

Kent Seasearch 2010 Summary



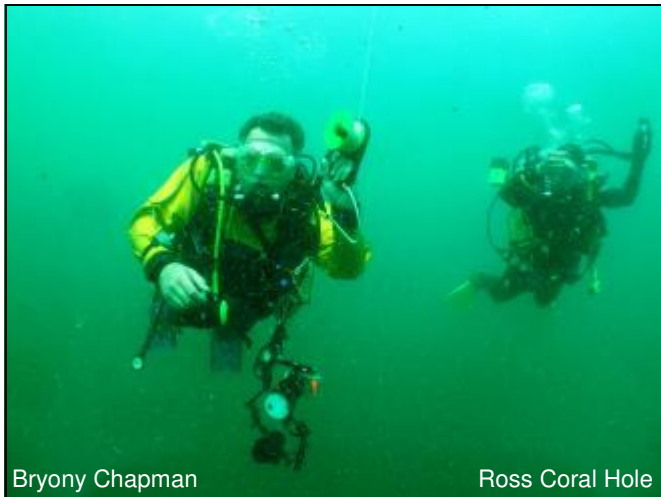
Rachel Coppock

Painted topshells



Sponge spider crab

Paula Young



Bryony Chapman

Ross Coral Hole



Ross Coral Hole

Bryony Chapman



Sharon Meadows

Dogfish



Scallop

Sharon Meadows



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2010 Kent Seasearch surveys

Kent Seasearch divers surveyed the seabed at 18 locations, at depths from 8m to 29m and with an average visibility of 2.6m. 76 forms were completed, leading to 5758 species records, including 122 different species.

The most frequently recorded species was again the common starfish (*Asterias rubens*), followed by finger bryozoans (*Alcyonium digitatum*), antenna hydroids (*Nemertesia antennina*), dahlia anemones (*Urticina felina*) and lesser spotted dogfish (*Scyliorhinus canicula*).

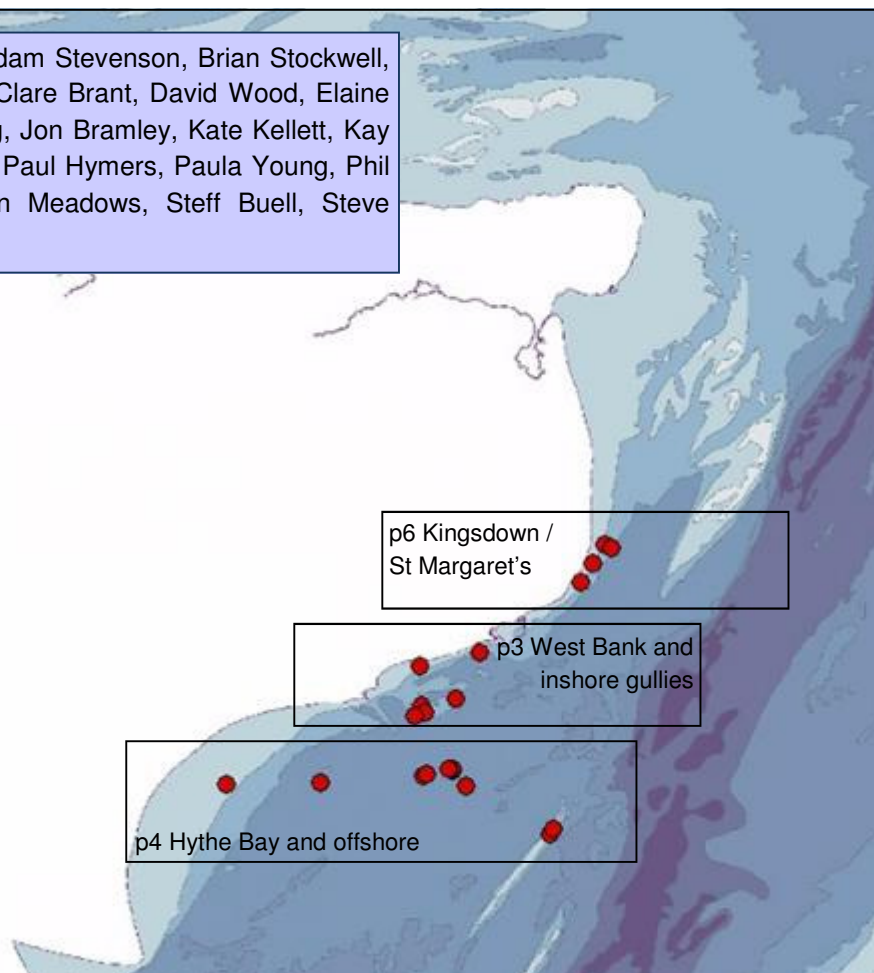
Many of the surveys recorded diversity on two special Kent habitats - the formations of subtidal chalk and rossworm (*Sabellaria spinulosa*) and the fragile sponge and anemone communities in the seabed bowls off Folkestone. Each of these important habitats is specifically highlighted for protection in the MCZ network, and knowledge of their distribution has been greatly aided by data from Seasearch.

