

The table to the left shows how many species in each phylum were found and what the most common species were.

Sponges. The boring sponge *Cliona celata* was the most common species recorded. This species is named not for its uninteresting nature but rather for its habit of boring into shells and other calcareous substrates. Both the massive form (which can reach over a metre across) and the cryptic form (in which only the tips of the raised oscules are visible above the substrate) were spotted.

Anemones, Corals, Hydroids and Jellyfish. The anemones

Sagarteogeton laceratus and *Sagarteogeton undatus* were recorded from soft sediment areas.

Crustaceans. Scampi *Nephrops norvegicus* were recorded from several locations. These live in burrows in areas of soft mud.

Molluscs. The 'highland dancer' side gilled sea slug *Pleurobranchus membranaceus* was recorded. This large sea slug can reach up to 12cm in length. It was mating at the time of the survey in spring and its large coils of spawn were visible on the substrate.

Echinoderms. Two Northern Ireland Conservation Priority Species, the sea cucumber *Thyonidium drummondii* and the purple sunstar *Solaster endeca* were recorded. The sea cucumber lives in areas of horse mussel bed and is a priority as it might be affected by damage to this habitat. The purple sunstar is a northern species at the southern end of its range in Northern Ireland. It may disappear from our waters if sea temperatures increase.

Fish. Several records were made of the tompot blenny *Parablennius gattorugine*. Strangford is one of the best places in Northern Ireland to spot this charismatic species.

Seasquirts. The fluted sea squirt *Asciidiella aspersa* was recorded. This white sea squirt was using dead horse mussel shell as a substrate.

Seaweeds. Fewer species were recorded than on other areas of the coast. Strangford waters are relatively turbid so the algal zone does not extend very deep.

Phylum/sub-phylum	Common name	Number of species	Total records	Common species (number of records in brackets)
Porifera	Sponges	8	20	<i>Cliona celata</i> (7) – Boring sponge
Cnidaria	Anemones, corals, hydroids, jellyfish	24	87	<i>Metridium senile</i> (10) – Plumose anemone <i>Alcyonium digitatum</i> (9) – Dead men's fingers
Annelida	Segmented worms	2	3	<i>Eupolymnia nebulosa</i> (2) – Strawberry Worm
Crustacea	Lobsters, crabs, barnacles	19	124	<i>Cancer pagurus</i> (14) – Edible crab <i>Necora puber</i> (17) – Velvet swimming crab
Mollusca	Shells, sea slugs, cuttlefish, octopus	42	93	<i>Calliostoma zizyphium</i> (8) – Painted top shell <i>Pecten maximus</i> (12) – King Scallop
Bryozoa	Sea mats	3	3	<i>Flustra foliacea</i> (1) - Hornwrack
Echinodermata	Starfish, urchins, sea cucumbers	16	102	<i>Asterias rubens</i> (20) – Common starfish <i>Crossaster papposus</i> (13) – Common sun star
Tunicata	Sea squirts	7	19	<i>Clavelina lepadiformis</i> (8) – lightbulb sea squirt
Pisces	Fishes	25	100	<i>Pollachius pollachius</i> (8) – Pollack <i>Callionymus lyra</i> (9) - Dragonet
Algae	Seaweeds	6	11	<i>Laminaria hyperborea</i> (4) – Forest kelp <i>Chorda filum</i> (2) – Thong weed
Total		152	562	



The sea cucumber *Thyonidium drummondii*, a NI Conservation Priority species.



Strangford Lough Survey 2007



Elegant sea slug *Okenia elegans*



Black Goby *Gobius niger*



Horse mussel *Modiolus modiolus*



Tompot blenny *Parablennius gattorugine*



Scampi *Nephrops norvegicus*



Sea cucumber *Thyonidium drummondii*



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Seasearch is a volunteer underwater survey project for recreational divers to actively contribute to the conservation of the marine environment (see www.seasearch.org.uk for more information). Financial support for the project was given by the Environment and Heritage service Northern Ireland. This report was written by Claire Goodwin (thanks to Julia Nunn and Chris Wood for editorial comments). Photos are by Claire Goodwin.



