



Sussex Seasearch Survey
2006
Summary Report

Brighton Marina

Brighton Marina has been dived on several occasions, but this year was special as a seahorse had been caught in the there earlier in the year. In October divers were able to explore the area where the specimen had been found. Young specimens were soon spotted swimming freely close to a pontoon. It was evident that trying to find any on the weed and animal encrusted sides of the pontoons themselves would be virtually impossible. Both 'wet' and 'dry' observers soon spotted further specimens. In all about a dozen, ranging in size from 10 to 25 mm, were seen, photographed and filmed. It turned out that both species the Spiney Seahorse *Hippocampus guttulatus* and the Short-snouted *H. hippocampus*, were present!

Selsey Lifeboat Station

This is one of the best shore dive sites in Sussex provided the dive is timed to avoid the tidal currents. The supporting legs of the structure provide substrates upon which a huge mixed turf can live. The composition of this varies in composition depending upon the vertical position and the position in the tidal flow. The seabed is littered with debris providing homes for Tompot Blennies, Greater Pipefish, Eels and Greater Pipefish. The soft sediment in the spring and early summer abounds with Peacock Worms *Sabella pavonia*.

Cuttlefish find the site particularly attractive for breeding, laying their eggs on old netting, tangled metal and discarded lobster pots. Amongst the smaller species to be found are the European Cowrie *Trivia arctica* and numerous species of nudibranchs.

Mixon Hole

Thought to be the mouth of a river the Mixon extends from about 6m to 25 m deep. The walls of clay and sandstone are bored by piddocks. half way down the wall starts to slope and here large lobster occur. The seabed is of cobbles and extensive shell deposits with two 1 m dia boulders (spherical) which some think make it an old Roman quarry or fortification the stones being catapult ammunition. A notable species seen was a Lump Sucker, *Cyclopterus lumpus*.

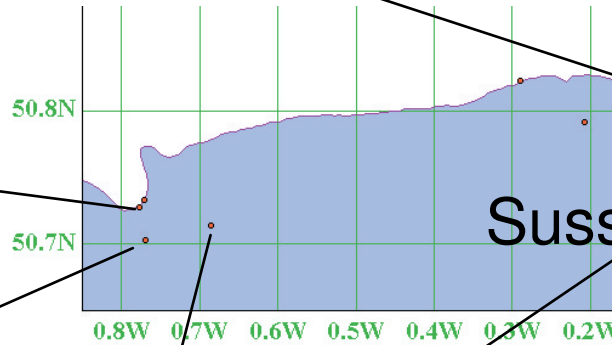
Stone Barge

Lying in a current swept area this metal wreck is so named because of its cargo of dressed stone blocks. The blocks measure up to 1.5m square and covering an area of about 100 square metres. Being made of granite they

do not support any boring animals but being jumbled together they provide crevices and fissures for creatures to live and hide in. The wreckage and blocks sit on an area of level mixed ground seabed comprising flint cobbles, pebbles, coarse sand and shell debris. A very few small boulders are also present. The cobbles are covered in a low red algal and ascidian turf. In the sandy areas Sand Mason worms *Lanice conchelega*, are common, two notable species found were Sea Cucumber *Paracerasma* and Cowrie *Trivia*.

Inshore

Seaford variable and gravel bed rock other areas of wrecks and age has been by beam recent m and silt a very fine particulate



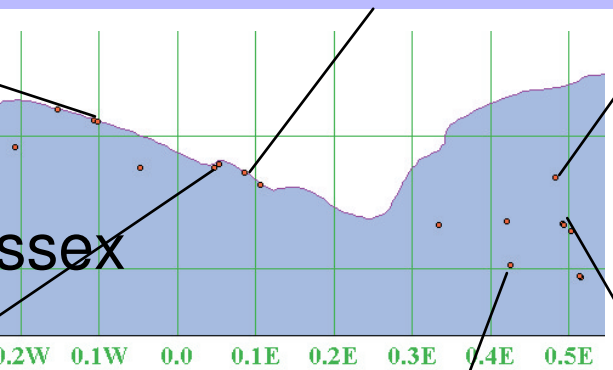
Newhaven

Newhaven construction age and health a shingle This lead or may be debris. A erer in t kelp and subliterate tect the provide means t different the com together

nets, ropes etc. Encrusting species include Sandall near Sponge *Pachymatisma johnstonia*, Light-bulb a *Zeugopterus punctatus*, Deadman's Fingers *Alcyon* small examples (the area is potted). Numerous fish Eels.