Thank you to all the divers who took part in the official Seasearch dives, and who undertook Seasearch surveys independently on their own dives.

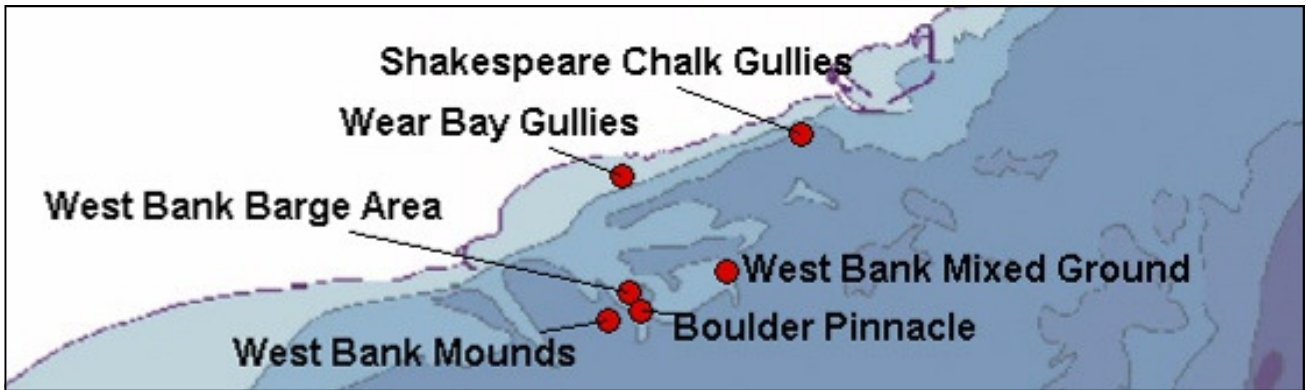
Extra thanks to Rachel for data input, and to Dave for cataloguing dive photos. Thanks also to David Batchelor and the Neptune crew.

2010 Seasearch dive schedule	
17-Apr-10	Wear Bay Gullies
09-May-10	Great Plumose Sands
09-May-10	West Bank Mixed Ground
06-Jun-10	Kingsdown Pebbles
06-Jun-10	West Bank Barge Area
07-Jun-10	Shakespeare Chalk Gullies
07-Jun-10	St Cecilia
02-Jul-10	Hythe Spoon Worms
04-Jul-10	Dogfish Pebbles
04-Jul-10	Ross Coral Hole
06-Jul-10	Boulder Pinnacle
07-Jul-10	Ross Coral Hole
24-Jul-10	Ross Coral Escarpment
24-Jul-10	West Bank Mounds
04-Aug-10	Kingsdown Chalk Reef
04-Aug-10	St Margaret's Bay Chalk
03-Sep-10	Folkestone Arc
03-Sep-10	Varne Bank Sandeels
04-Sep-10	Brazen Bumps
04-Sep-10	Varne Bank Sandeels

2010 Kent Seasearch Divers: Adam Stevenson, Brian Stockwell, Bryony Chapman, Chris Williams, Clare Brant, David Wood, Elaine Purse, Ian Barrie, Jason Armstrong, Jon Bramley, Kate Kellett, Kay Skinner, Lesly Conroy, Mark Card, Paul Hymers, Paula Young, Phil Buckley, Rachel Coppock, Sharon Meadows, Steff Buell, Steve Musgrove and Tim O'Hare.



West Bank and inshore gullies



West Bank Mixed Ground

51.07853N, 1.27685E

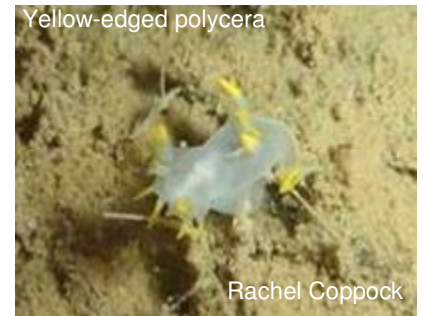
Hard rock overlain by a deep layer of very silty sediment with scattered small and medium boulders, cobbles, pebbles and broken shells. Boulders and cobbles have a rich, silted cover of hydroids, bryozoans, anemones and horseshoe worms.

