



Search of The Seaslugs

CALUM DUNCAN

Facelina auriculata from Macduff with ringed rhinophores clearly visible

NUDIBRANCHS, COMMONLY known as sea slugs, are some of the most colourful and flamboyant animals you might encounter in the sea. In comparison to the British terrestrial slugs, they are spectacular. They come in a variety of forms and exist in a wide range of environments, from the tropics to the poles. Many species have a highly specific niche and are decidedly specialised predators.

Nudibranchs are molluscs but unlike many molluscs they have evolved to lose their protective shells so have to rely on other methods of survival. You may have swam past *Tritonia hombergi* on many occasions, as its white and lumpy form blends in immaculately to the dead men's fingers (*Alcyonium digitatum*) upon which it feeds. Its cousin, *Tritonia nilsodhneri* is perfectly camouflaged against the pink sea fan *Eunicella verrucosa*, which it feeds on in southwest UK waters.

Other species adopt a different survival strategy and display bright warning colours, which fish recognise as being dangerous or at least inedible, and hence avoid being eaten. The warning colours are there for a reason. Some species gain their toxins from feeding on toxic anemones or jellyfish. A tropical species,

Glaucus, preys on the Portuguese Man-of-War and selects the most venomous nematocysts (stinging cells) to use as defence. Consequently it is highly poisonous, even to touch. Fortunately nudibranchs in this country are rarely harmful to people, unless consumed!

A tell-tale trail of eggs

One of the more notable features of nudibranchs that may alert you to their presence are their eggs. Nudibranchs are simultaneous hermaphrodites; which means that they possess both male and female sex organs and when they copulate they both donate sperm to their mate and store sperm from their mate.

They will then typically walk around in circles, laying their eggs while fertilising them with the sperm they have stored and producing beautiful, white spiral-shaped egg masses. Many egg masses are species-specific in shape and are laid on their prey animal.

Despite their fascinating life history, very little is known about the seaslug fauna of the Scottish coast. Seaslugs can be notoriously difficult to identify without being able to examine them under a microscope. Many of the distinguishing features lie in the form of the rhinophores, the horn-like, sensory tentacles on their head, or the pattern of the gills on their back. However, this difficulty in identifying them does not make them any the less popular.

Nudibranch fan club

In May of this year, 17 seaslug fans, including myself participated in a nudibranch identification course given by one of the UK experts, Dr Bernard Picton, author of a number of publications including 'A Field Guide to the Nudibranchs of the British Isles'.

One of the highlights on the first day was collecting nudibranchs on the

Macduff shoreline. Their minute size, often less than 1cm, and their incredible camouflage made it a challenge to find any, yet collectively we returned with; *Facelina auriculata*, a nudibranch with iridescent blue gills; the grey sea slug *Aeolidia papillosa*, a species which preys on anemones and is commonly found intertidally; *Polycera quadrilineata* and *Dendronotus frondosus*.

We had greater success the following day while diving from Sandhaven in the southeastern Moray Firth. After intensive scouring of the rock surfaces and staring intensely at every sponge, hydroid and kelp stipe, we managed to collect another five species, including the yellow spotted *Limacia clavigera*, a species which feeds on the bryozoan *Electra*, and *Jorunna tomentosa* a sponge feeder.

In only one weekend, course attendants, managed to identify 9 species, six of which had never been recorded in northeast Scotland before!

Seasearch is very keen to improve our knowledge of the distribution of these remarkable species around the Scottish coastline and summer is a good time to find them. If you see a nudibranch and would like to record it, you can send in a record on an Observation form, with information about the habitat and other species seen, available from www.seasearch.org.uk.

Recommended identification guides are 'A Field Guide to the Nudibranchs of the British Isles' by Bernard Picton, and online: the Seaslug forum www.seaslugforum.net, Habitas www.habitas.org.uk and Scottish Nudibranchs www.scottishnudibranchs.co.uk.

Marion Perutz
Northeast Scotland Seasearch
Co-ordinator



Bernard Picton teaching on Macduff shoreline (Calum Duncan/MCS)

AS WELL as recording broad seabed types, Seasearch is a great excuse to slow down, get up close and reveal the miniature marvels of the sea. Northern sea-fans *Swiftia pallida* on which tiny rare anemones *Amphianthus dohrnii* cling are one example. No group of animals better demonstrates the rewards of slowing down and looking carefully than the colourful nudibranchs. Marion Perutz tells us about an excellent identification course that she organised in Macduff, run by the man himself, Bernard Picton while Owen Paisley reports from Insh Island ...



