
Duncansby Head

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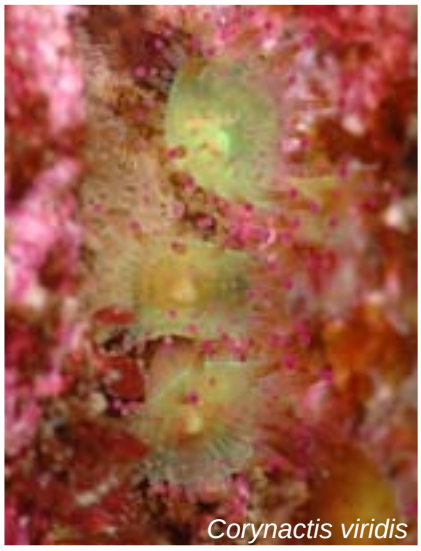
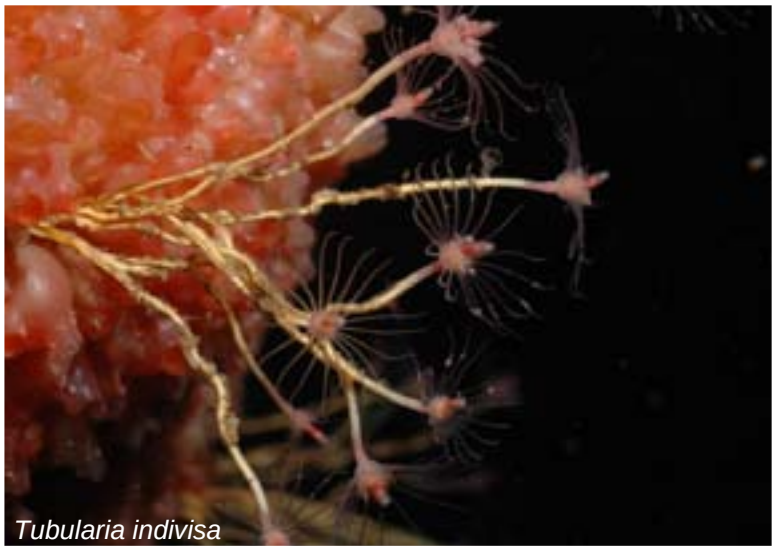
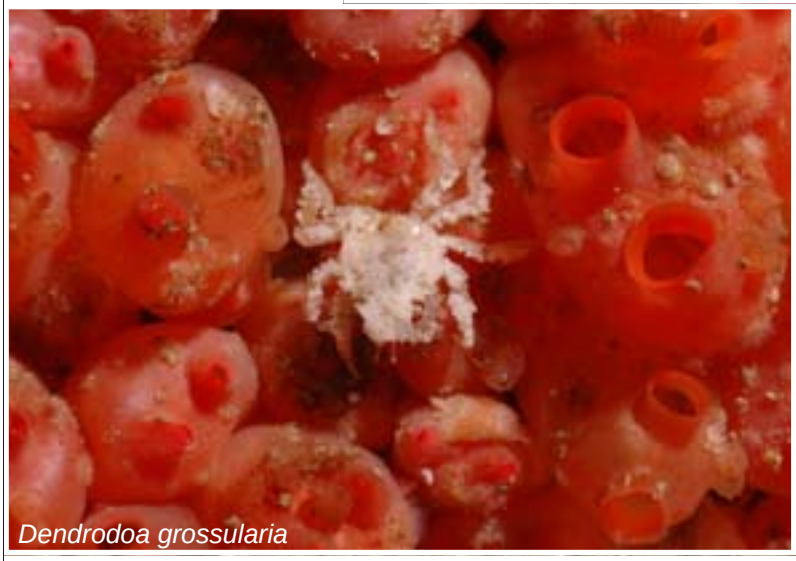
Muckle Skerry

Pentland Skerries & Caithness 2005


Corynactis viridis


Calliostoma zizyphinum


Tubularia indivisa


Dendrodoa grossularia


Taurulus bubalis


Galathea strigosa

Photos: George Brown

The Pentland Firth

The treacherous waters of the Pentland Firth give rise to some spectacular underwater scenery. On the north side of the Firth, better described as a strait, are the islands of Hoy and South Ronaldsay of the Orkney Islands and on the south side is the mainland between Dunnet Head in the west to Duncansby Head in the east. In-between are the islands of the Pentland Skerries, around which are some of the fastest tides in the world (16 knots being reported close to the west of the Pentland Skerries). In May 2005 a team of divers from Inverness Sub-Aqua Club conducted a Seasearch survey around Duncansby Head and the Pentland Skerries. Divers from the Caithness Sub-Aqua Club also under took surveys in 2005.


