Porcupine Newsletter

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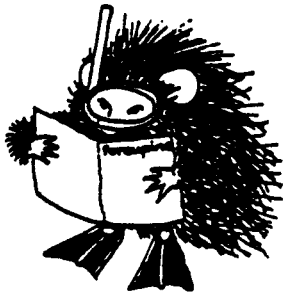

PORCUPINE

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EDITORIAL

That the present issue achieves the status of "big" is a result of the success of the Autumn Meeting in Cornwall. I should not only thank those who have already sent copy (more is promised) and the selfless band who braved the elements to produce the copious shore records, but mostly Stella Turk and the staff of Cornish Biological Records Unit for their kind and generous hospitality; and also the generosity of the person who donated a sieve for our field work, and who wishes to remain anonymous.

Those who observe that this Organ is becoming more like a normal scientific periodical (i.e. articles of the "paper" type but few notes, notices, letters, etc.) are congratulated on their perception -there is no plan in this - I can only publish what you good people send me. So send me!

I am further reminded, looking at these contents, that at some point I have to compile the generic index for this volume - this issue does not make my life any easier! {*plaintive cry for seasonal sympathy*}

I behoves me to remind those that need it that the annual membership subscription falls due on 1st January. Those not already doing so may find it more convenient to use a banker's order: the Hon. Treasurer certainly finds it more convenient, and he has a supply of the relevant forms to make life so much easier for you.

Finally (more behoving) may I wish all readers a Merry Christmas (and to those receiving this after the Christmas postal delays, Happy New Year); we look forward to seeing more of you at the 1993 meetings.

FUTURE MEETINGS:
The 1993 Spring Meeting and 16th AGM will be at Peterborough on 13-14 March: see p.146 for full announcement; the first circular is enclosed with this Newsletter. The Autumn 1993 meeting is being planned for the Isle-of-Man - further details will appear in due course. For a really advance announcement, the Autumn 1994 Meeting is being planned for the Channel Isles, probably based in Guernsey. We anticipate a normal weekend of paper presentations, accompanied by field excursions (we hope one of these to be to the Gouliot Caves; see PN 3, 235 et seq).

All offers for venues and themes for future meetings will of course be gratefully received - contact the Hon. Sec. Ian Killeen (see above). Members should also send to Ian any proposals for Council Members and/or Office Bearers for consideration at the AGM in March.

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PORCUPINE AUTUMN FIELD TRIPS TO MARAZION/ST MICHAEL'S MOUNT AND CASTLE BEACH, FALMOUTH

Roger Bamber

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The 1992 Autumn Meeting of **PORCUPINE** included two field excursions to Cornish south coast shores, taking advantage of the spring low tides both to get "hands-on" experience of interestingly southern beasties and plants, and to supplement the records database of our most hospitable hosts, the Cornish Biological Records Unit. Sunday morning (25 October) found an intrepid group gathering at Marazion to brave the gales and abrasion in order to survey the diverse shores in the vicinity of the St Michael's Mount Causeway. This site offered rock, concrete, exposed and (in the Harbour) sheltered sands, algal and *Zostera* beds and wind gusting to Force 10. Indeed, when one appreciates the extraordinary discomfort of subjecting mere human epidermis to shotblasting, with passing comments of "here's a pycnogonid - oh, sorry, it blew away", the undeleted expletives as certain normally sober and correct Porcupines decided that they had had enough, and the unfortunate etching by wind-driven sand of car windows at the cliff-top, the list below will be seen to be a most remarkable achievement. The group seemed most impressed by the warmth, shelter and good value of the pub at lunchtime.

Those that survived to Monday morning (26th) visited the rocky shore at Castle Beach, Falmouth, where, after initial confusion over the lack of gales and the abundance of canine egesta, we surveyed the hard substrate shore only, until the call of the pasty and the homeward trip became irresistible.

But a good time was had by all (I think), alphabetically, Roger Bamber†, Nike Bianchi, Roger Brehaut, Meg Cameron, Willie Fowler, Paul Gainey, Roger Herbert†, Tim Hill, Andy Horton, Ian Killeen†, Jan Light, Carla Morri, Ralph Robson and Shelagh Smith (apologies to attending wives, who very sensibly remained in their cars). Those marked with † were solely responsible (i.e. to blame) for the Castle Beach, Falmouth records, not forgetting Paul Gainey who arrived to give us moral support.

Much was identified *in situ* or returned to Pool for closer examination; I am grateful to all those who sent their eventual records to me for this collation, and also those who sent their sorted debris in case I could extract more therefrom (which I managed to an extent). The ensuing results comprise an impressive list of 226 species! I have refrained from appending "Species Directory" reference numbers in the light of the revision currently in prep., but readers are referred to that publication for authorities. Notes of abundance represent the maximum from the records submitted to me (i.e. if two recorders listed a species as "occasional" and "common" respectively, I assumed the latter to be more valid).

Previous compilations exist for both sites visited, viz. Turk, 1974? and 1980?, copies of which were kindly supplied by Stella Turk, together with output listings from the CBRU computer itself. Comparisons of these listings to the data below reveal that the Porcupine trip added some 38 species to the list for Falmouth and 53 for Marazion (denoted by * in the list below), as well as the odd notable rediscovery - *Ocnus lactea* appears to be the first Marazion record since 1906!

References:

Turk S.M., ?1974. Marine life of the Marazion area, comprising notes and records from Marazion - St Michael's Mount and the nearby Long Rock. J. Camborne-Redruth nat. Hist. Soc., 3 (1); 17-38.

Turk S.M., ?1980. Castle Beach Falmouth. ERICA records 1960-1980. Cornish Biological Records Unit, 19pp.

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TABLE 1. FAUNA AND FLORA RECORDED DURING THE **PORCUPINE** FIELD COLLECTING IN CORNWALL, 25-26 OCTOBER 1992:

	FALMOUTH (50°08.5'N 05°02.5'W)	MARAZION (50°06.5'N 05°27.5'W)
ANIMALS		
PORIFERA		
Halichondria panicea	Common beneath boulders, in holdfasts	Common beneath boulders, in holdfasts
Hymeniacidon perleve	Occasional beneath boulders	Occasional at coralline pool edge
CNIDARIA		
Scyphozoa		
Haliclystus auricula	One, ELWS on algae	
Anthozoa		
Actinia equina	Occasional	Occasional in pools and upper shore
Anemonia viridis	Abundant including on algae	Occasional in pools
Urticina felina	Occasional	One found
Bunodactis verrucosa	Rare	Common
Cereus pedunculatus		One in rock pool
Hydrozoa		
Dynamena pumila	A single shoot on *Fucus serratus*	
Candelabrum phryngeum		Common *
PLATYHELMINTHES		
Prostheceraeus vittatus		One beneath stone *
NEMERTEA		
Lineus ruber	Rare, in rock crevice *	
SIPUNCULA		
Golfingia minuta	Occasional in *Corallina* *	
ECHIURA		
Thalassema thalassemum	Common within bored rock	Present within bored rock *
ANNELIDA		
Oligochaeta		
Tubificoides benedii		Common in open Bay beach sand *
Polychaeta		
Scoloplos armiger		Occasional in sand East of causeway *
Spirorbis corallinae	Abundant on *Corallina*	Abundant on *Corallina*
S. rupestris	Abundant on rock/*Lithothamnion*	Abundant on rock/*Lithophyllum*
S. spirorbis	Abundant on *Fucus*	Abundant on *Fucus*
Pomatoceros triqueter	Abundant beneath boulders	Abundant beneath boulders
P. lamarcki	(not checked for)	A group on a pebble in *Saccorhiza* zone positively identified *
Alentia gelatinosa	Abundant beneath boulders	Common beneath boulders
Harmothoe extenuata	Frequent beneath boulders, ELWS *	
H. castanea	One, beneath boulder, ELWS *	
Lepidonotus squamatus	Occasional beneath boulders	Common *