Environment & Heritage Service

www.ehsni.gov.uk

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Strangford Lough Survey

Our first survey of Strangford Lough was in 2005 when we surveyed the horse mussel *Modiolus modiolus* beds and associated species. These large mussels are an important species in the Lough. They were once abundant and large areas of the Lough were covered in clumps of mussels, which formed a sort of living reef. These "biogenic reefs" are important as they provide a hard surface for other species to colonise in what would otherwise just be a flat muddy area. It appears that the reefs have been damaged in recent year by mobile fishing gear and there are few areas of this biogenic horse mussel reef left in good condition. One possible way of allowing the reefs to recover is to close some areas to all sources of disturbance. We were asked by the Environment and Heritage Service Northern Ireland to survey some proposed non-disturbance sites.

Other sites in the Lough were also surveyed by independent divers. For some frequently dived areas such as the 'Alastor' and 'Lees' wrecks we now have several records over three years, these data help us to monitor any changes in the Lough.

North of Jane's Rock (Horse Mussel Survey)

Muddy, gently sloping seabed with covering of up to 80% dead horse mussel *Modiolus modiolus* shell (7-17m surveyed). Some live horse mussel individuals were present, up to 10% cover in some areas of the site, but in other areas only one or two live individuals were seen. In the deeper areas of the site the seabed composition altered, there were occasional small bedrock outcrops and large boulders on sandy gravel. Abundant common starfish *Asterias rubens* were seen and occasional common urchins *Echinus esculentus*. In some areas the black brittlestar *Ophicomina nigra* was abundant. The side gilled slug *Pleurobranchus membranaceus* was sighted at 17m. Some plumose anemones *Metridium senile* were present on the rock outcrops.

North of Long Sheila (Horse mussel survey)

Three pairs of divers surveyed slightly different areas of this site. The seabed was a gently sloping mud slope (10.6-14.8m surveyed). Much dead horse mussel *Modiolus modiolus* shell was present, up to 95% cover in some areas of the site. There were also a few clumps of live individuals, but only one pair of divers recorded seeing these. There were some areas of dense *Ophiothrix fragilis* and *Ophicomina nigra* brittlestar bed. Much life was attached to the horse mussel shell including the common feather star *Antedon bifida* and the helter-skelter hydroid *Hydrallmania falcata*. Some very large common starfish *Asterias rubens* were present. The sea cucumber *Thyone roscovia* and the purple sunstar *Solaster endeca* were recorded, both of these are Northern Ireland Conservation Priority species.

Ringhaddy Sound

Gently sloping seabed, primarily mud, with signs of life present, 1.2-15.5m surveyed. The site was extremely sheltered with large number of crabs present. Many man-made objects were recorded ranging from large wheels etc. used as mooring weights, to small items of rubbish (broken bottles, dishes etc.). Local fishermen seem to use the site as a dumping ground for by-catch: large numbers of broken shells were present. Ringhaddy sound lies north to south. The dive was directly out from Ringhaddy pier in an easterly direction.

The 'Alastor' wreck

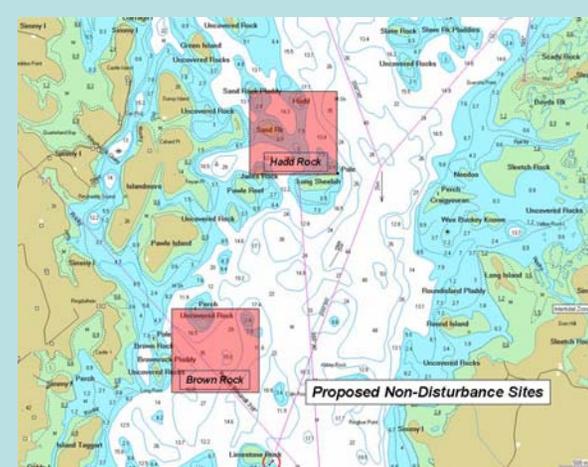
This a fairly intact, upright, wreck which lies in 20m in the middle of Ringhaddy Sound. It is a popular dive site and was surveyed several times in 2007. The seabed around the wreck was a mixture of mud cobbles and pebbles. The wreckage was densely covered with tall and short animal turf including the common feather star *Antedon bifida* and sea squirts. Some crevice cucumbers were present under the gunnel at the stern. There was also much life on the seabed surrounding the wreck including many anemone hermit crabs *Pagurus prideaux*, shore crabs *Carcinus maenas*, Black goby *Gobius niger*, and clumps of edible mussels *Mytilus edulis*. Many of the shore crabs were infected with parasitic barnacles. Much litter was present including netting, tyres, and glass and ceramic bottles. In July a record was made of the elegant nudibranch *Okenia elegans*. This is a fairly rare nudibranch with only a few Northern Irish records, mainly from the north and east coasts. This is the first time it has been recorded from Strangford Lough.