Henricia sp.

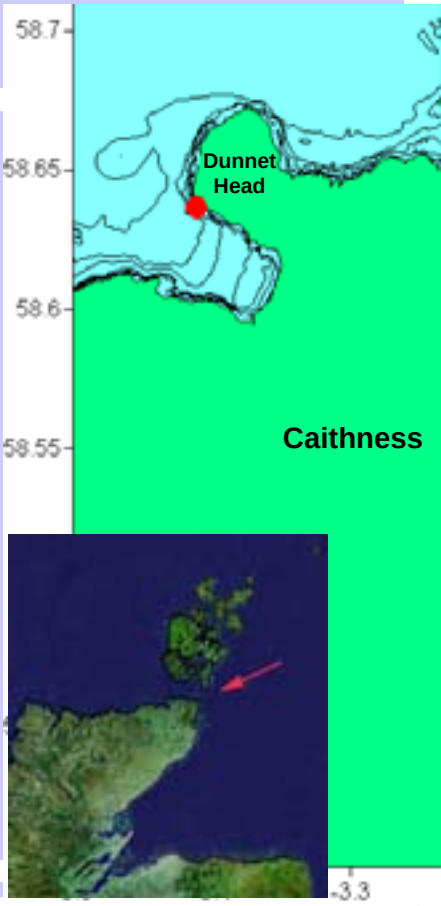
Duncansby Head

The towering cliffs at Duncansby Head reach 64 metres in height and are characterised by stacks, arches and steep-sided inlets locally known as geos. The layered mudstone provides an ideal nesting site for thousands of seabirds. The cliffs resound with the sound of calling guillemots, razorbills, gannets and kittiwakes, which fill every available space. Underwater the geos give way to huge sheltered caverns leading out to tide and wave battered walls on the seaward side.


Inside a geo

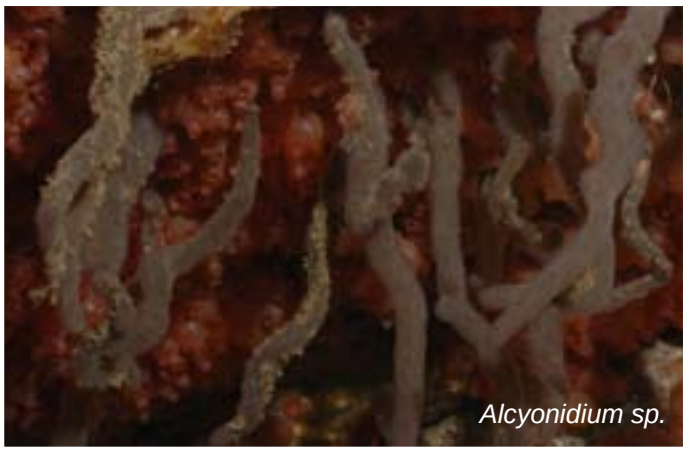
Inside the Geos (Geo of Sclaites, Duncans Bay) Baxter Rock and the Lighthouse Caves