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Pygospio elegans		Abundant in St Michael's Mount Harbour sands *
Cirriformia tentaculata	Rare in pool gravel *	Occasional in open Bay beach sand
Terebella lapidaria	Common within bored rock *	
Amphitritides gracilis	Common beneath stones *	Occasional beneath stones *
Lanice conchilega	Occasional in pools	Abundant in beach sands, some pools, Harbour
Dodecaceria concharum	Occasional within bored rock *	
Capitella capitata		One in sand East of causeway *
Arenicola marina		Common
Eulalia viridis		Common
Phyllodoce maculata		Occasional in beach sands
P. mucosa		Occasional in harbour sand, abundant in open Bay beach *
Nephtys hombergi		Common in beach sands, absent from Harbour
Glycera rouxi		Occasional in beach sands, abundant in Harbour *
Nereis pelagica	Common in holdfasts and rock crevices	Common in algae, beneath stones, etc.
Platynereis dumerilii	Occasional in holdfasts *	Frequent in *Corallina*
Nematonereis unicornis	One in crevice *	
ARTHROPODA		
Pycnogonida		
Nymphon gracile		Occasional amongst algae *
Anoplodactylus angulatus	Occasional in *Corallina*, breeding *	Occasional in *Corallina* *
Achelia longipes	Gravid female in *Corallina* *	Gravid female in *Corallina* *
Endeis spinosa		Occasional amongst algae *
Crustacea		
Cirripedia		
Balanus balanoides	Frequent	Occasional
B. perforatus	Abundant	Common
Chthamalus montagui	Abundant	Abundant
C. stellatus	Occasional	Occasional
Verruca stroemi	Abundant	Abundant in patches
Sacculina carcini	On a male *Carcinus maenas* *	
Cumacea		
Cumopsis goodsiri		Rare in sand East of causeway *
Mysidacea		
Siriella clausii		Occasional amongst algae in pools *
Praunus flexuosus		Common amongst algae in pools *
Isopoda		
Gnathia sp. indet		Praniza larvae amongst *Balanus perforatus**
Idotea granulosa	Occasional amongst algae	Common
Sphaeroma serratum	Rare beneath stones *	One specimen
Dynamene bidentata		Rare, amongst algae
Cymodoce truncata	One female amongst *Corallina* *	Rare, amongst algae
Jaera forsmani	Rare beneath boulders *	
Janira maculosa	Rare amongst algae *	

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Tanaidacea		
Apseudes talpa	One beneath stone *	
Amphipoda		
Gammarus oceanicus	Occasional amongst algae *	
G. locusta		Common in *Corallina*
Podocerus variegatus	Common amongst algae; southern *	
Urothoe poseidonis		Frequent in open Bay beach sand *
Bathyporeia pelagica		Occasional in open Bay beach sand
Gammarella fucicola	Occasional amongst algae; southern *	
Ampithoe (A.) ramondi	Occasional amongst algae, breeding; cosmopolitan southern distribution *	Occasional amongst algae, breeding *
Maera grossimana	Occasional amongst algae; southern *	
Caprella acanthifera	Rare, beneath boulder (!); a northern species!	Occasional amongst algae *
Decapoda		
Palaemon serratus	Occasional in pools	Occasional
Hippolyte varians	Abundant amongst algae *	Common amongst algae
Galathea squamifera	Frequent under boulders	Common
Pagurus bernhardus		Occasional
Porcellana platycheles	Abundant beneath boulders	Abundant beneath boulders
Pisidia longicornis	Common under boulders	Common under boulders
Carcinus maenas	Occasional in pools, under boulders	Rare beneath boulders; frequent within Harbour and juveniles in *Corallina*
Liocarcinus puber	Common beneath boulders in pools	Common beneath boulders
Cancer pagurus	Frequent beneath boulders, in holdfasts young.	Common beneath boulders, young
Pilumnus hirtellus	Occasional in pools, under boulders	Occasional under boulders
Inachus phalangium	Rare in dense algae *	
Macropodia rostrata	Occasional amongst algae	
Pirimela denticulata	One in weed/shell gravel at base of overhang	
Xantho incisus	Frequent beneath boulders, including in copula	Common beneath boulders.
Insecta		
Clunio marinus	Males abundant over rock pools *	One larva in *Corallina* *
MOLLUSCA		
Polyplacophora		
Callochiton septemvalvis	Rare	
Lepidochitona cinereus	Occasional	Occasional
Acanthochitona crinitus	Rare	
Gastropoda		
Prosobranchia		
Diodora graeca	Rare *	Rare
Tectura virginea	Frequent	Occasional
Patella depressa	Frequent	Rare *
P. ulyssiponensis	Frequent	Rare
P. vulgata	Abundant	Abundant
Helcion pellucidum	Frequent	Occasional

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Monodonta lineata	Common	Abundant
Gibbula magus	Rare	
G. cineraria	Common	Abundant
G. umbilicalis	Common	Frequent
Calliostoma zizyphinum	Frequent	Frequent
Tricolea pullus	Occasional *	Common
Bittium reticulatum	Occasional	Occasional
Lacuna pallidula	Occasional	Frequent
L. parva	Occasional	Common
L. vincta	Occasional	Occasional
Littorina littorea	Frequent	Abundant
L. mariae	Present	Occasional
L. obtusata	Frequent	Occasional
L. nigrolineata		Occasional *
L. saxatilis	Abundant	Abundant
Melarhaphe neritoides	Abundant	Common
Eatonina fulgida	Abundant	Common
Barleeia unifasciata		Frequent *
Rissoa interrupta	Common *	Abundant, including on *Zostera* *
R. lilacina	Frequent *	Occasional *
R. parva	Common	Frequent, abundant on *Zostera*
Alvania beanii		Rare *
A. semistriata	Common	Frequent
Manzonia crassa		Occasional
Onoba aculeus		Occasional
O. semicostata	Common	Common
Trivia monacha	Occasional	
Lamellaria latens		Frequent
L. perspicua		Occasional
Cerithiopsis tubercularis	Rare	
Epitonium clathratulum		Rare, on *Zostera* *
Ocenebra erinacea	Occasional	Frequent
Nucella lapillus	Rare	Common
Buccinum undatum	Rare	
Hinia reticulata	Occasional	Occasional, common in *Zostera* bed
H. incrassata	Common	Common
Mangelia coarctata		Rare on *Zostera* *
Raphitoma purpurea	Occasional	
Rissoella diaphana	Occasional	Occasional *
Pyramidellidae		
Odostomia plicata	Frequent *	
O. turrita	Occasional *	Occasional *
Brachystomia scalaris		Occasional *
Turbonilla lactea		Occasional, frequent in *Zostera* bed
Opisthobranchia		
Retusa truncatula	Occasional	Occasional, frequent in *Zostera* bed
Berthella plumula	Occasional	Occasional
Goniodoris nodosa		Rare *

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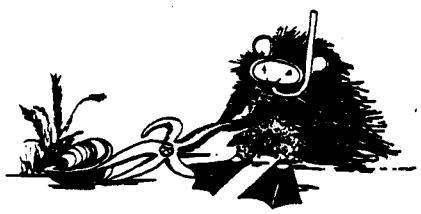
Ancula gibbosa		Occasional *
Facelina auriculata		Rare *
Aeolidia papillosa		Occasional
Pelecypoda		
Mytilus edulis	Frequent	Abundant
Modiolus modiolus	Rare *	Shell only, occasional *
Modiolarca tumida		Rare *
Ostrea edulis	Rare	
Heteranomia squamula	Common	Common
Pododesmus patelliformis	Occasional	Rare *
Loripes lucinalis		Frequent in *Zostera* bed *
Kellia suborbicularis		Occasional
Lasaea adansoni		Frequent *
Tellimya ferruginosa		Shell only, occasional *
Mysella bidentata	Rare	Occasional in *Zostera* bed
Cerastoderma edule		Common in sand in the Harbour *
Parvicardium exiguum		Occasional in *Zostera* bed *
P. ovale		Occasional in *Zostera* bed *
Spisula solida	Shell only, rare	
Angulus tenuis		Frequent in sands, including the Harbour
Fabulina fabula		Occasional in *Zostera* bed, frequent in sands except in the Harbour *
Abra alba		Frequent in *Zostera* bed *
Arctica islandica		Shell only, rare *
Tapes rhomboides	Occasional	
Venerupis senegalensis	Occasional	Rare, frequent in *Zostera* bed
Dosinia exoleta	Occasional	
Turtonia minuta		Shell only, occasional
Hiatella arctica	Frequent	Frequent
BRYOZOA		
Alcyonidium gelatinosum	Rare, on *Fucus*	Common on algae
Scrupocellaria scruposa	Rare, beneath rock *	
Electra pilosa	Common on algae	
Membranipora membranacea	Common on kelp fronds	
ECHINODERMATA		
Echinoidea		
Psammechinus miliaris	Frequent beneath boulders	Abundant beneath boulders
Asteroidea		
Asterina gibbosa	Frequent under boulders	Common beneath boulders
Asterias rubens		Occasional
Marthasterias glacialis	One, beneath boulder, observed eating a *Gibbula cineraria*	Rare
Ophiuroidea		
Amphipholis squamata	Common in crevices, under boulders, amongst weed.	Common, abundant in *Corallina*
Ophiothrix fragilis	Occasional beneath boulders	Two beneath boulders



