

kelp forest



3-bearded rockling

**Coll Survey
June 2003
Summary Report**



nudibranch *Cuthona caerulea*



bloody Henry starfish and elegant anemones



snake pipefish and sea cucumber



diver and soft corals

North-west Coast

Sites 22-28 were exposed, rocky offshore reefs reaching a seabed of clean, coarse sediments at around 30m. Eilean an Ime (Site 23) was split by a narrow vertical gully from near the surface to 15m, providing a spectacular swim-through. In shallow water there was dense curvie kelp forest, with patches of jewel and elegant anemones on vertical rock. Below 15-20m rock and boulder slopes had a varied fauna of dense soft corals, sea firs, featherstars, barnacles, sponges and nudibranchs. The cotton spinner sea cucumber *Holothuria forskali* (see back cover) was occasional on these slopes.

Between 20-35m life appeared much sparser, probably reflecting increased scour from sediments, and increased urchin-grazing in deeper water. However the sea mat *Securiflustra securifrons*, seasquirt *Clavellina lepadiformis*, cup coral *Caryophyllia smithii* and barnacles were all common, and the hard erect sea mat *Porella compressa* was characteristic of these deeper areas. Fish including leopard-spotted gobies, lemon sole, conger and 3-bearded rockling were seen around boulder holes, and probably the red blenny *Parablennius ruber* (see back cover) at Site 24.

Below 30-35m, rock slopes ended in clean rippled shelly sand, with occasional scallops, 7-armed starfish, sand stars, necklace shells, burrowing and dahlia anemones, dabs and dragonets.



Calmac Jetty

The cylindrical pilings of the Calmac jetty (Site 33) are vertical or angled, and have a rich epifauna, making the site an interesting night dive. Plumose and elegant anemones and soft corals are abundant on the pilings, with jewel anemones on the outermost. Young velvet swimming crabs, brown crabs and bloody Henry starfish nestle amongst them, while on the sediments and cobbles beneath are dahlia anemones and scorpion fish.



Airne na Sgeire

Bedrock ridges ran eastwards from this offshore rock, with mixed sediments between, sloping down to 30m and beyond (Sites 10-13). The deeper sediments, with scattered cobbles and boulders, had a particularly interesting fauna with the anemones *Hormathia coronata* and *Cereus pedunculatus* both common. Also recorded were the colonial anemone *Epizoanthus couchii*, the ovulid *Simnia patula* feeding on soft corals, and the cotton spinner *Holothuria forskali*.



SS Nevada

The wreck of the SS Nevada (Site 14) lies with the upper parts against a steep rock slope at 8m, and lower part on a mixed seabed at around 16m. The wreck still has some large pieces intact, providing homes for a variety of animals and seaweeds. On the elevated parts of the wreck, bushy bryozoans, soft corals, lightbulb seasquirts and elegant anemones were common, with ghost shrimps (caprellidae) festooning everything. Fish fry were very numerous around the wreck, and shoals of pollack swam above. Other fish seen included cuckoo, ballan, goldsinny and rock cook wrasse, poor cod, bib, ling, leopard spotted goby, sand goby and dragonet.



Sgeir Bousd

Sites 15-17 were offshore rocky reefs, slightly less wave exposed but more current exposed than those further west. Rock slopes were covered with kelp in shallow water, with dabberlocks *Alaria esculenta* in the sublittoral fringe at Site 17. A wide range of animals was found on rock slopes down to around 20m, including the rare seaslug *Okenia aspersa*, and the snake pipefish *Entelurus aequorius*. Coarse shell gravel at the base of the rock at 20-23m had some interesting species, including the marbled swimming crab *Liocarcinus marmoreus*, burrowing sea cucumber *Neopentadactyla mixta*, tiny dragonets and juvenile prawns. Rocks in the gravel had typical seaweeds, barnacles and a fuzz of fine hydroids, the sting winkle *Ocenebra erinacea*, pencil sponge *Ciocalyptra penicillus*, and small red chameleon prawns.



Cairns of Coll

Off the northern end of Coll, the Cairns (Sites 5-7) are swept by very strong currents on most states of the tide, with little slack water. These were very scenic sites, with dense foliose seaweeds and kelp in shallow water, and a high proportion of colourful animals. The seabed was of bedrock slopes and walls, with communities typical of extreme water movement, dominated by anemones (particularly jewel anemones, elegant anemones and *Actinothoe sphyrodeta*), barnacles, featherstars and sea firs (particularly *Nemertesia antennina* and *Tubularia indivisa*). Many seaslugs *Dendronotus frondosus* were seen feeding on sea firs in deeper water, and the northern starfish *Leptasterias muelleri* was common at Site 7.