The silt layer has disrupted life at the site, with rosworm and other species being smothered by the silt layer, and dead ends of hydroids can be seen sticking out of the sediment. Mobile life consists mainly of brittlestars, starfish and hermit crabs, as well as the occasional fish (butterfish, dab and lesser spotted dogfish). Also present are large numbers of transparent juvenile fish.



Wear Bay Gullies 51.09769N, 1.24098E

Seabed at 8m of silty sand with scattered chalk cobbles and small boulders. Cobbles and boulders are piddock bored and pitted. Sponges, red algae and rosworm also present. Recording limited by poor visibility.



Shakespeare Chalk Gullies 51.10736N, 1.30010E

Chalk platform with sand and gravel gullies, as well as the occasional large chalk boulder. Sessile life is dominated by sponges and a turf of hydroids and bryozoans, with oaten pipe hydroid extensive on the edges of the gullies. Mobile life includes starfish, dogfish and the occasional crab and topshell. Survey time was limited by the strong tide running and the site remains worthy of further investigation.

West Bank Barge Area 51.07379N, 1.24434E

Firm, mixed ground seabed of pebbles and gravel, whole and broken shells, overlain by areas of closely set medium sized boulders and a few small outcroppings of bedrock.

Boulders and cobbles support a rich attached fauna of conspicuous sponges, anemones, hydroids, bryozoans and soft corals overlying a closer layer of hydroids and bryozoans. Between the boulders and cobbles, the silty mixed ground features anemones, bryozoans, nudibranchs with eggs, spider crabs and numerous brittlestars.



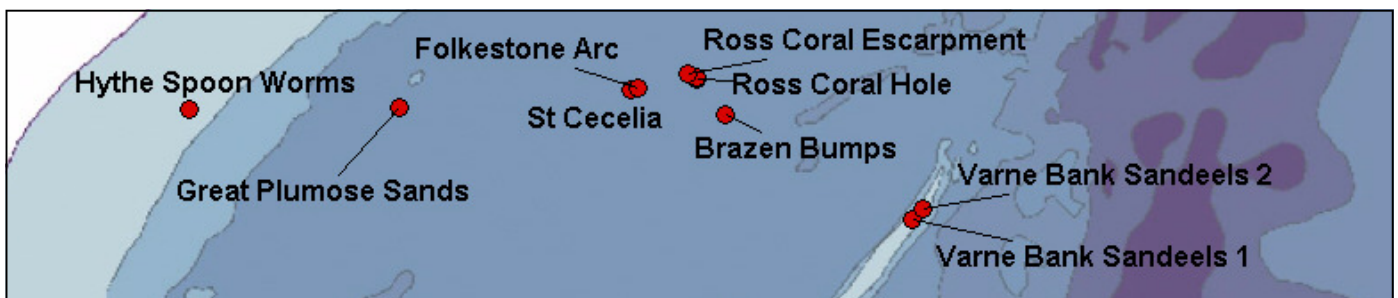
West Bank Mounds 51.06759N, 1.23712E

The seabed slopes upwards from 23m to around 20m, with overall size of stones increasing eventually to outcropping greensand bedrock. High level of habitat complexity, with outcrops, underhangs, holes, deep cracks and fissures. Greensand bedrock and boulders support a very dense and rich fauna of encrusting and bushy bryozoans, hydroids, anemones, and large sponges.

Firm mixed ground persists between outcropping bedrock and the large boulders, and includes whole and broken shells as well as some cobbles and pebbles, including flints.



Hythe Bay and offshore



Great Plumose Sands 51.02535N, 1.14687E

Level seabed of thick, soft, fine, silty sediment. Cobbles and small boulders scattered throughout the site, notable in supporting large plumose anemones. Attached animal life on cobbles and boulders includes various hydroids and bryozoans, notably a shorter turf of smaller herringbone and feathery hydroids. Mobile life includes small spider and hermit crabs, brittlestars, and the occasional fish (lesser spotted dogfish, dab, goby and poor cod).

Frequent large sand mason tubes seen, along with tracks made by netted dog whelks and necklace shells.