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Holothuroidea		
Ocnus lactea		One recorded beneath rock
CHORDATA		
Tunicata		
Ciona intestinalis		Present *
Ascideilla aspersa		Common *
Ascidia mentula	Rare *	
Didemnum maculosum	Occasional on algal bases *	
Botryllus schlosseri	Common	
Botrylloides leachi	Occasional	
Pisces		
Nerophis lumbriciformis	Common in lower shore weeds	Common in lower shore weeds
Ciliata mustela	Frequent, lower pools.	Frequent, lower pools.
Blennius pholis		One large specimen
Pholis gunnelus	Occasional in pools	Present
Gobius niger		One in pool *
Lepadogaster lepadogaster	Two adults beneath large boulder	
Lepadogaster sp.	Two young, apparently not the above	
Aves		
Corvus corax	Raven, flying high overhead	
Pica pica	Magpie, three	
Larus argentatus	Herring gull, present	Present
L. ridibundus		Black headed gull, one *
PLANTS		
ALGAE		
Rhodophyceae		
Palmaria palmata	Common	Common
Porphyra umbilicalis		Common
Hildenbrandia rubra	Common on pebbles	
Corallina officinalis	Common in pools	Common
Lithothamnion sp.	Common on rocks in pools	
Mastocarpus stellatus	Frequent	
Chondrus crispus	Frequent	Common
Gigartina cf. acicularis	Occasional on rocks at edges of pools *	
Plocamium cartilagineum	Common	
Lomentaria articulata	Common	Common
Ceramium rubrum	Common	Common
Laurencia pinnatifida	Common	Common
Polysiphonia lanosa	Common on *A. nodosum*	Common on *A. nodosum*
Phaeophyceae		
Ectocarpus sp.	Abundant *	
Leathesia difformis	Occasional	Common
Cladostephus spongiosus	Common	
Laminaria digitata	Abundant	Abundant
Laminaria saccharina	Abundant	
Saccorhiza polyschides	Common	Abundant

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Ascophyllum nodosum	Abundant	Abundant
Fucus serratus	Abundant	Abundant
F. spiralis		Present
F. vesiculosus	Abundant	Abundant
Sargassum muticum	Frequent in pools	
Himanthalia elongata	Occasional	Common
Cystoseira tamariscifolia	Occasional in lower shore pools	Common
Chlorophyceae		
Enteromorpha sp.	Abundant	Abundant
Ulva lactuca	Common	Common
Cladophora rupestris	Common	Common
ANGIOSPERMAE		
Zostera marina		Common in open pool areas.

* * * * * * *

THE BOOK OF PORCUPINE, PART 2: The Great St Michael's Mount Expedition

C.T. Canon

It was a pale and stormy morn, as the intrepid Porcupine gathering gathered (I gather) to attempt to force the southwest passage in the name of St Michael and his sturdy Mount. By devious routes, uncharted tracks and the A30 they assembled at the edge of the land and prepared to search for the long lost Lusitanian invertebrate.

But lo, the great god Marazion did cause a mighty wind to spring up as if from nowhere (or a nearby depression); and a plague of sand was visited upon the gathering; and they were sore afraid - well, sore. And they began to regret ignoring the warnings of the great Turk. For it was indeed Force 9.

With cries of the appropriate defensive expletives, the Honsec led the coarse corps by a course to the Causeway (of course), where they scattered to the one wind. And the grass was like eels; and the air was like sand; and cries of "*Fucus*!" were heard all around; and they were more sore (mainly on exposed skin).

The local guide Gainsaid "They are here somewhere; and manifold; we have only to search diligently." But some smiles were seen to be grimaces, and some stones were verily left unturned (except where the wind could get under them); and "with gusto" took on a new meaning. And the Honed cried "I shall make for the harbour, where I shall take no advantage of the shelter at all but only for scientific reasons"; and later a burning of incense was observed from that direction. But there were no gales of laughter, only of sand.

The migrant passing Tourists would rarely stop to leer, and an itinerant hunting party of the Baitdiggeri could not believe their screwed up eyes and pretended not to notice. And the Italianate delegation suddenly remembered a prior engagement with "shelter". And when Light relief was given in the form of comments of final exasperation, the Porcupines disappeared as if at random into the radulae of the gale.

As if by a miracle, they all reappeared, breezing into an local hostelry, there to partake of such vittals and good

.....cont'd P.478

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'SOUTHERN' MARINE SPECIES IN CORNISH COASTAL WATERS: RECORDS, RECORDERS AND RECORDING

Stella Maris Turk

Cornish Biological Records Unit, Pool, Redruth, Cornwall

Cornwall is essentially wet, windy, warm and winding! The wetness, windiness and warmth occur in varying combinations and intensities; the winding, indented coastline is rather more stable! The coastline is longer (250 miles without the inlets) than that of any English county and the various types of substrate and the different aspects of coastline, together with the drowned valleys of the south coast, fulfil the promise of a rich variety of marine life. The drowned valleys (rias) are particularly rich since they are virtually fully marine, forming sheltered arms of the sea. The Fal stretches inland 10 miles from Falmouth to Truro, whilst the Helford River extends five miles from its mouth to Gweek. Both of these rias have a complex of creeks, much silted but forming important feeding grounds for birds. No part of Cornwall is more than 10 miles from the sea, and much of it is less than five: Hayle on the north coast of Cornwall is a mere four miles from Marazion on the south coast. The effects of salt spray are felt far inland when Atlantic gales lash the coastline.

Temperature is undoubtedly the overriding factor controlling the distribution of marine fauna and flora, and the effect of the Gulf Stream's Northern Drift dictates much that is special in the Cornish scene. "Northern" and "southern" are necessarily comparative terms. Many northern (cold water) species reach as far as Cornwall but our southern (warm water) species are more difficult to define, and it is often more a matter of quantity than of occurrence - marine barriers are usually more subtle than terrestrial ones! Most species of the far south-west coasts and shallow seas edge northwards and eastwards, and most have variable limits. For instance, shore species like *Monodonta lineata* were killed in large numbers by the cold in the more easterly parts of the Channel coasts in the 1963/63 winter. Paradoxically, many "southern" species that require warm water for breeding can only breed much further east in the Channel where the water is shallower and can reach sufficiently high temperatures.

The Cornish coast has even more Atlantic drift organisms, many of them from the Caribbean, than have Ireland or the west coast of Scotland: many tropical seeds and fruits are found, as well as the hydrozoan *Velella velella*, the tiny cephalopod *Spirula spirula*, sea snails (*Janthina* spp.) and goose-barnacles (*Lepas* spp.). Especially dramatic was the speed-boat, adapted for extra speed and space to carry contraband, which drifted onto the north coast of Cornwall in 1987 complete with West Indian fauna attached!

Apart from the Cornish naturalists like William Borlase in the 18th century and Jonathan Couch and his son Richard in the 19th, numerous marine biologists have visited and still visit Cornwall, and many have come here to live. An exception was William Pennington Cocks who, in 1843, came to die - and lived another 40 years, writing on the marine fauna of Falmouth! There is now a legacy of some 250 years of marine studies.