More Seaford Bay

Seaford Bay faces SW and extends for 4 km. The seabed is flat but variable and includes sublittoral chalk gullies, chalk bedrock, silt, sand and gravel and wreckage, mainly metal but also wood. Some areas of rock are covered in the ascidian *Molgula manhatenensis*, while others are covered in *Sabellaria spinulosa*. The Bay's geographical position and location east of Newhaven has resulted in it being heavily wrecked, through natural and man-made means. Much of this wreckage has been deliberately broken and also damaged, like the seabed, beam-trawling and anchors. Wrecks include early wooden ships to modern metal ones and aircraft. Over time the seabed changes as sand and silt are moved about by the tides and currents which can occur at a very fast rate, so each visit shows a snap-shot of what occurs at a particular place and at a particular time.



Newhaven Harbour Arm

Newhaven Harbour Arm extends 700m SSE. It was constructed in 1890 and is now showing signs of its age and has had to be closed to public access through health and safety considerations. The seabed is initially a gentle slope over which sand eels and other fish occur. This leads onto areas of shallow chalk gullies that may or may not be filled with dead seaweed, silt and other debris. A little further out coarse concrete boulders cover the seabed in typical intertidal fringe species occur, such as green and red seaweeds. These lead onto the large intertidal concrete 'sacs' and cast blocks used to protect the wall against wave action. The concrete blocks provide a great variety of places for life to live which means that a huge range of organisms can be found at different depths. Further along the harbour arm their community changes. Old line is commonly found together with fishing weights and hooks, pieces of discarded anemone *Actinotheria sphyrodeta*, Elephant-bell anemones *Clavelina lepadiforme*, Topknot *Alcyonium digitatum*. Free ranging lobsters albeit small fish include Tompot Blennies, Bib, Wrasse and

Oceana

On the 16th March 1912 the 6,610 ton, 143m P&O liner Oceana collided with the Pisagua, a famous four-masted steel barque. Twenty minutes after taking on water she sank to the seabed, 22 meters below with masts and funnels showing. Typical wreck species were found including Bib *Trisopterus luscus*, Ballan Wrasse *Labrus bergylta*, Rock Cook *Centrolabrus exoletus*, Goldsinny *Ctenolabrus rupestris*, Deadman's Fingers *Alcyonium digitatum*, various sponges and Cuttlefish *Sepia*

Sabellaria Reef

Sabellaria spinulosa, the Ross Worm, a sedentary polychaete worm lives within rigid tubes made from sand and shell fragments cemented together. Under favourable conditions the worms are gregarious and their tubes fuse together forming extensive reefs. These are solid but fragile and can be several metres across and rising to 30cm off the seabed. Off the Sussex

coast a number of areas of *Sabellaria* have been found. This one consists of an area of sandy seabed with cobbles and abundant *Sabellaria*. The *Sabellaria* provides niches for many organisms resulting in a complex community including Aglaophenia pluma, Queen Scallop *Aequipecten opercularis*, Sea Lemon *Archidoris pseudoargus*, Daisy Anemone *Cereus pedunculatus*, the sea anemone *Sagartia elegans*, Oaten Pipes Hydroid *Tubularia indivisa*, and Dahlia Anemone *Urticina felina*. A notable species recorded was the Brittle Star *Ophiura ophiura*.

Duchess

Following a collision with the destroyer, HM Cossack in July 1917, the Duchess, sank. She is fairly broken-up with the a 2.5 metre diameter boiler lying about two thirds of the distance along the wreck. A great deal of life covers the wreckage including numerous tompot blennies *Parablennius gattorugine*. Shoals of bib *Trisopterus luscus*, typical wreck species, circle the site. Other species found included Conger Eels *Conger conger*, Leopardspotted Goby *Thorogobius ephippiatus*, Peacock Worms *Sabella pavonina*, Horseshoe Worms *Phoronis hippocrepia*, various sponges and anemones. She sits on a seabed of mainly sand with ripples; a area of cobbles and pebbles, possibly ballast from wreck.

Rocky Reef SE of Royal Sovereign Shoals

SE of the Royal Sovereign Shoals is a sandstone rocky reef surrounded by boulders, cobbles, flint pebbles and many broken mussel shells. This site has a high density and large examples of the bryozoan Ross Coral, *Pentapora fascialis*, the largest seen being 60 X 20 cm. Other species present included the sponge *Hemimycale columella*, the beautiful Twin-fan Worm *Pawsonia saxicola*, Deadman's Fingers *Alcyonium digitatum*, the tall hydroid *Nemertesia antennina* and several species of fish.

ross coral

Sponges

A variety of species of sponges were recorded predominantly from the wrecks and chalk.