Elabellina gracilis

The nudibranchs found diving at Sandhaven, eastern Moray Firth: *Ancula gibbosa* & *Goniodoris nodosa* were from the intertidal shore at Macduff.

All images courtesy Bernard Picton unless otherwise credited



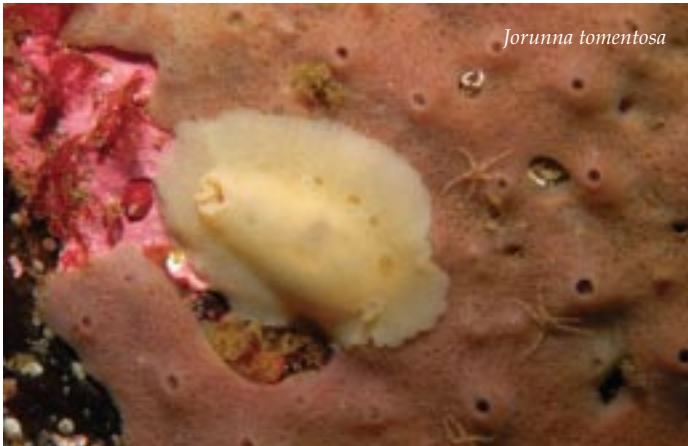
Polycera quadrilineata
from Macduff shoreline
feeding on bryozoans



Goniodoris nodosa



Ancula gibbosa



Jorunna tomentosa



Limacia clavigera



Participants in the Nudibranch course
(MCS)

Finning For Sea Fans

NORTHERN SEA fans are filter-feeders found on rocks and boulders in areas with some current but deeper than wave surge to avoid damage. They are normally found between 18 and 60m in association with Devonshire cup corals and sponges and have been recorded in the Firth of Lorn, exposed sites on western Isle of Mull, the mouth of Loch Sunart, the Small Isles, around Skye, along the east coast of the Western Isles and a few locations in west Ireland.

Rarely exceeding 1cm across, the tiny sea fan anemone clings to sea fan branches, though it may also occur on tall hydroids and worm tubes, to get up into the current. Due to its rarity, it is a Biodiversity Action Plan species. It has been recorded in Scotland only 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.

In April 2005 a group of 8 Seasearch divers confirmed the presence of *Amphianthus* at the latter two sites and carried out measurements of 195 sea fans that contributed to the Site Condition monitoring report for the Firth of Lorn marine Special Area of Conservation.

Fan coral gardens

In early May 2007, another group, this time of Dalriada SAC divers measured another 67 colonies at the SW corner of Insh Island where they found a steep kelp-covered rock face to 18 metres, with

bedrock and very large boulders beyond.

On the vertical south face at depths of 20 to 30 metres, a large area of bedrock jutting out at right angles to the island hosted large numbers of sea fans, with many more visible in deeper water. Just to the north, a car-sized boulder was also covered in sea fans and cup corals. On its southern face one sea fan was recorded with four anemones on it, whilst on the northern face another three sea fans, each with one anemone, were recorded within half a metre.

Are there sea fan anemones elsewhere in Scotland? You could help us find new important areas by getting involved in Seasearch and reporting your sightings. The first Seasearch course of 2007 was held at grand old Fettes College, Edinburgh in early May, to whom many thanks for providing their facilities free of charge. More Seasearch Scotland events are planned for June, July and October: see www.seasearch.org.uk for more details.

Owen Paisley & Calum Duncan
Seasearch West Scotland co-ordinator
and Seasearch Scotland co-ordinator



Sea fan anemone on northern sea fan in the Firth of Lorn (George Brown)

For general Seasearch enquiries and training contact Calum (details below) or visit www.seasearch.org.uk. For northeast Scotland Marion Perutz is on: 07745 656978 or seasearch_nescotland@yahoo.co.uk. For west Scotland Owen Paisley is on: 01546 600209 or seasearch.west@btinternet.com.



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