Folkestone Arc 51.03322N, 1.24870E

Sand and silt overlying a matrix of cobbles and pebbles, with occasional cobbles exposed and supporting an attached life of sponges, bryozoans and hydroids. Variety of mobile life including crustaceans, molluscs and gobies. Survey was limited through poor visibility.

Brazen Bumps 51.02591N, 1.28921E

Fairly flat seabed of fine sand. Life is mainly attached to pebbles and cobbles, and included numerous anemones, dead man's fingers and keel worms.

Mobile life of gobies, numerous sea urchins, hermit crabs, prawns and painted topshells.



Ross Coral Hole 51.03586N, 1.27619E

Areas of outcropping greensand bedrock and boulders, with overhangs, holes and fissures. Firm and stable mixed seabed of silty sand, broken shells and cobbles between outcrops and boulders. Pronounced slope drops away from about 27m, and to 30m and beyond, the seabed features areas of outcropping rock and boulders as well as areas of cobbles and small boulders on smaller mixed sediment.

Cobbles, boulders and outcropping rock covered in encrusting bryozoans and a dense turf of erect hydroids and bryozoans. Finger bryozoans, a wide variety of anemones and a variety of sponges are frequently seen. Pockets of double-spiral worms are present, and the seabed in places has abundant broken tubes of *Sabellaria*.

Mobile life includes several species of sea slug, occasional other molluscs, echinoderms, crabs, cuttlefish and a good variety of fish life.



Boulder pinnacle 51.06982N, 1.24826E

Medium-sized boulders rise from the seabed at 24m into a broad, 7m high, pinnacle spanning an area of 30m diameter. Surrounding seabed appears mobile and consists of gravel and sand with some cobbles. Olex data shows that the pinnacle forms part of a wider complex of features in the area, some of which are of outcropping greensand, and these remain a point of interest for future investigation.

The pinnacle provides copious holes and fissures that are all occupied by crabs, squat lobsters or fish. Boulders are covered in a very dense and diverse cover of hydroids and bryozoans as well as a turf featuring double-spiral worms and dead man's fingers.



Hythe Spoon Worms 51.02360N, 1.05500E

Fine, soft mud seabed stabilised by numerous tubes and heavily burrowed by animals, including the spoonworm *Maxmuellaria lankesteri* and crustaceans including the square crab, *Goneplax rhomboides*. A highly unusual and incredibly rich site, which was specifically chosen for survey to follow up on previous studies of the spoonworm community. Mobile life includes the sea mouse, *Aphrodite aculeate*, with its iridescent bristles, and the white lobe shell, *Philine aperta*, whose delicate egg sacks are attached to the seabed by a fine thread. Both species are specifically adapted to life in soft mud. Seabed is covered in tracks of mainly necklace shells and other molluscs and supports occasional small sprigs of hydroids and bryozoans.

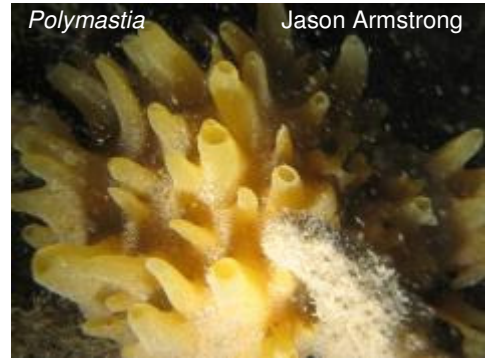


Ross Coral Escarpment 51.03671N, 1.27247E

Greensand escarpment dropping away from a gently sloping bouldered seabed with outcropping greensand ledges at 26m. The edge of the escarpment drops sharply down 1-2m and forms large overhangs with horizontal crevices reaching deep into the rock. Below that, the seabed slopes away at around a 45 degree angle, and is covered in scattered boulders.

Outcropping rock and boulders covered in dense turfs of small erect hydroid and bryozoan species as well as a variety of anemones and encrusting sponges. Large patches of colonial sea squirts live at the escarpment edges. Above the dense turf are taller hydroids and erect bryozoans, a diverse range of sponges, and, notably, several colonies of ross coral (potato crisp bryozoan, *Pentepora fascialis*).

Mobile life includes sea slugs, cuttlefish and a variety of fish species including goldsinny wrasse, leopard spotted goby, bib, tope and lesser spotted dogfish.