With so many decades of recording, it should be possible, in broad terms, to monitor the occurrence of those animals that always make side-lines if not headlines in the local media. For instance, both huge jellyfish and giant turtles attract attention, so the dramatic increase in the Moon Jellyfish (*Rhizostoma octopus*) and the Leathery Turtle (*Dermochelys coriacea*) which feeds on these jellyfish is surely real. Cornwall has always had more records of these turtles than any other part of Britain, but until 1988 there were never more than two or three annually: in that year and again in 1990 there were 16! Similarly, *Rhizostoma*, which formerly was reported in small numbers, occurs in great flotillas and can even be a nuisance to fishermen. Another warm-water species which always attracts

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attention, and which has had record numbers in recent years - i.e. half-a-dozen instead of one or two - is the sea-horse (*Hippocampus ramulosus*).

Any fisherman from the Channel Isles northwards would be certain to report the finding of a shell as spectacular as the triton *Charonia lampas*, the shell of which can reach 33 cm. Three were found living off the Channel Isles between 1825 and 1847, but between 1961 and 1987 a total of a dozen were recorded off the Channel Isles, Co. Kerry, Cornwall and Dover. Two are at present in the Marine Biological Association's aquarium at Plymouth. One can assume that this species is extending its range northwards, whether through climatic change or through greater tolerance of colder conditions we do not know.

Particularly strange is the distribution of that small mollusc, *Onchidella celtica*, variously classified as a nudibranch or a pulmonate in the past, but now in an Order of its own. Apart from Loch Fyne, where it was discovered offshore, it is known in the British Isles only from Cornwall. Here it is to be found in the middle to upper shore, from west of Plymouth to Veryan Bay on the south coast and from Bude to the Newquay area on the north coast. Despite searches, it has never been found in Devon nor in the Land's End peninsula or the Scillies.

Our rarest southern species must surely be the stalked barnacle *Pollicipes pollicipes*. In 1880 H.W. Groves collected a couple of specimens near the Land's End and, in due course, they were deposited in the collections of the Natural History Museum. Nearly a century later, Alan and Eve Southward searched in vain in the Land's End district, scouring all those exposed sites which this species is known to favour. It fell to Ray Dennis to discover a single specimen in 1984; it is still there eight years later and its continued survival is being monitored with interest. At least there is no chance of its being collected for human consumption, as happens to this species where it is common in Portugal, Spain and North Africa!

Distribution patterns, long-term and short-term, can only be seen clearly over space and through time and in a wide ecological context - a raison d'etre for recording everything. This is why Frank Turk, when he initiated the Cornish Biological Records Unit 20 years ago, determined to record all species of plants and animals, living and fossil, marine and non-marine, parasitic and free-living, microscopic and macroscopic. Thanks to Colin French's computer expertise and a great deal of help from dedicated staff and participants, there are now well over half a million records on computer. We should be well placed to observe those patterns and trends.

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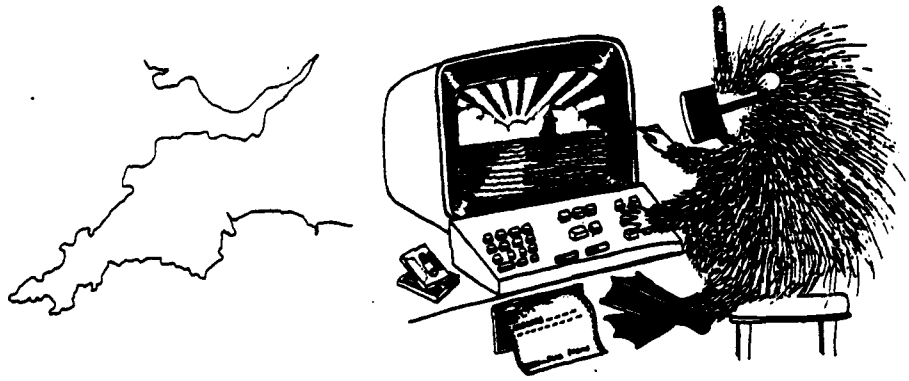

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POMATOCEROS LAMARCKII (POLYCHAETA: SERPULIDAE) IN SOUTH-WEST CORNWALL, WITH FURTHER NOTES ON THE DISTINCTION OF THE SPECIES OF *POMATOCEROS*

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During the Porcupine field trip to Marazion/St Michaels Mount on Sunday 25 October 1992, a few specimens of the serpulid polychaete *Pomatoceros lamarckii* (Quatrefages) were collected from the lower shore. Their tubes were encrusting stones among *Saccorhiza polyschides* holdfasts. The living worms were yellow and blue in colour and the opercula bore a moderately long central apical projection with two or three small distal teeth (such as in Fig. 3 e & g).

P. lamarckii had not been recorded on the computer data base at the Cornish Biological Records Unit (CBRU). Apparently this is the first record for south-west Cornwall. Although this species is presently considered common around the British Isles (Crisp & Ekaratne, 1984; Nelson-Smith *et al.*, 1990) and in Brittany (Bianchi, 1980; Castric-Fey, 1983), this fact has only recently been recognized since the species has often been confused with *P. triqueter* (L.) in the past (Castric-Fey, 1983; Crisp & Ekaratne, 1984; see also the discussion in Zibrowius, 1968). The distinction between these two species of *Pomatoceros* has been made clear by Zibrowius (1968) and Bianchi (1981). The major differences concern the tubes and the opercula.

The calcareous tubes offer easy field characters by which to distinguish the two species. Species of the genus *Pomatoceros* have tubes which are more or less triangular in cross-section: however, the tube of *P. triqueter* has only one longitudinal dorsal keel (Fig. 2 a, b), while that of *P. lamarckii* has two further, although less pronounced, lateral keels beside the central one (Fig. 3 a, b). A more subtle distinction requires examination of the operculum under the stereomicroscope. In this genus the operculum comprises a lower soft **ampulla** covered by a calcareous **plate** which often bears apical projections or "teeth" (Fig.1): the presence and shape of these teeth is considered to have no taxonomic value. In *P. triqueter* **the ampulla is flattened**, the plate is convex, often conical, and the peduncle is inserted on the dorsal side of the operculum (Fig. 2, d-h). In *P. lamarckii*, on the contrary, **the ampulla is elevated**, the plate tends to be concave (although sometimes convex) and the peduncle is inserted at the centre of the operculum (Fig.3, d-j).

