



Lumpsucker
Marion Perutz



Portsoy
Seasearchers Liliás Parks



Dahlia anemone
George Brown



Brown shrimp
George Brown

MORAY FIRTH COAST ABERDEENSHIRE



Seaslug *Flabellina gracilis*
Bernard Picton



Coral worm
Gawaine Appleby



Yarrell's blenny
George Brown



Cuckoo wrasse
George Brown

The North Aberdeenshire coastline

The dramatic yet under-explored Moray Firth coastline of north Aberdeenshire displays a wide variety of habitats, from steep cliffs, arches and islands at Trouphead to sheltered bays at Millshore and wide expanses of beach at Macduff. On a coast where no underwater records existed, Seasearch divers have helped fill in some of the blanks.

Seven-armed starfish
Alan Bellerby

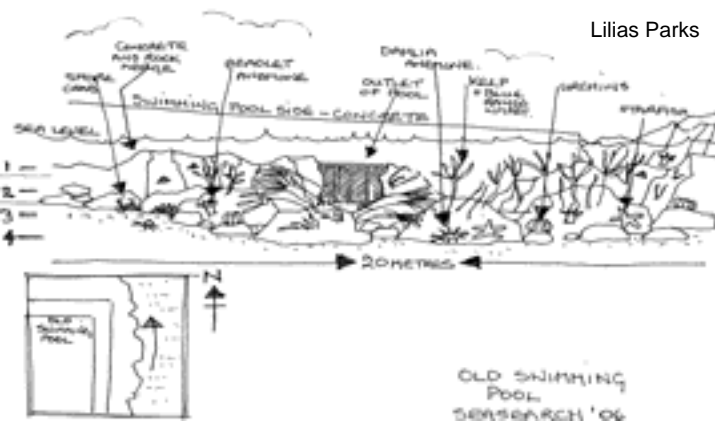
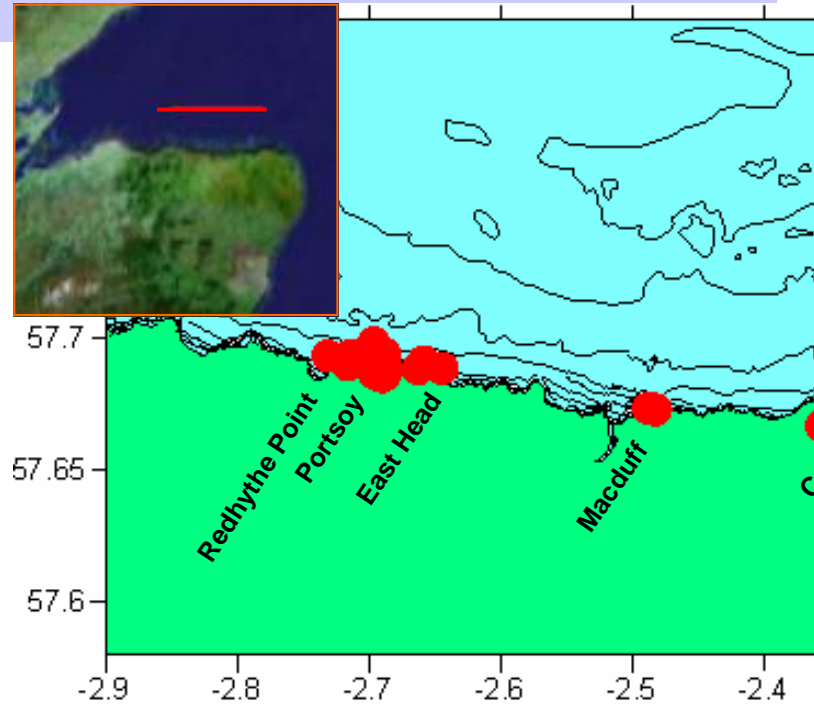


Redhythe Point (surveyed Feb 2006)

Beneath the cliffs at Redhythe Point, on a peninsular to the west of Portsoy, the rock face progresses into a vertical wall to 10 metres. The seabed then flattens out to very large, scoured boulders interspersed with cobbles and pebbles. Kelp park covered the tops of the boulders and sparse animal turf (echinoderms, bryozoans and dead men's fingers *Alcyonium digitatum*) on the sides. The latter were home to the scale worm *Harmothoe propinqua*, small shrimp and an abundance of nudibranchs including *Tritonia plebii*. A two-spotted cling fish *Diplecogaster bimaculatus* was camouflaged against the pink encrusting algae on the wall.