Wreck of St Cecilia

51.03180N, 1.24765E

Wreck of a troopship mined in 1916, now well broken on a sandy seabed. The wreck is covered in short animal turf, with shoals of bib and pollock surrounding it. Top of the wreck covered in a hydroid and bryozoan turf, mainly composed of oaten pipe hydroid. Samples later highlighted the rich fauna of small crustaceans also covering the wreck. Mobile life includes hermit crabs, lobster, tompot blennies and common starfish. The side of the ship is covered in plumose anemones and dead man's fingers, with mobile life including a large edible crab, lobsters and tompot blennies. The lower deck is covered by large plumose anemones, numerous orange anemones, sea slugs and sea slug egg whorls.

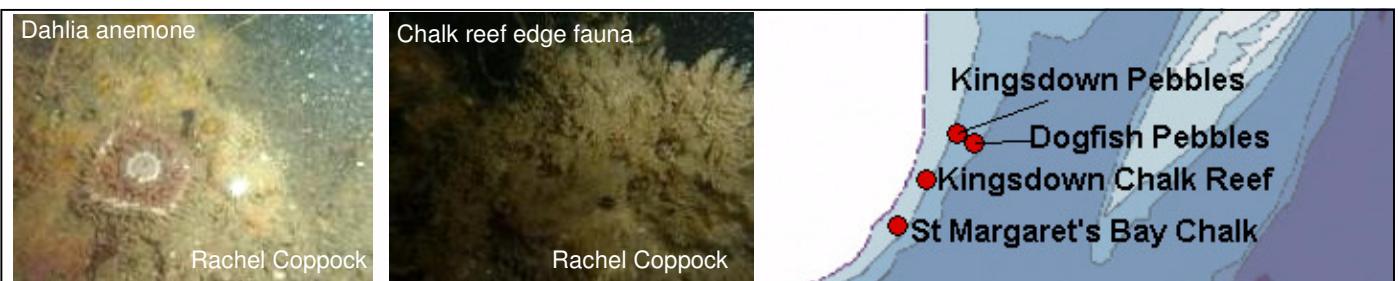


Varne Bank 50.99880N, 1.37179E

A massive sand bank in the middle of the Dover Straits, where mobile coarse sand forms ripples and waves up to 1m deep. Ribbons of silt form along the ridges, while pebbles and shell fragments gather in pockets.

Along with the gobies and crabs visible on the surface of the sand, there are also numerous sand eels and weaverfish darting around, flipping up diversionary puffs of silt with their tails, and instantaneously burying themselves back in the sand.

Kingsdown / St Margaret's



St Margaret's Bay Chalk Reef Edge 51.15173N 1.39534E

Site on the outer edge of Dover's extensive subtidal chalk reef (that runs the length of the coast from Folkestone to Kingsdown), where the chalk bedrock becomes progressively covered in coarse mobile sediment.

The chalk reef and boulders are covered in a turf of colourful sponges, hydroids and bryozoans, which supports a variety of mobile species. Recording the site's full diversity was hampered by currents.

Dogfish



Bryony Chapman

Kingsdown Pebbles 51.17509N 1.41858E

Silty seabed with areas of recent disturbance apparent, with less silt cover as well as turned-over pebbles. Flint and chalk cobbles and larger pebbles have a dense close hydroid and bryozoan turf, with anemones, *Tubularia* and finger bryozoans most conspicuous. In contrast, some small cobbles and pebbles are quite bare though some have piddock and *Polydora* boring, and some have keel worms. Mobile life includes fish, crabs, molluscs and common starfish.

Dogfish Pebbles 51.17311N 1.42543E

Flat, mixed ground seabed, predominantly pebbles and cobbles with occasional small boulders. Many dogfish and groups of dogfish eggs are present, and other mobile species includes painted topshells, hermit crabs, common starfish, crystal sea slugs and grey sea slugs.

Common starfish



Adam Stevenson

Kingsdown pebbles



Sharon Meadows

Oaten pipe hydroid



Sharon Meadows

Kingsdown Chalk Reef 51.16337N 1.40696E

Complex mosaic of uneven chalk bedrock reef including vertical and horizontal chalk faces, gullies, and slopes raised up to 1-2m high. Areas overlain with flint and chalk cobbles, pebbles and firm mixed ground with a silt dust.

Dominant cover of sponges over and amongst a rich and dense turf of hydroids and bryozoans. In areas, a crust of rosworm is evident, partially overgrown with sponges, and some of the pockets of smaller sediment among the reef contain broken *Sabellaria* tubes. Mobile life includes numerous common starfish along with a variety of crustaceans.