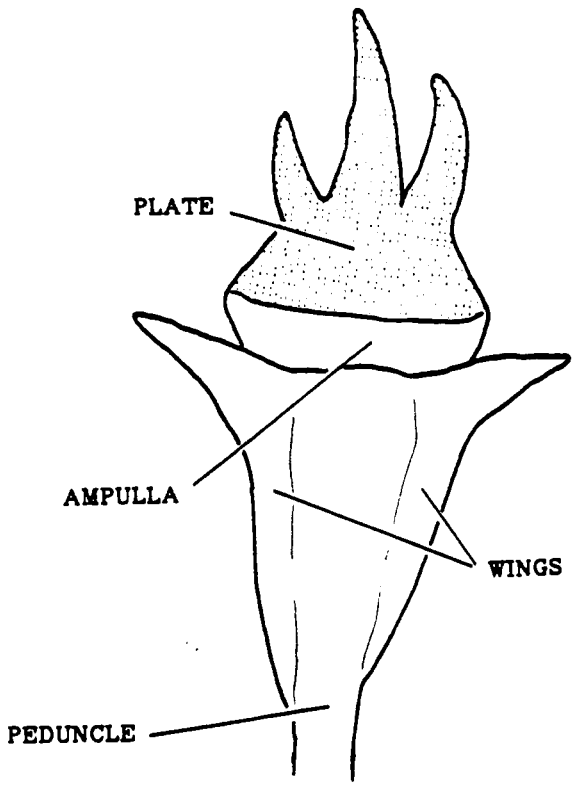

FIGURE 1. OPERCULUM

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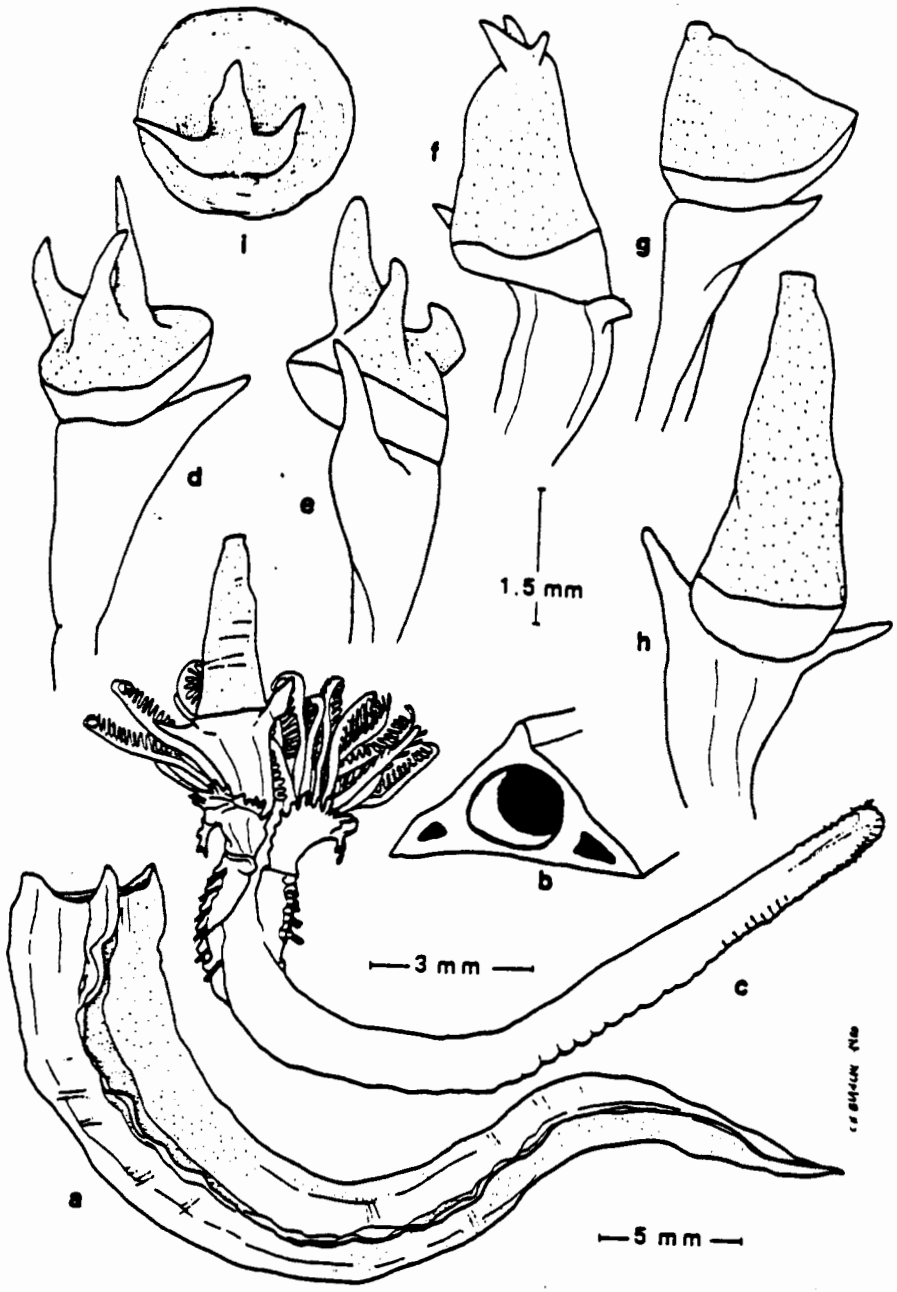

Figure 2. ***Pomatoceros triqueter*****: a, tube; b, schematic cross-section of the tube; c, entire worm; d-h, opercula; i, opercular plate from above (from Bianchi, 1981).**

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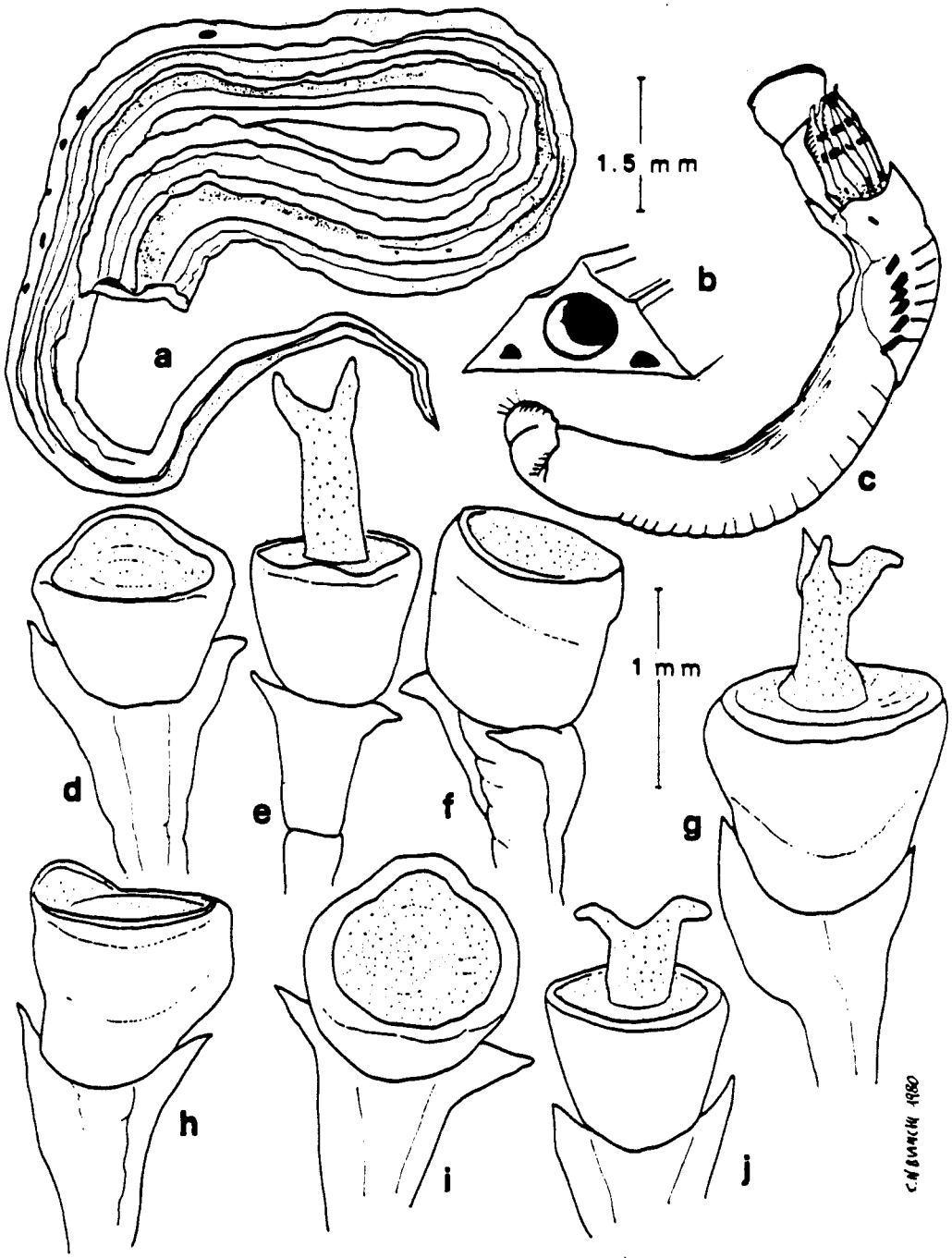

Figure 3. ***Pomatoceros lamarckii*****: a, tube; b, schematic cross-section of the tube; c, entire worm; d-j, opercula (from Bianchi, 1981).**

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Differences in ecology are less clear. According to Crisp & Ekaratne (1984) *P. lamarckii* is predominantly intertidal, whereas *P. triqueter* is predominantly subtidal, although in more northerly regions there is a tendency for *P. triqueter* todisplace *P. lamarckii*. Possibly *P. lamarckii* is a "southern" species with respect to *P. triqueter* (Castric-Fey, 1983; Nelson-Smith *et al.*, 1990); the distribution of the two species within the Mediterranean is consistent with this hypothesis (Bianchi, 1983, 1985; Bianchi *et al.*, 1984; Bianchi & Morri, 1991). Thus, it would be interesting to monitor the occurrence around the British Isles of *P. lamarckii*, as that of other warmer-water species (Smith, 1989), in relation to present climatic changes.