Portsoy harbour (Sep 2003, Feb 2006, Apr 2006)

On the outer edge of the new harbour at Portsoy is a shallow wall (4 m bcd) leading around to some bedrock gullies. At the entrance to the harbour is flat sand. Progressing around to the seaward side is stony reef (small and medium sized boulders interspersed with cobbles and pebbles) covered in kelp forest and red algae. Further around are scoured bedrock gullies and caves. To the west, beside the rocky reef at the entrance to the harbour, is a steep slope to 9 metres again with stony reef, kelp park and mixed seaweeds. In the crevices of the brick wall of the harbour were blennies (Yarrell's blenny *Chirolophis ascanii* and the shanny *Lipophrys pholis*) and a conger eel *Conger conger*. In the urchin-grazed kelp forests were a rich community of species including anemones such as the dahlia anemone *Urticina felina*, top shells *Calliostoma ziziphinum*, crabs such as the greater spider crab *Hyas araneus* and snake pipefish *Entelurus aequoreus*. Male lumpsumsuckers *Cyclopterus lumpus* are frequent Spring visitors here defending their eggs hidden in the kelp forest.



Lilias Parks

Portsoy Old Swimming Pool (Feb 2006, Apr 2007)

West of Portsoy village lies an abandoned outdoor swimming pool. The shallow wall surrounding the pool (only 2 m bcd) is composed of large and small boulders forested with kelp (*Laminaria digitata* and *Laminaria saccharina*), red and brown algae and patches of cobbles, pebbles and gravel. On the kelp were found species such as topshells *Calliostoma zizyphinum*, blue rayed limpets *Helcion pellucidum*, shore crabs *Carcinus maenas* and fish such as short-spined sea scorpions *Taurulus bubalis*. To the east of the pool is a sandy channel with rocky reef on either side and a similar kelp habitat.

East Head (Feb 2006)

At East Head, east of Portsoy, is a steep wall (11 to 14 m), below which is a jumble of mixed sized boulders lying on bedrock. The bedrock wall is smooth with gently sloping plates and vertical steps about 3 metres in height. North of this is a ridge of coarse sand composed of intact mussel and razor shell fragments. Further out is an area of rippled sand with worm casts but no other life apparent. The kelp on the top of the wall had a blanketing of mixed seaweed within which was found a dogfish egg case or mermaid's purse. The bedrock was encrusted with keel worms and patches of the bryozoan horn wrack *Flustra foliacea*. The wall was inhabited by tall animal turf species such as dead men's fingers, plumose anemone *Metridium senile*, molluscs including whelk eggs and echinoderms such as the bloody henry *Henricia* sp.. A wolf fish *Anarhichas lupus*, a bootlace worm *Lineus longissimus* and a common lobster *Homarus gammarus* were all found hidden under boulders.



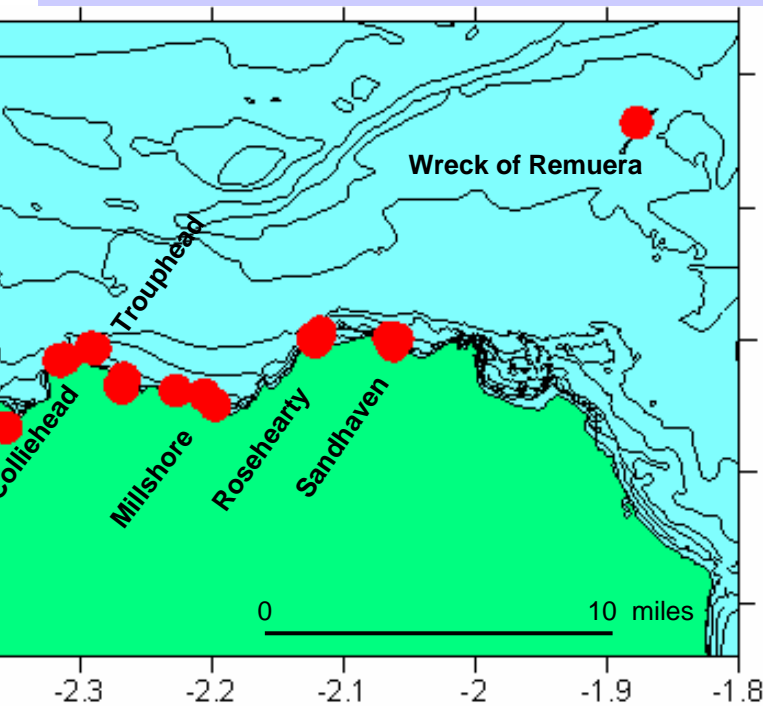
Lumpsumucker
Marion Perutz

Macduff (Jan 2006)

To the east of Macduff, the rocky reefs run perpendicular to the shore. Immediately out from the shore are areas of kelp park, barren sand and mixed ground, progressing to larger rounded boulders, among which are scattered half-buried wreckage. Further out are rocky reefs with gullies (15 m). A pogge *Agonus cataphractus* was recorded on the sand and crustaceans such as a greater spider crab and velvet swimming crabs *Necora puber* among the kelp. Around the boulders were squat lobsters (*Galathea strigosa* and *Galathea squamifera*) and echinoderms (the purple sunstar *Solaster endeca*, the shore urchin *Psammechinus miliaris* and feather stars *Antedon bifida*). The rocky reefs were covered in tall animal turf including sparse dead men's fingers, sponges such as *Halichondria* sp. and the Devonshire cup coral *Caryophyllia smithii*.

Millshore (Aug 2004)

On the west side of the small pebbly cove of Millshore, west of Pennan, is a shallow wall (5 m maximum). Near the top of the wall were mixed red and brown algae and kelp forest *L. digitata*. Slightly deeper were small boulders with short animal turf. Among the turf were anemones such as beadlet anemones *Actinia equina* and starfish such as the bloody henry. Blue rayed limpets were attached to the kelp fronds. Away from the wall were areas of sand with occasional brown seaweed and fish such as the lesser weever *Echiichthys vipera*. Further along the wall are gullies renowned for their rich nudibranch fauna.



Trouphead (Jun 2004, Jun, Jul and Oct 2006)

To the west of Rosehearty are the towering cliffs of Trouphead, made famous for being mainland Scotland's only gannet colony. Beside the cliffs is Seal Island, aptly named for the abundance of grey seals that inhabit it. The seabed takes the form of bedrock walls and gullies. The walls exhibit an exceptionally dense covering of dead men's fingers and other species including plumose anemones, edible urchins, seasquirts (*Morchellium argus* and *Corella parallelogramma*), hydroids and featherstars. Nudibranchs such as *Onchidoris bilamellata* and sea hares *Aplysia punctata* were found among the animal turf. Slightly deeper (12 m), the bedrock became more scoured. The seabed was composed of a mixture of sand patches and large boulders. Leopard-spotted gobies *Thorogobius ephippiatus* inhabited the smallest cracks. Lumpsummers were seen in crevices between boulders and ballan wrasse *Labrus bergylta* darting between boulders and the kelp. Large shoals of saithe *Pollachius virens* (Biodiversity Action Plan Species) were circling around the kelp forest. Juvenile poor cod *Trisopterus minutus* and cod *Gadus morhua* (BAP species) were shoaling in great abundance around the walls and the seafloor and pollack were seen predated on smaller fish.

Colliestown (Jul 2005)

Colliestown, west of Trouphead, exhibits similar habitats and species. The rocky reef takes the form of large boulders, walls, caves and gullies. On the seabed are boulders with patches of mixed ground, cobbles, pebbles and sand. Areas of kelp park with urchins and sea oak *Halidrys siliquosa* were growing on the boulders. The pinnacles were topped with kelp forest (at 5 m) and the walls thronged with a rich animal turf community similar to that at Trouphead. The light bulb seasquirt *Clavelina lepadiformis* covered entire walls in places. The spiny lobster *Palinurus elephas* (BAP species) was creeping out from under a boulder. Again pollack patrolled these boulders and large shoals of gadoids were seen swimming around the tops of the pinnacles.