Velvet swimming crab



Rachel Coppock

Spider crab



Paula Young

Chalk reef fauna



Rachel Coppock

Dahlia anemone



Adam Stevenson

Species diversity recorded in surveys

Porifera (sponges) – 14 species, including: *Suberites* sp. (sea orange), *Amphilectus fucorum* (shredded carrot sponge), *Haliclona oculata* (mermaid's glove sponge), *Halichondria panacea* (breadcrumb sponge), *Raspailia ramosa* (chocolate finger sponge).

Cnidaria (jellyfish, corals and anemones) - 13 species, including: *Alcyonium digitatum* (dead man's fingers), *Nemertesia antennina* (antenna hydroid), *Urticina felina* (dahlia anemone), *Tubularia indivisa* (oaten pipe hydroid), *Actinothoe sphyrodeta* (white striped anemone), *Sagartia troglodytes*.

Annelida (polychaete worms) – 10 species, including: *Bispira volutacornis* (double-spiral worms), *Lanice conchilega* (sand mason worm), *Sabelaria spinulosa* (rossworm), *Pomatoceros triqueter* (keel worm).

Crustaceans – 17 species, including: *Cancer pagurus* (edible crab), *Necora puber* (velvet swimming crab), *Pagurus bernhardus* (hermit crab), *Homarus gammarus* (common lobster), *Maja squinado* (spiny spider crab).

Molluscs – 22 species, including: *Calliostoma zizyphinum* (painted topshell), *Janolus cristatus* (crystal seaslug), *Archidoris pseudoargus* (sea lemon), *Polycera faroensis* (yellow lined polycera), *Aequipecten opercularis* (queen scallop), *Pholadidae* (piddocks).

Bryozoans (sea mats) – 11 species, including: *Alcyonidium diaphanum* (finger bryozoan), *Flustra foliacea* (hornwrack), *Cellepora pumicosa* (pumice bryozoan), *Pentapora foliacea* (potato crisp bryozoan), *Bugula* (spiral bryozoan).

Horseshoe worm – 1 species: *Phoronis*.

Spoon worm – 1 species: *Maxmuelleri lankesteri*.

Echinoderms – 5 species: *Asterias rubens* (common starfish), *Ophiura albida* (white flecked sand brittlestar), *Crossaster papposus* (common sunstar), *Ophiura ophiura* (sand brittlestar), *Psammechinus miliaris* (green sea urchin).

Chordata (sea squirts) – 7 species, including *Molgula*, *Clavelina lepadiformis* (lightbulb seasquirt), *Diplosoma listerianum* (grey slime sea squirt).

Chordata (fish and mammals) – 17 species, including: *Scyliorhinus canicula* (lesser spotted dogfish), *Ctenolabrus rupestris* (goldsinny), *Trisopterus luscus* (bib), *Parablennius gattorugine* (tompot blenny), *Callionymus lyra* (dragonet), *Zeugopterus punctatus* (topknot).

Algae - 6 species, including: *Corallinaceae* (encrusting pink), *Palmaria palmata* (dulse), *Delesseria sanguinea* (sea beech), *Chondrus crispus* (carrageen).

Training in 2010

23 divers undertook the Kent Seasearch Observer course in 2010, held in Canterbury. Eight divers undertook the Kent Seasearch Surveyor course in 2010, held in Dover.



Bryony Chapman

18 people attended the specialist course on Sponge Identification, also held in Dover, and seven attended a camera training course kindly held by Ocean Optics.



Jason Armstrong



Thank you to those who provided facilities for the training courses (P&O, St Edmund's School, Dover Coastguard) and also laboratory equipment (Canterbury Christ Church University). Special thanks to Glyn Jones for organizing the P&O training centre and willingly donating his valuable time, as well as everyone who helped teach and tutor — Ali Bessell, Chris Spurrier, Jason Armstrong and Jon Bramley.

Seasearch is a national volunteer survey project for recreational divers to support conservation of marine life. Kent Seasearch is run by Kent Wildlife Trust. We are very grateful for contributions towards the 2010 programme from the Environment Agency via National Seasearch, and from Biodriven. Grateful thanks also to Natural England's Countdown 2010 programme and the Crown Estate for supporting the surveys of the chalk around Dover.

For more information: Kent Wildlife Trust, Tyland Barn, Sandling, Maidstone, Kent, ME14 3BD. Tel: 01622 662012. info@kentwildlife.org.uk. Website: www.kentwildlifetrust.org.uk

Kent Wildlife Trust is the leading conservation charity for Kent and Medway. Charity no: 239992