East of Brown Rock (Horse mussel survey)

Dive on east side of Brown Rock in proposed non-disturbance zone. Gently sloping mud seabed (9.6-23.2m surveyed) with scampi *Nephrops norvegicus* burrows. Slender seapens, *Virgularia mirabilis* were common. In deep water these were all very short (<5cm) but taller ones were present in the shallower parts of the site. The anemone *Sagartiogeton laceratus* was also common, this species was more abundant in shallower areas. Some pots were present at the site.

South-East of Brown Rock (Horse Mussel Survey)

Dive to southeast side of Brown Rock in proposed non-disturbance zone. The seabed was gently sloping mud (5.8-17.3m surveyed). In the shallower part of the site (5.8-12.8m) there was little life apparent, although burrows and depressions were visible on the sediment surface. The burrowing anemone *Cerianthus lloydii* was common. In the deeper areas of the site (12.3-17.3m) the seabed was composed of approximately 25% live *Modiolus modiolus*, 40% dead shell, and 35% mud. The Northern Ireland Priority Species sea cucumber *Thyonidium drummondii* was recorded.



This figure shows the areas proposed originally – the location of closed areas is still under consultation

'Inner Lees' Wreck

This wreck is a popular local dive site and was surveyed several times during 2007. The wreck lies in 11.5m in Ballyhenry Bay on a sand and boulder sea bed. The wreck lies roughly north to south with the bow adjoining the northern shore of the bay which slopes steeply upwards. The wreckage is covered in dense tall and short animal turf. Under the wreck and on the surrounding seabed there are many crevices which house many crabs and gobies, including tompot blennies *Parablennius gattorugine*, leopard spotted gobies *Thorogobius ephippiatus* and conger eels *Conger conger*. Shoal of poor cod *Trisopterus minutus* were seen at the wreck break (stern half of wreck further offshore). Nudibranchs were seen on seabed surrounding the wreck but not on wreck itself. Lobster pots were present on shore side of the wreck and there was also a mussel raft, with a line to the wreck.

'Outer Lees' Wreck

This is the stern half of the SS Empire Tana, a liberty ship. This was purchased for scrap, after the second world war, by the breakers John Lees, based in Ballyhenry Bay. While they were attempting to beach her she got caught in the current, struck a rock and sank (see <http://www.irishwrecksonline.net/details/EmpireTana360.htm> for more details). The bow section is known locally as the 'Inner Lees' wreck and lies further inshore in Ballyhenry Bay. The site was surveyed twice in June.

The wreck lies on a sand and boulder seabed at 12.5m. The surfaces of the wreck were covered in short and tall animal turf. Shoals of pollack were present around wreck with some quite large individuals. Lots of lion's mane and moon jellyfish were also present. On one dive sea slugs were very abundant, groups of 5-10 nudibranchs were observed clustered at approx 5m away from the rudder on Lough side of wreck.

The Drop Off

A steep rocky reef, vertical face from approximately 17-30m led onto gently sloping area with scattered boulders. There were many gullies in the vertical rock face. Much life was present on the bedrock including large pieces of boring sponge *Cliona celata* and huge numbers of the white striped anemone *Actinothoe sphyrodeta*. Some lobsters *Hommarus gammarus* were observed, these seemed to be moving into deeper water.



The 'Highland dancer' slug *Pleurobranchus membranaceus*



Bed of striped brittlestars *Ophiothrix fragilis*



The anemone *Sagartiogeton laceratus* and the slender sea pen *Virgularia mirabilis*.



Many species use the horse mussel shell as a substrate including the common feather star *Antedon bifida*.