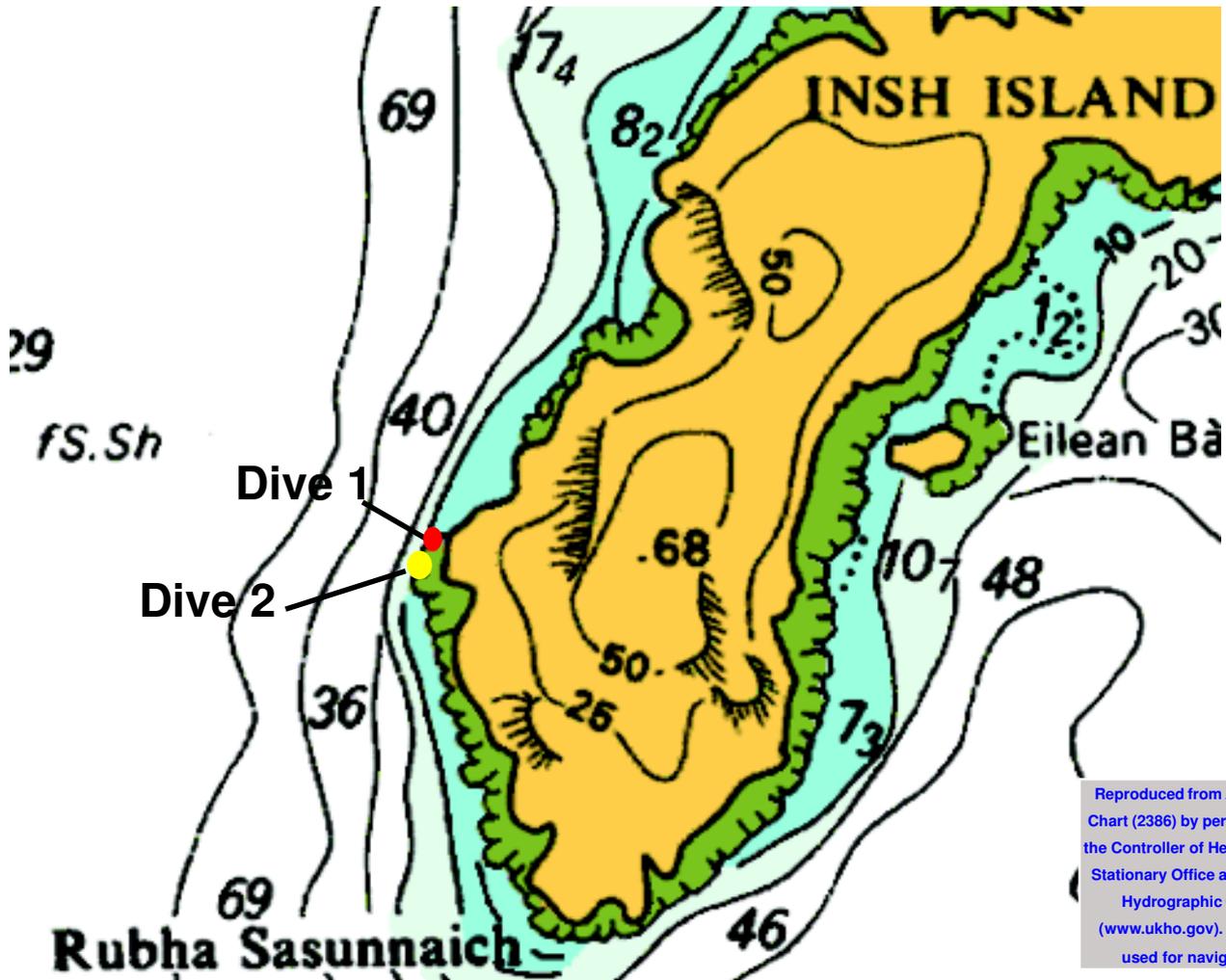
This was recorded using the following scale: D = Dead, 1= colony almost dead and/or fouled, 2= colony with major damage or fouling, 3= colony significantly damaged or fouled, 4= colony showing minor damage or some fouling and 5=completely clear colony. The majority of fans at this site 78% were given a condition score of 4 or 5 with only 6 % being recorded as having major damage or fouling. No dead or almost dead colonies were recorded.

Feeding

The survey took place at around slack water and the vast majority of colonies were recorded as feeding with visible polyps.

Conclusion

The sea fans of SW Insh Island appear to be in good condition and thriving. The sea fan anemone is still present at this site though highly localised and present on only 4 out of 67 colonies surveyed.



Position of dive sites off the SW corner of Insh Island, Firth of Lorne, Argyll and Bute.

exploring the undersea world

This seasearch survey was organised by Owen Paisley.

Seasearch Surveyors were:
Trevor Davies, Yvonne Davies, Marilyn Franks and Owen Paisley.

Thanks to Argyll Biodiversity Group for providing the underwater recording slates used during this survey.

Special thanks to Trevor and Yvonne for providing a RHIB,

Text by Chris Wood, Calum Duncan and Owen Paisley,
Photographs by Calum Duncan and Rohan Holt.



Seasearch is a volunteer underwater survey project run by MCS which encourages recreational divers to contribute towards the conservation of the marine environment.

Financial support for the project during 2007 has been given by:



