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.

**Anenomes, 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 drummondi 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 Ascidiella 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.
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.

‘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 foraminifera Trifarotina minuta were seen at the wreck break (stem 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 Less, based in Ballyhenny 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 Ballyhenny 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. Shools of pollock 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 drop off including large pieces of boring sponge Cliona celata and huge numbers of the white striped anemone Actinohthys ephyndeta. Some lobsters Homarus gammarus were observed, these seemed to be moving into deeper water.

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 (6.8-12m surveyed). In the shallower part of the site (6.8-12.5m) 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 (12.5-17m) the seabed was composed of approximately 25% live Modiolus modiolus, 40% dead shell, and 35% mud. The Northern Ireland Priority Species sea cucumber Typhlonia drummondii was recorded.

Ringhaddy Sound

Gently sloping seabed, primarily mud, with signs of life present, 1.2-15.5m surveyed. The site was extensively 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 wreck wreckage was densely covered with short and tall animal turf including the common feather star Antedon bifida and the heller-skelter hydroid Hydralmania falcata. Some very large common starfish Asterias rubens were present. The sea cucumber Thyonome roscovitae and the purple sunstar Sunolaria endeca were recorded. Both of these are Northern Ireland Conservation Priority species.

The ‘Highland dancer’ slug

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