Acknowledgements - Thanks are due to Ian Killeen for making me join the 1992 Autumn Porcupine Meeting, and to Stella Turk (Pool) for her hearty hospitality at the Cornish Biological Records Unit.

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BRITISH *APLYSIA* SPECIES

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Aplysia has been known from early times, being first described by Pliny in the first century A.D. as *Lepus marinus* the sea hare. The name sea hare has persisted to this day because of the resemblance of some species to a sitting hare in the contracted state. Eales (1960) revised the world species of *Aplysia* and gave a full synonymy of the genus.

Aplysia punctata Cuvier 1803 is the most common British species and it is well known from Cornish waters. Its appearances are somewhat spasmodic but occasionally they are found in great abundance as in March 1971 in the Helford River. Their whereabouts for most of the year is not known. Carefoot (1967) was able to study a sublittoral population off Anglesey for several months but the animals disappeared one day without trace. Two other species have also been recorded from southern waters, *A. depilans* (Gmelin 1791) and *A. fasciata* Poiret 1789 (Bebbington & Turk, 1991) which are normally found along the Atlantic coasts of France and West Africa and in the Mediterranean.

Eales (1921) stated that *Aplysia punctata* can swim by sinuous movements of the parapodia but this has not been observed by the present author. Bebbington & Thompson (1968) stated that they had never seen *A. depilans* swimming but Bebbington (1972) reported a collection of specimens which were actively swimming. *A. fasciata* is a graceful swimmer in which the two parapodia move slightly out of phase with each other (Bebbington & Hughes, 1973).

The present author first observed *Aplysia depilans* and *A. fasciata* at Arcachon, France, in the 1960s. There it was noted that some research workers had misidentified the species possibly because of the many synonyms and the fact that these two species and *A. punctata* have all been described under the name *A. depilans* at one time or another. With these nomenclatural tangles it became clear that a detailed anatomical study needed to be carried out.

Grigg (1949) gave a figure showing the differences in their body outlines and Bebbington & Thompson (1968) illustrated and gave a table summarizing their main features. Bebbington's figures also appear in Thompson (1976). *Aplysia punctata* is the smallest of the three species having a body which is low, long and narrow. The parapodia are thin, widely spaced in front and joined high up posteriorly. The body of *A. depilans* is bulkier and broader. The body of *A. fasciata* is relatively high and narrow when resting due to the large parapodia meeting low down on the tail so that the mantle cavity is open posteriorly. In the preserved and contracted state it is necessary to use internal features to determine the species. Fortunately, these three species belong to different sub-genera and have quite distinct differences in their anterior genital complexes. In a ventral dissection, made by making a longitudinal cut along the length of the foot, the penis in its sheath lies to the left of the buccal mass (i.e. the animal's right side). In *A. punctata* the penis is broad and spatulate, the sheath is smooth and there is a single retractor muscle. In *A. depilans* the penis is stout and black, the penial sheath is armoured with spiny warts and there are two retractor muscles. In *A. fasciata* the penis is filiform and white, the sheath has a small lobe on its interior and there are two retractor muscles.

Bebbington & Thompson (1968) studied the reproduction and early development of the species but failed to induce metamorphosis of the veligers. Details of the structure and function of the reproductive organs were given by Thompson & Bebbington (1969). Switzer-Dunlap & Hadfield (1977), working with other aplysiid species, successfully reared the veligers and studied metamorphosis and early juvenile development.

There is a fourth species which collectors in the south should be on the look out for. Bebbington &

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Brown (1975) reported the appearance of *Aplysia parvula* Guilding in Morch 1863 from Devon. This species is circum-tropical in its distribution and resembles *A. punctata* in size and shape. It is distinguished from that species in having black borders to the cephalic tentacles, rhinophores, parapodia, mantle foramen and siphon which persist in the preserved state. Internally, the penial sheath of *A. parvula* has two retractor muscles, unlike *A. punctata*.

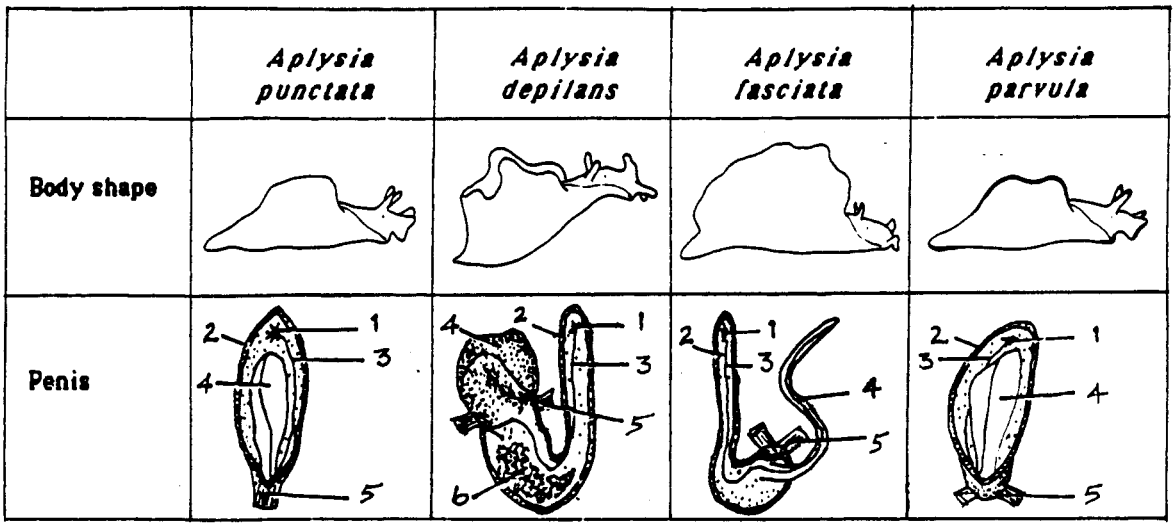

Figure 1. Right lateral aspect of living specimens of four species of *Aplysia*, with a ventral view of their anterior genital complexes (part of the penial sheath has been cut away to show the penis). 1, male opening; 2, penial sheath; 3, seminal groove; 4, penis; 5, retractor muscle; 6, spiny warts.

Some doubt was cast as to the validity of the specimens described by Bebbington & Brown (1975) when further examination showed that some of the specimens which had black bordering were *Aplysia punctata* and this variant had not been noted before. This finding of *A. punctata* juveniles with black markings was unusual and it would be interesting to know if these persist in adults as in *A. parvula*.

In conclusion, *Aplysia punctata* is the common British species, *A. depilans* and *A. fasciata* have been recorded several times from our shores and there is the possibility of *A. parvula* being found.

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LITTORAL ECOLOGY OF PEBBLE AND OTHER FALKLAND ISLANDS

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Subsequent to an initial and very cursory collection of Mollusca in January 1989, I revisited the Falkland Islands in February 1992. It was possible to plan part of this second trip to obtain the benefit of excellent spring tides. The area chosen for most of the study was Pebble Island. Additional sites were in East Falkland nera Stanlty, Sea Lion Island and West Falkland at Port Howard. Access within the Falkland Islands is not easy and thus sites, unless within walking distance of a base, were worked opportunistically. Even when it was possible to reach the shore, there were no-go areas, owing to the presence of original inhabitants, particularly sea-lions and elephant seals. Mine fields were not a problem except at Port Howard. This region is somewhat to the south of that normally reported on by Porcupines, lying between 51° and 52° south and between 57° and 62° west. The islands have been compared with the Shetland Isles; they are to my mind more like the Outer Hebrides, the broad differences being the less cloudy or wet weather but more constant wind and colder sea-water temperatures.