Sùil Ghorm

Sites 18-21 around the lighthouse were current-swept, with mobile sediments affecting rock at around 23-26m. Coarse shell gravel and sand was more consolidated about 10m out from the rock base, and with a varied fauna, including marbled swimming crabs, dragonets, the sea fir *Sertularia cupressina*, sea mats *Securiflustra securifrons* and *Alcyonidium* sp, dahlia and burrowing anemones *Cerianthus lloydii*, maerl fragments, and the seaweeds *Scinaia turgida* and *Bryopsis plumosa* attached to shells. Next to the sediment, steep rock slopes had a limited fauna of cup corals, lightbulb seasquirts and other scour-resistant animals. Yarrell's blenny and lumpsucker were seen at Site 21, and the colourful seaslug *Cuthona caerulea* at Site 20.



North Channel

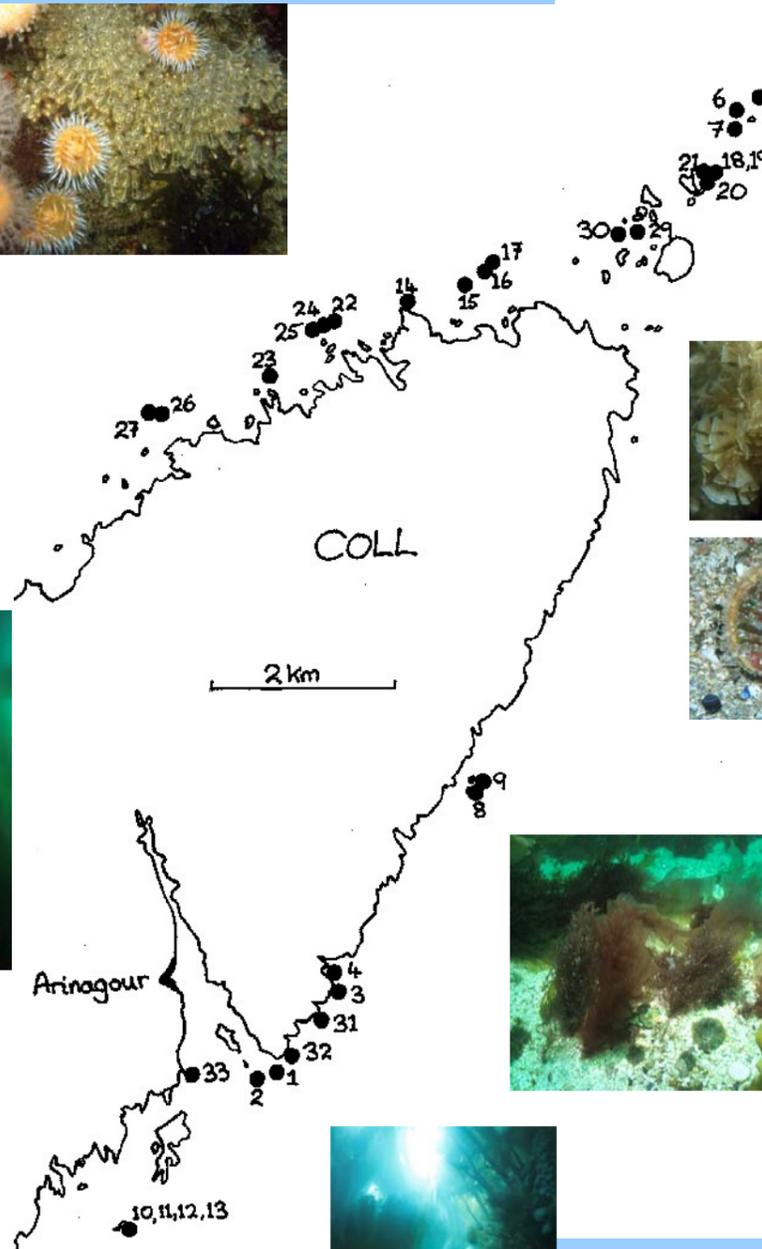
The current-swept channel between Eilean Mór and Eag na Maoile (Sites 29 & 30) proved an exceptionally rich site for seaweeds, with 43 species recorded from 8-12m deep. Many of these were very large, luxuriant plants, attached to stones in sand, while on flat bedrock outcrops furbelows kelp *Saccorhiza polyschides* grew up to 4m long. Daisy anemones *Cereus pedunculatus* were common in the sand. Shaded vertical walls at the edges of outcrops provided another distinct habitat, with abundant tube-dwelling amphipods, jewel and elegant anemones, sponges, lightbulb seasquirts, and the coralline seaweed *Corallina officinalis*.

Waves of clean sand in deeper water at 19-21m had the solitary sea fir *Corymorpha nutans*, marbled swimming crabs, burrowing sea cucumbers *Neopentadactyla mixta*, razor shells, necklace shells, queen scallops, hermit crabs, sandmason worms and scattered fragments of maerl.