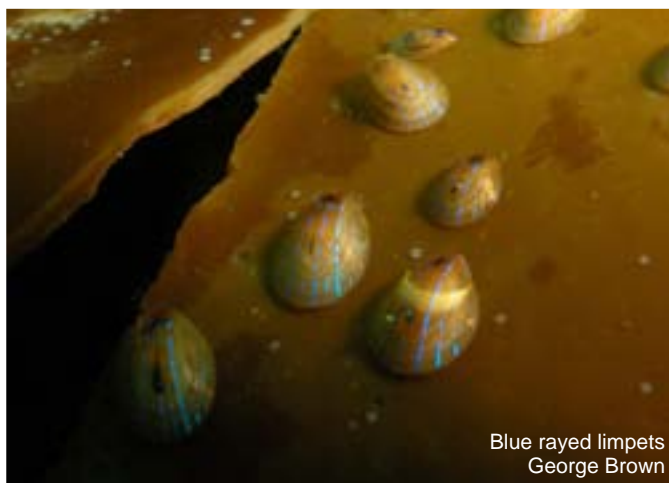
Spiny lobster
Calum Duncan

Rosehearty (Jul 2004, Jan, Jul, Nov 2006)

At the small town of Rosehearty there are reefs adjacent to the shore and also approximately 0.5 km offshore at Newmill Reef. Nearby are wrecks such as the Nordpool at (15 m), covered in tall animal turf and rich in fish and crustacean life. At the shore site (Picnic Site) lies a maze of rocky gullies (15 to 20 m depth). The seabed is composed of sand, mixed ground and boulders ranging from pebble sized to several metres in diameter. The upper surfaces of the walls and the tops of the pinnacles were covered in kelp forest, which progressed into areas of tall animal turf and dense dead men's fingers, urchins *Echinus esculentus* and anemones. On the barer patches of bedrock were saddle oysters *Anomia ephippium* and keel worms. Greater spider crabs were a common find clinging to the kelp. In the cracks were crustaceans, including large lobsters *Homarus gammarus* and squat lobsters *Galatheididae* and fish such as the tadpole fish *Roniceps vaninus*, Yarrell's blenny and leopard-spotted gobies. Caves were inhabited by species such as the curled octopus *Eledone cirrhosa* and a large (> 50 cm) cod. On the sea floor were patches of kelp park and brown seaweed such as sea oak, home to the snake pipefish. The areas of bare sand were inhabited with half buried sandeels.

Sandhaven (surveyed Feb, Nov 2004, May 2007)

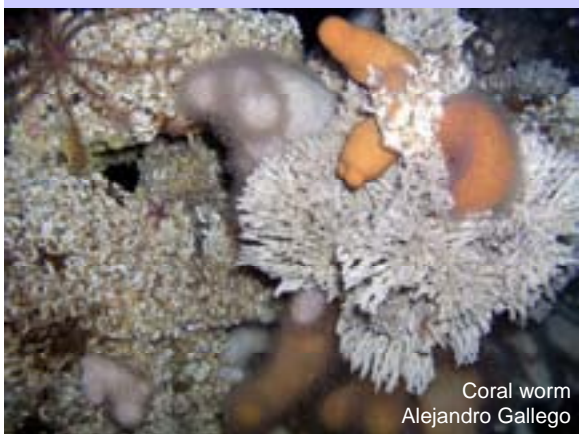
Immediately out from the shore is a thickly forested, stony reef. This progresses into a channel of large boulders swamped in broken or dead kelp, *L. hyperborea*, and among which were literally hundreds of snake pipefish (May 07). The channel walls and surrounding tunnel-like gullies were covered in animal turf composed of sponges and rich in nudibranch fauna, such as *Goniodoris nodosa*, *Diaphorodoris luteocincta* and *O. bilamellata*. Fish such as dog fish *Squalus acanthias*, wolf fish, flounder *Platichthys flesus*, and five-bearded rockling *Ciliata mustela*, were found in crevices and short-spined sea scorpion camouflaged against the wall.



Blue rayed limpets
George Brown

Wreck of the Remuera (Sep 2006)

The wreck of the Remuera lies on a flat coarse sand seabed at 60 m. The wreck lies on its side with wreckage scattered around the seabed. The wreck itself was covered in tall animal turf composed of extensive clumps of the coral worm *Salmacina dysteri* and dead men's fingers. On and within the coral worm was a myriad of other species, such as pea crabs, scale worms and a Hippolyte shrimp. Ling *Molva molva* (BAP species), bib *Trisopterus luscus*, poor cod and cuckoo wrasse *Labrus mixtus* were hidden under the clumps as were crustaceans such as spider crabs and lobsters. The wreck was surrounded by huge shoals of fish including, juvenile gadoids, Clupeids (herring family) and pollack.