Falkland Island shores range from the extremely sheltered to the extremely exposed, but many of the latter are protected from the worst of the "Furious Fifteis" (westerly gales) by extensive beds of kelp (*Macrocystis pyrifera*) which grows on bedrock reefs just offshore, sheltered as well as exposed, and has fronds up to 50 m long. The rocky shores comprise cliffs, irregular rock and rock platforms. These have a rich algal flora with many species of small algae and, at low water, other species of kelp such

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as *Durvillea antarctica* which also break the force of the waves. As may be envisaged, there are few loose boulders except in the more sheltered areas, where a rich and diverse fauna is present, sponges, ascidians, echinoderms and molluscs being especially numerous. Although there are boulder and cobble storm beaches, no boulder beaches reaching to low water and beyond were seen except on Sea Lion Island. The sedimentary shores include very sheltered sandy creeks and lagoons, gravel beds and wide sandy beaches with the amount of infauna depending on the degree of exposure. There are numerous brackish lagoons, mostly sandy, none of which was investigated owing to lack of accessibility.

In contrast with 1989, many of the shores in 1992 unfortunetely had a covering of loose and rotting algae which made considerable areas unsuitable for worthwhile study. There also appeared to be fewer species of large mollusc washed up on the sandy beaches. The shell-sand undoubtedly contained fewer species. This was regarded as natural and bad luck. On the other hand, it was observed that the shores adjacent to human habitation did have more refuse in 1992. The fall-out of Chilean volcanic ash, which has caused considerable problems on land, probably has had no effect on the marine environment.

The ecology of the shores of the Falkland Islands is influenced very much by the geology. The rocks are mostly Devonian and Carboniferous in age, part of South Africa, and comprise heavily folded and faulted strata much of which are ostensibly flat-lying or shallowly dipping strata which are in reality overfolds (in the manner of not-very-tidily folded bedlinen in a cupboard); as the exception to this, the strata bordering the western side of Falkland Sound are vertical. Much is quartzite, which has few crevices, especially in less sheltered habitats, but there are areas of flags and shales, which are particularly significant on Pebble Island.

The kelp protects the exposed shores from the worst of the weather, so that few places suffer such severe wave action as on exposed coasts of northwest Europe. However, the almost continuous strong winds mean that areas with a relatively short fetch are comparatively more exposed, and a swell of 1 m is normal.

Shores were surveyed particularly for the Mollusca, and small samples of weed were taken and washed for their animal content, which proved to include some molluscs but chiefly amphipods. Many species have not yet been identified. The most exposed shores (except on Sea Lion Island where very large algae dominate) have a fauna dominated by limpets, whether patellid (*Nacella*) or pulmonate (*Kerguelenella*) and mussels (*Aulacomya*). The most sheltered shores are again dominated by limpets (*Kerguelenella* and *Siphonaria*) and mussels (*Mytilus*). The intermediate shores favour sponges and echinoderms, *Crepidula* and the buccinid *Pareuthria*, and of course a much wider diversity of flora and fauna. For most habitats, while the biomass is high, the species diversity is much less than for similar habitats in Britain.

PEBBLE ISLAND

This island lies off the north coast of West Falkland, separated from it by waters which are mostly very shallow and studded with low-lying islands. This area is protected at the west end by the high islands Saunders and Keppel. The northwest entrance channel, Keppel Sound, is about 6 km wide and permits considerable wave action from this direction. The eastern entrance channel, Tamar Pass, is a mere 750 m wide and has tidal streams running at up to 10 knots together with overfalls and whirlpools. The tidal range in this area is about 3 m.

Pebble Island, together with its northwest extension, Pebble Islet, is about 35 km long, lying more or less east-west, and 3.75 to 8 km wide except at the settlement where the narrow waist is only 750 m wide. The eastern end is low-lying, undulating, with shallow freshwater ponds some of which extend to the storm beaches. The central and western parts are marked by three craggy peaks, up to 270 m high, joined by a ridge. Much of the southern shore is, by Falkland standards, moderately sheltered,

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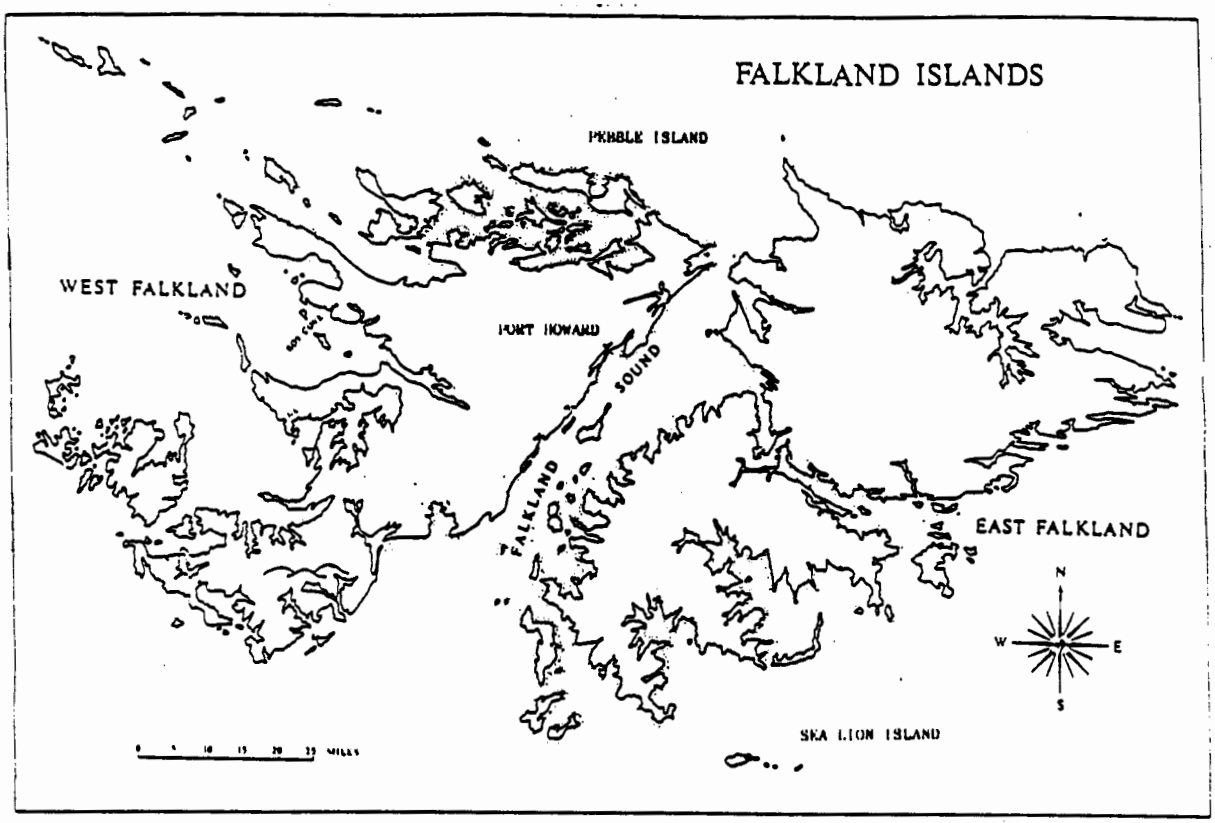

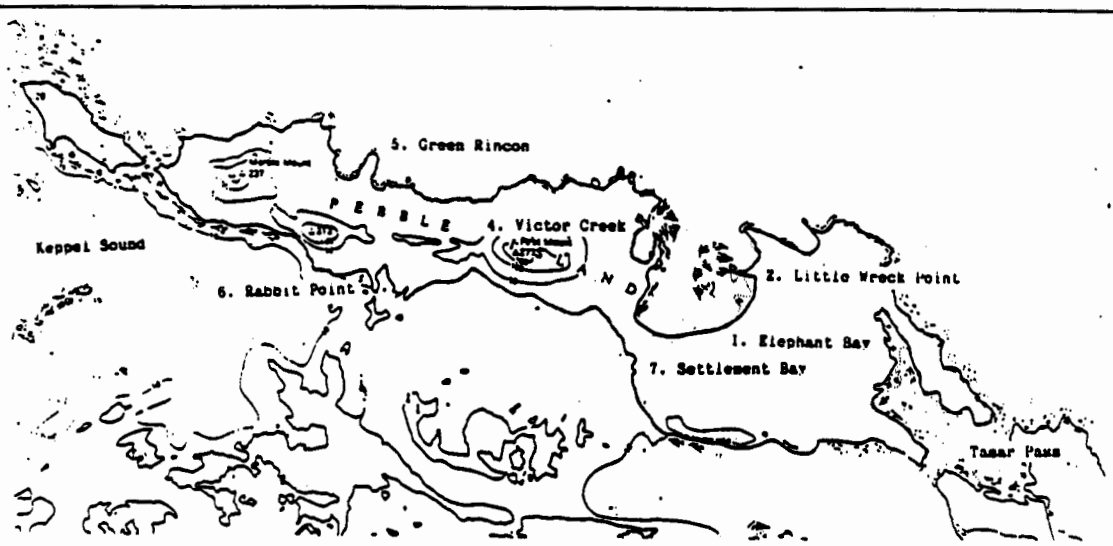

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comprising sandy bays and rock platforms backed by low cliffs. Further shelter is provided by the high ground. The northern and eastern shores are much more exposed, with irregular rock backed by cliffs or cliffs rising directly out of the sea, and sandy bays of which the largest is Elephant Bay. The northern shore is of the folded and contorted quartzite Port Stanley Beds while the southern shore consists of sandy flags which lend themselves to the development of rock platforms.