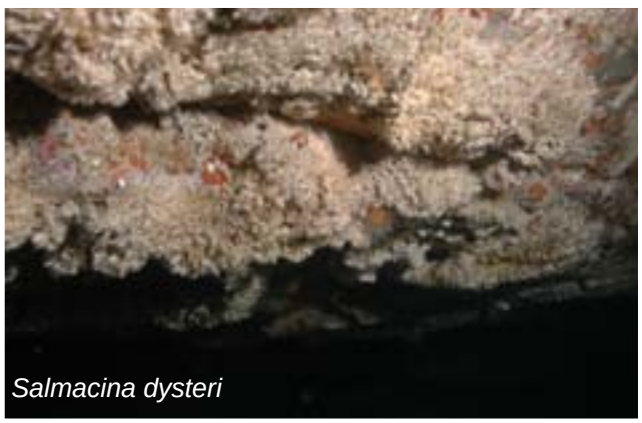
Below the waves of the vertical-walled, narrow geos are spacious, lightless chambers, yet the surface is open (surveyed May 05). The layered mudstone cliffs stretch back into the land by up to 50 metres. The floors of the caverns (~15 m deep) were strewn with large boulders and covered in broken egg shells from the guillemot colonies on the cliffs above. Despite the extreme tidal movement and wave action, life abounds even here. The walls were covered in a mixture of the white *Clathrina* sponge, the bright red baked-bean seasquirt *Dendrodoa grossularia* and the long dark green bryozoan *Alcyonidium* protruded from the wall like over-sized pipe cleaners. In the deeper and darker reaches of the wall, there was a carpeting of the coral worm *Salmacina dysteri.* At the geo entrance, the light shone though a meadow of oaten pipe hydroid *Tubularia indivisa*.



On the seaward walls at Duncansby Head

The communities changed abruptly on the seaward walls (surveyed May 05). Kelp *L. hyperborea* covered much of the walls, interspersed with several species of anemones including dense patches of jewel anemones *Corynactis viridis*, sponges such as elephant's hide sponge *Pachymatisma johnstonia* and extensive hydroid/ echinoderm/ bryozoan animal turf. Several species of nudibranch were also recorded here, such as the violet seaslug *Flabellina pellucida* and the white hedgehog seaslug *Acanthodoris pilosa.* Shoals of pollack *Pollachius pollachius* and saithe *Pollachius virens* sauntered around the entrance to the geos.


Alcyonidium sp.


Salmacina dysteri

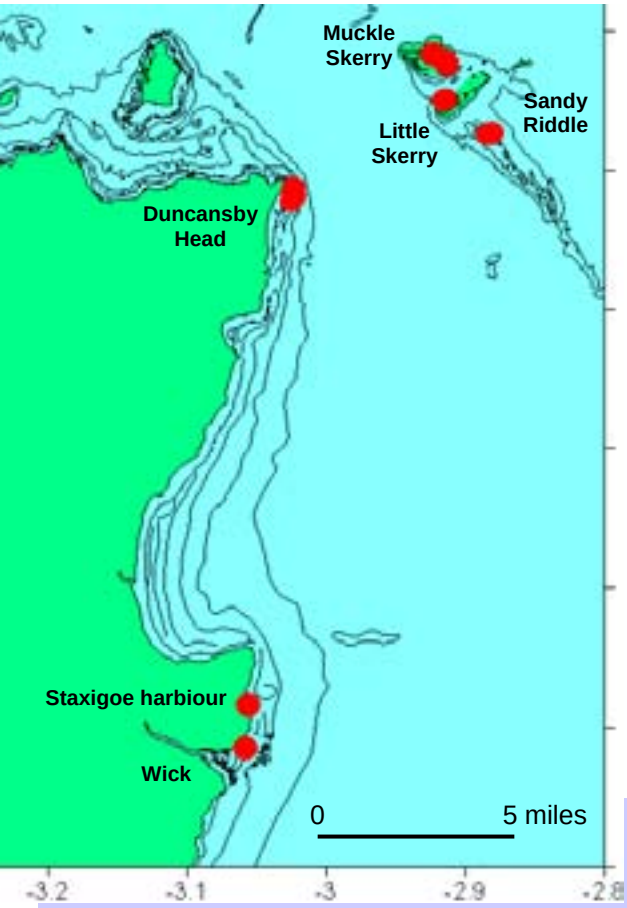
The Pentland Skerries

The four uninhabited islands of the Pentland Skerries (Muckle Skerry, Little Skerry, Louther Skerry and Clettack Skerry), to the northeast of Duncansby Head, are home to a grey seal colony and an abundance of highly territorial and vicious terns. This area exhibits fast currents and strong tides, not to mention some of the roughest seas in the UK.