Coral worm
Alejandro Gallego

Kingdom	Phylum	Number	Taxon	Examples of species Common name	
Animalia	Porifera (sponges)	9	<i>Grantia compressa</i>	Calcareous sponge	
			<i>Halichondria panicea</i>	Bread crumb sponge	
			<i>Pachymatisma johnstonia</i>	Elephants hide sponge	
	Cnidaria (anemones, corals, hydroids and jellyfish)	16	<i>Aurelia aurita</i>	Moon jellyfish	
			<i>Abietinaria abietina</i>	Hydroid	
			<i>Nemertesia antennina</i>	Sea beard	
			<i>Cerianthus lloydii</i>	Burrowing anemone	
			<i>Tubularia indivisa</i>	Oaten pipe hydroid	
	Ctenophora (comb jellies)	1	<i>Pleurobrachia pileus</i>	Sea gooseberry	
			Nemertea (ribbon worms)	2	<i>Lineus longissimus</i>
	Annelida (segmented worms)	12	<i>Eulalia viridis</i>	Green leaf worm	
			<i>Eupolymnia nebulosa</i>	Strawberry worm	
	Crustacea (barnacles, crabs, lobsters)	26	<i>Crangon crangon</i>	Brown shrimp	
			<i>Pandalus montagui</i>	Shrimp	
			<i>Galathea squamifera</i>	Squat lobster	
			<i>Homarus gammarus</i>	Common lobster	
			<i>Palinurus elephas</i>	Spiny lobster	
			<i>Hyas araneus</i>	Greater spider crab	
			<i>Macropodia tenuirostris</i>	Spider crab	
			Mollusca (shells, seaslugs and octopus)	22	<i>Polyplacophora</i>
	<i>Anomia ephippium</i>	Saddle oyster			
	<i>Calliostoma zizyphinum</i>	Painted top shell			
	<i>Aplysia punctata</i>	Sea hare			
	<i>Archidoris pseudoargus</i>	Sea lemon			
	<i>Polycera faeroensis</i>	A nudibranch			
	<i>Eledone cirrhosa</i>	Curled octopus			
<i>Loliginidae</i>	Squid				
Bryozoa (sea mats)	3	<i>Bryozoa indet crusts</i>			Bryozoa
		<i>Flustra foliacea</i>			Hornwrack
Echinodermata (feather stars, starfish, urchins, brittlestars)	12	<i>Antedon bifida</i>	Feather star		
		<i>Crossaster papposus</i>	Sunstar		
		<i>Marthasterias glacialis</i>	Spiny starfish		
		<i>Solaster endeca</i>	Purple sunstar		
		<i>Stichastrella rosea</i>	Scaly starfish		
Tunicata (sea squirts)	5	<i>Ophiocomina nigra</i>	A brittlestar		
		<i>Aplidium proliferum</i>	A seasquirt		
		<i>Clavelina lepadiformis</i>	Lightbulb seasquirt		
Pisces (fish)	31	<i>Corella parallelogramma</i>	Gas mantle seasquirt		
		<i>Callionymidae</i>	Dragonets		
		<i>Conger conger</i>	Congor eel		
		<i>Crenilabrus melops</i>	Corkwing wrasse		
		<i>Cyclopterus lumpus</i>	Lumpsucker		
		<i>Gadus morhua</i>	Atlantic cod		
		<i>Labrus bergylta</i>	Ballan wrasse		
		<i>Liparis montagui</i>	Montagu's sea snail		
		<i>Lipophrys pholis</i>	Shanny		
		<i>Molva molva</i>	Ling		
		<i>Nerophis lumbriciformis</i>	Worm fish		
		<i>Spinachia spinachia</i>	Fifteen-spined stickleback		
		<i>Syngnathus acus</i>	Greater pipefish		
		<i>Thorogobius ephippiatus</i>	Leopard-spotted goby		
<i>Platichthys flesus</i>	Flounder				
<i>Zeugopterus punctatus</i>	Topknot				
Plantae	Algae	24	<i>Halidrys siliquosa</i>	Sea oak	
			<i>Laminaria hyperborea</i>	Tangle, cuvie	

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