Cliona celata, the largest and most conspicuous British sponge. It bores into calcareous substrates including chalk. In sediment and silty condition Mermaid's Glove, *Haliclona oculata*, and *Polymastia mamillaris* were found. In contrast the Elephant Ear Sponge, *Pachymatisma johnstonia*, was found in areas of strong water movement such as on the protective concrete blocks by Newhaven Harbour Arm. The Shredded-carrot Sponge, *Esperiopsis fucorum* overgrows short animal turf, and was typical on some wrecks. *Stylostichon plumosum*, which has local distribution was also seen.

Seafirs and Anemones

Seafirs together with the bryozoans dominant many of the animal turf communities found encrusting the solid

substrates including the chalk and wrecks. No doubt many are overlooked as they are not easily identifiable in situ. Ubiquitous Oaten-pipe Hydroid, *Tubularia larynx*, is a common species of wrecks such as The Duchess and Holland Five. Others are epiphytic on algae with *Dynamena plumila* in shallow water on fucoids and *Aglophenia pluma* on *Laminaria* and also wrecks and rocks. The anemone *Actinotoe sphyrodeta* was widespread on suitable rocks and concrete in which it could insert its base.

Sea Mats

The distinctive bryozoan *Pentapora fascialis*, Ross Coral, was found SE of the Royal Sovereign Shoals.

Echinoderms

Few species were recorded including the Common

Starfish, the Brittle Star *Ophiura ophiura* and two species of Sea Cucumber, the Gravel Sea Cucumber *Neopentadactyla mixta* and *Pawsonia saxicola* the Sea Gherkin.

Surveyors taking part were: Sue and RW Armfield, Bryony chapman, alison dack, David Dooley, EMU Ltd, Alex Holmes, Keith Kempton, Gerald Legg (GL), Michelle Legg

Phylum	Common Name	No. records	No. species
Porifera	Sponges	35	16
Cnidaria	Anemones	47	10
	Sea Firs	40	6
	Soft Coral	13	1
	Sea Pens	1	1
	Flat Worms	1	1
Platyhelminthes	Arrow Worms	1	1
Phoronids	Horseshoe Worms	1	1
Annelida	Segmented Worms	36	16
Crustacea	crabs, prawns, barnacles	80	22
Mollusca	Bivalves	42	6
	Gasteropods	35	9
	Chitons	1	1
	Cephalopods	3	1
	Bryozoa	Sea Mats	39
Echinodermata	Starfish	14	1
	Echinoids	3	1
	Sea Cucumber	2	2
Tunicata	Sea Squirts	50	13
Pisces	Fish	104	34
Algae	Reds	19	9
	Browns	7	5
	Greens	6	4
	Total Species		

Table showing the how many records and different species were recorded.

Habitats Surveyed

Rock, including clay, mud stone, chalk and other rock	38%
Sediment, including fine and coarse mud, sand, gravel, pebbles, mixed sediment	45.3%
Clay cliff	1%
Chalk cliff	1.5%
Wreckage	14%
Boulders	5%
Concrete	0.15%

Crabs, Prawns, Lobsters

Twenty two species of crustaceans were recorded including eleven-species of 'crabs'. Areas with rocks, gullies and wreckage frequently had Lobsters, Velvet Swimming and Edible Crabs.

Molluscs

Fourteen species of molluscs were recorded including Cuttlefish. Nudibranchs found included the Sea Lemon, *Archidoris pseudoargus*, and *Polycera quadrilineata* which feeds on *Mebranipora*.

Tunicates

Of the thirteen species of tunicate one is note worthy, *Molgula man-hatenensis*, as it was found forming continuous covering over areas of exposed chalk bedrock and gullies as well as on cobbles in areas of weed covered mixed ground.

Fish

Wrecks and rocky reefs abounded with Bib, *Trisoperus luscus* and tompot Blennies, *Parablennius gattorugine*. Notable species were Lump Suckers, *Cyclopterus lumpus*, and Undulate Ray, *Raja undulata*.



Seasearch is a volunteer underwater survey project for recreational divers to contribute to the conservation of the marine environment. financial support for the project during 2006 and for the production of this summary report has been given by: WHAT OTHER LOGOS?



THE BOOTH MUSEUM OF NATURAL HISTORY