Muckle Skerry

Little Skerry (site 2)

This shallow bay on the northern side of Little Skerry (surveyed May 05), surrounded by a bedrock wall, was completely covered in kelp forest (predominantly *L. hyperborea*). The rock wall was carpeted in red algae and occasional elephants hide sponge. Other wall inhabitants included the oaten pipe hydroid, starfish such as the spiny starfish *Marthasterias glacialis*, the Devonshire cup coral *Caryophillia smithii* and the long-spined sea scorpion *Taurulus bubalis*. Amongst the kelp was an abundance of crustaceans and molluscs, such as the painted top shell *Calliostoma zizyphinum* and the blue rayed limpet *Helcion pellucidum.* To the north of Little Skerry were patches of the protected habitat maerl *Lithothamnion corralloides.*



Muckle Skerry


Henricia sp.

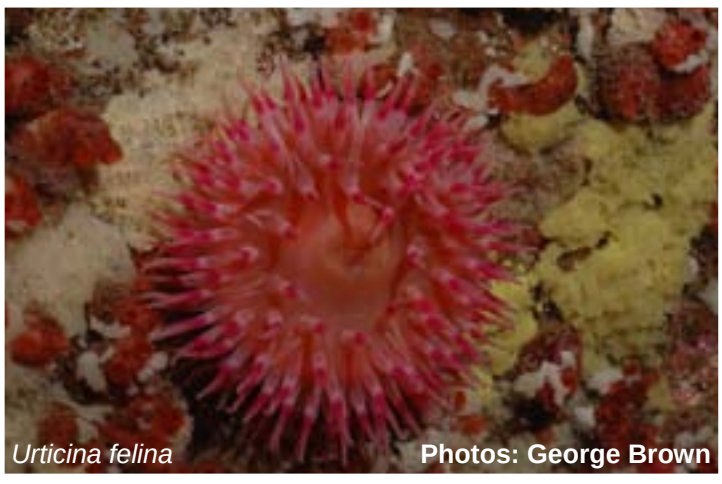
Similar to Little Skerry (surveyed May 05), the north side of Muckle Skerry was characterised by a vertical bedrock wall to approximately 7 metres. This wall was blanketed in dead men's fingers *Alcyonium digitatum* and red algae with occasional clumps of the oaten pipe hydroid. On descending the wall the seabed gently shelved to a depth of 12 metres with a covering of thick kelp forest (*L. hyperborea*). Approximately 100 metres offshore lies the wreck of the Kathe Niederkirchener, which sank in 1965. The wreck was smothered in red seaweeds. Peacock worms were commonly recorded attached to the wreckage and shoals of pollack surrounded it. Nearby the seabed changed to a boulder strewn reef with mixed red seaweeds and kelp park interspersed with clearings of coarse sand. Butterfish *Pholis gunnellus* and the brightly coloured red/pink common sunstar *Crossaster papposus* were found among the boulders.

Wick and surrounds

The rocky reefs surveyed from the shore in Caithness in the surroundings of Wick and Dunnet Head are composed of Caithness flagstone and exhibit a stepped appearance with vertical walls and flat platforms. At Staxigoe harbour (surveyed Mar 05), 2 miles north of Wick, a 3 metre bedrock wall gives way to a stepped seabed with kelp on the platforms and cobbles and pebbles overlying the bedrock in the troughs. The wall was covered with short animal turf, among which were species such as the sea hare *Aplysia punctata,* nudibanchs and the strawberry worm *Eupolymnia nebulosa*.

At North Head, on the north side of Wick harbour, lies the wreck of the St. Nicholas (surveyed Nov 05). A gulley leads out through the shelving rock down to 12 metres, after which is a gently shelving seabed with sand patches interspersed by boulders, cobbles and pebbles and kelp park. This area was inhabited by occasional Queen scallops *Aequipecten opercularis*, crabs and starfish.

On the west side of Dunnet Head (surveyed Dec 05), at a depth of 13 to 20 metres, the shelving bedrock was inhabited by animal turf on the horizontal surfaces and kelp on the vertical. Large shoals of pollack and saithe were seen above the reef, and ballan wrasse *Labrus bergylta* and rock cook *Centrolabrus exoletus* under the boulders.


Urticina felina **Photos: George Brown**

Pagarus bernhardus

Sandy Riddle

The Sandy Riddle (surveyed May 05) is a bank of sand SSE of the Pentland Skerries. It is composed of sand dunes with a series of level platforms at a depth of between 17 and 24 metres. Each platform is between 15 and 25 metres in length. The area has exceptionally strong tidal flows and downfalls leading to depths exceeding 40 to 60 metres nearby. The dune waves were approximately 10 metres from crest to crest and of a depth of approximately 1 metre. Buried in the sand, composed entirely of large fragments of shells, worm casts and urchins, were an abundance of sandeels *Hyperoplus immaculatus*.