North-east Coast

Sites 1-4, 8,9,31 and 32 were all on the current-swept north-east coast of Coll, where a steep slope of bedrock near the shore ended in a less steep slope of boulders and cobbles at 15-20m, covered with soft corals, sea firs, sea mats and sponges. In some places the white anemone *Actinothoe sphyrodeta* dominated larger boulders, and cotton spinner sea cucumbers were seen at several sites. Crustaceans were frequent amongst boulders, including a single lobster, at one of only 2 sites on Coll where these were seen.



Species seen on the survey

The table opposite summarises the numbers of species recorded in each group, and lists some common species. The number of species recorded by the survey reflects the type of survey which concentrated mainly on habitats, and prominent, easily identifiable species. The survey totals are boosted by inclusion of a wide range of sites with varying exposure, substrata and habitats, and by the geographical position of Coll on the west coast, where species with both northern and southern distributions occur. Northern species include the red seaweeds *Odonthalia dentata* and *Ptilota gunneri*, starfishes *Stichasterias rosea* and *Leptasterias muelleri*, and Yarrell's blenny *Chirolophis ascani*.



cotton spinner *Holothuria forskali*

A number of southern species are particularly common on Coll. Among those seen on this survey were the daisy anemone *Cereus pedunculatus*, the anemone *Hormathia coronata*, the cotton spinner sea cucumber *Holothuria forskali*, the potato crisp bryozoan *Pentapora foliacea* and the sting wrinkle *Ocenebra erinacea*.



anemone *Hormathia coronata*

Phylum	Common name	No of species	Common species
Algae	Seaweeds	62	Encrusting coralline algae Kelp <i>Laminaria hyperborea</i> Sea beech <i>Delesseria sanguinea</i> <i>Heterosiphonia plumosa</i> <i>Dictyota dichotoma</i>
Porifera	Sponges	19	Boring sponge <i>Cliona celata</i> <i>Scypha ciliata</i>
Cnidaria	Anemones, corals, sea fans, jellyfish	34	Cup coral <i>Caryophyllia smithii</i> Sea beard <i>Nemertesia antennina</i> Soft coral, deadmen's fingers <i>Alcyonium digitatum</i> Jewel anemone <i>Corynactis viridis</i> Elegant anemone <i>Sagartia elegans</i> Dahlia anemone <i>Urticina felina</i>
Ctenophora	Comb jellies	3	
Nemertea	Worms	1	
Annelida	Segmented worms	8	Sandmason worm <i>Lanice conchilega</i>
Crustacea	Prawns, crabs, lobsters	27	Velvet crab <i>Necora puber</i> Brown crab <i>Cancer pagurus</i> Barnacles Cirripedia Hermit crabs <i>Pagurus bernhardus</i> Spider crab <i>Hyas coarctatus</i> Spiny squat lobster <i>Galathea strigosa</i>
Mollusca	Snails, bivalves, sea slugs	39	Painted topshell <i>Calliostoma ziziphinum</i> Sea hare <i>Aplysia punctata</i> Blue-rayed limpet <i>Helcion pellucidum</i> King scallop <i>Pecten maximus</i> Seaslug <i>Polycera quadrilineata</i>
Bryozoa	Sea mats	11	Encrusting <i>Securiflustra securifrons</i> Lacy sea mat <i>Membranipora membranacea</i> <i>Alcyonidium sp</i>
Echinodermata	Starfish, urchins, sea cucumbers	19	Common urchin <i>Echinus esculentus</i> Common starfish <i>Asterias rubens</i> Spiny starfish <i>Marthasterias glacialis</i> Common featherstar <i>Antedon bifida</i> Bloody Henry starfish <i>Henricea sp</i> Cotton spinner <i>Holothuria forskali</i>
Tunicata	Sea squirts	16	Lightbulb seasquirt <i>Clavellina lepadiformis</i> Star sea squirt <i>Botryllus schlosseri</i> <i>Botrylloides leachii</i>
Pisces	Fish	28	Dragonet <i>Callionymus lyra</i> Goldsinny wrasse <i>Ctenolabrus rupestris</i> Cuckoo wrasse <i>Labrus mixtus</i>
TOTAL SPECIES		259	

The small ovulid gastropod *Simnia patula* is another species with southern distribution, rarely seen in Britain. On this survey it was relatively common, recorded at 5 sites feeding on soft corals *Alcyonium digitatum*.

Some species groups were particularly well represented. 62 species of algae is a particularly good total for a Scottish location. 23 species of seaslugs (2 opisthobranchs and 21 nudibranchs) were seen, reflecting the wide range of food sources for them around Coll, particularly

sponges, hydroids and bryozoans. Interesting species included the rarely recorded *Okenia aspersa*, and the uncommon *Lomanotus genei*.

28 species of fish were seen, many of them in boulder holes on the west coast. A red 'tompot' blenny recorded from Site 24 was probably the red or Portuguese blenny *Parablennius ruber*, only recently recorded from Britain at a number of sites on the west coast of Scotland and Ireland.

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Report and photographs by Sue Scott.



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