Hyperoplus immaculatus

The surveys of Duncansby Head and the Pentland Skerries were organised by George Brown of Inverness SAC in May 2005. Seasearch participants in addition to George, included Judith and Steve Colligan, Donald Macneill, Bruce Greig and Jimmy Whyte from Inverness SAC, Jonie and Richard Guest, formerly from the Caithness SAC and Marion Perutz, Seasearch Northeast Scotland Coordinator. The shore dives were carried out by Jonie and Richard Guest, Lee Cartwright and Maurice Edmunds throughout 2005. The photos were taken by George Brown.

This summary report was produced by Seasearch North-east Scotland Coordinator, Dr Marion Perutz, with a grant from the Moray Firth Partnership. Seasearch is coordinated by the Marine Conservation Society and supported by the organisations below.

This species list includes some examples of species in this diverse region of Caithness.

Species list

Phylum/ no. species recorded		Examples of species found	Common name
Porifera	**11**	*Clathrina*	
(Sponges)		*Halichondria panicea*	Breadcrumb sponge
		Pachymatisma johnstonia	Elephant hide sponge
		Scypha ciliata	A sponge
Cnidaria	**17**	*Actinothoe sphyrodeta*	Sandalled anemone
(Anemones, corals,		*Alcyonium digitatum*	Dead men's fingers
hydroids, jellyfish)		*Caryophyllia smithii*	Devonshire cup coral
		Corynactis viridis	Jewel anemone
		Sagartia elegans	Elegant anemone
		Thuiaria thuja	Bottlebrush hydroid
		Tubularia indivisa	Oaten pipe hydroid
Annelida	**5**	*Sabella pavonina*	Peacock worm
(Segmented worms)		*Salmacina dysteri*	Coral worm
Crustacea	**17**	*Galathea squamifera*	Olive squat lobster
(Barnacles, crabs,		*Homarus gammarus*	Common lobster
lobsters)		*Inachinae*	Small spider crabs
		Pagurus bernhardus	Common hermit crab
		Palinurus elephas	Spiny lobster/ crayfish
Mollusca	**18**	*Anomiidae*	Saddle oysters
(Shells, seaslugs		*Calliostoma zizyphinum*	Painted topshell
octopus)		*Trivia monacha*	European cowrie
		Aplysia punctata	Sea hare
		Acanthodoris pilosa	White hedgehog seaslug
		Flabellina pellucida	Violet seaslug
		Onchidoris bilamellata	A seaslug
Bryozoa	**5**	*Alcyonidium diaphanum*	Sea chervil
(Sea mats)		*Crisia*	Crispy threads
		Bryozoa indet crusts	Encrusting bryozoans
Echinodermata	**14**	*Antedon bifida*	Common featherstar
(Starfish, sea urchins		*Henricia sp.*	Bloody henry
brittlestars)		*Marthasterias glacialis*	Spiny starfish
		Ophiocomina nigra	Black brittlestar
		Ophiopholis aculeata	Crevice brittlestar
		Porania pulvillus	Red cushion star
Tunicata	**10**	*Aplidium proliferum*	A seasquirt
(Sea squirts)		*Ascidia mentula*	Red seasquirt
		Ciona intestinalis	Yellow-ringed seasquirt
		Dendrodoa grossularia	Baked bean seasquirt
		Lissoclinum perforatum	White perforated seasquirt
		Morchellium argus	Four spotted squirt
		Sidnyum elegans	A seasquirt
Pisces	**8**	*Ammodytes tobianus*	Lesser sandeel
(Fish)		*Hyperoplus immaculatus*	Greater sandeel
		Pollachius pollachius	Pollack
		Taurulus bubalis	Long-spined sea scorpion
		Trisopterus minutus	Poor cod
Algae	**14**	*Laminaria digitata*	Oar weed/ tangle kelp
(Seaweeds)		*Laminaria hyperborea*	Cuvie/ forest kelp
		Laminaria saccharina	Sugar kelp
		Lithothamnion coralloides	Maerl