1. Elephant Bay

This bay is horseshoe-shaped, 2.7 km across the mouth and nearly 4 km from mouth to head. 6.5 km of wide sand flats sweep around the southern and eastern sides. Two low rock ridges, Wreck Point and Little Wreck Point, guard the eastern side; between these is a small sandy bay backed by a cobble storm beach, upon which numerous pilot whales were stranded in 1991, and their carcases still remain. The main sandy beach is up to 500 m wide at low tide and backed by sand dunes; there are small patches of variably exposed rock near the eastern end. The beach is frequently littered with kelp and kelp holdfasts; the latter may be up to 1 m across and high. The sand is occasionally covered by a fine layer of coal or coke from wrecked ships, and the shelly strandline has a high barnacle content. The most obvious species of stranded molluscs included the slit limpet *Fissurella*, the muricid *Trophon geversianus*, the volute *Odontocymbiola magellanica* (which was not infrequently cast up alive) and the bivalves *Spisula*, clams anf the kelp-dwelling *Gaimardia*. The eastern end of the Bay, sheltered by Little Wreck Point, had an infauna of small bivalve molluscs, worms, tube-building cristaceans and burrowing isopods; the more exposed central part had little life.

2. Little Wreck Point

This rock ridge just clears high water of spring tides, extending 750 m northwestwards into the Bay. The strata of quartzite are almost horizontal, dipping southwestwards. On the northeast side are pools with boulders, flat ledges and overhangs, and these and the area below mid tide had a lush growth of algae, including calcareous species. Kelp extended from just above low water out into the centre of the Bay in a large bed which helped top break the force of the waves. The most common larger molluscs were chitons and *Fissurella* which occurred in pools, reached up to 150 mm in length and was much covered by calcareous and other algae. *Pareuthria, Nacella* and the small mussel *Aulacomya ater* were also abundant, with pulmonate limpets, chiefly *Kerguelenella lateralis*, on the upper shore. Weed washings were dominated by the winkles *Laevilittorina caliginosa* and *Eatoniella bennetti*. Isopods and echinoderms, especially cushion stars, were common.

3. West side of Elephant Bay

This side was largely composed of irregular rocks sheltering small pools, and backed by cliffs up to 10 m high or by steep banks. There are also small sandy bays backed by cobble storm beaches. On both trips the algal cover was observed to be less than on other rocky shores, possible due to sand scour. The dominant molluscs were limpets, both *Nacella* and *Siphonaria* species, and chitons. The seaward sides of rock ridges were colonized by the ribbed mussel *Aulacomya ater* while on the sheltered sides was *Mytilus edulis*. The algae were covered with *Gaimardia*.

4. Victor Creek

This sheltered, flat sandy bay lies immediately to the west of Elephant Bay. It is about 1 km long and 750 m wide, almost drying at low water, and fringed by low sand and gravel and rocky ridges, some low rocks extending oert way across the middle of the bay. While the rocks had the common upper-shore mollusc fauna of mussels and *Siphonaria*, the sand contained galeommataceans and tellins, together with burrowing and tubicolous crustaceans and worms. The bay is a feeding ground for small waders and mullet.

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5. Green Rincon

This rocky ridge, about 50 m high, 1 km long and half as wide, extends northwards butressing two bays, the one to the west rocky, that to the east sandy. The sandy bay had numerous burrowing sand crabs from mid-tide downwards. Here, on the east side of Green Rincon, are irregular rocks with some grain at right-angles to the shore. The area is exposed, especially to the north. There are small rock pools with impoverished weed of less than average cover. Common molluscs were *Nacella* and *Aulacomya ater*, neither as abundant as on the rocks around Elephant Bay.

6. Rabbit Point

This area is the most sheltered part of Pebble Island, Rabbit Creek being the only reasonable safe place to keep a boat in the water. Flat sandy flags form low points and tidal ledges. The upper shore was dominated by *Siphonaria* and isopods. The crevices between upper shore flags were full of *Onchidella*. Chitons were numerous on the lower shore ledges, which were less-affected by the abundant drift algae than were the shore rocks. *Photinula* occurred under boulders. There is a large sandy bay containing a few crustaceans and bivalves and the smaller Rabbit Creek is muddy with *Mytilus edulis* on stepping-stones.

7. Settlement Bay

Settlement Bay is partly sheltered with a sandy/muddy central area which was much-cluttered with drift algae. To the west there is a low rock platform extending from some 400 m west of the new pier, under the pier itself and as far east as the old pier. The platform is backed by a bank some 10 to 20 m high. In 1989 this area was clear of drift algae, but in 1992 the upper shore in particular was heavily blanketed, to the detriment of the fauna and flora. There was a thick layer of rotting kelp brought in by the westerly winds. The lower shore had shallow pools with algae, but the whole did not encourage detailed study.

Further around the Bay, omitting the central part with its rotting algae and refuse, the south side proved to be of considerable interest, being the richest site found. Here a rock platform steps down southwestwards giving shallow pools and many loose boulders. The area was surprisingly clear of drift algae and other debris and had a diverse algal cover. Small fish were abundant, attracting a successful night-heron. The fauna was the most diverse and abundant of anywhere studied, particularly regarding phyla other than molluscs. Of particular note were sponges, worms and echinoderms, especially several species of starfish and small holothurians. Molluscs included many species not found elsewhere, such as *Lucopinella*, *Lamellaria* and *Berthella*, and the weed-washings were the only sample with more than 10 species present.

PORT HOWARD INLET

Port Howard Inlet is in West Falkland on the northwest side of Falkland Sound. It is almost landlocked, less than 1 km wide and over 12 km long extending northeast and southwest, with an entrance less than 400 m wide halfway along the southeast side. To the west, behind the settlement, the mountains rise to 658 m (Mount Maria), providing shelter from the west and north. The inlet is hidden from the open sea by ridges over 100 m high. This situation is brought about by the trough of the inlet being formed of shale whereas the surrounding higher ground is of quartzite, all being essentially vertical.

The sides of Port Howard Inlet are steep and rocky, with narrow rock platforms in places, the ends flatter with sand, gravel and mussel beds (*Mytilus edulis*) together with *Siphonaria lessoni*. The sands have an infauna of polychaetes, amphipods and bivalve molluscs (galaeommataceans and tellins). The creeks are very sheltered. On the rocks in the brackish parts there occurs *Laevilittorina caliginosa*, in

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a completely different habitat from that on Pebble. Beacuse of the almost constant soputhwesterly winds funnelled up the inlet, the rocky points at Port Howard would normally be classed as moderately exposed. They have little algal cover and a fauna dominated by the limpet *Nacella* and the ribbed mussel *Aulacomya ater*. The rock platforms have a greater diversity of algae, with much *Enteromorpha?*, and a mollusc-dominated fauna, largely *Crepidula dilatata*, trophons and *Pareuthria* with *Siphonaria* above mid-tide being most abundant.

The inlet operates like a lagoon, except that there is no sill. Tides at the north end take up to 9 hours to fall and only 3 hours to come in. The tide range is about 2 m. This, together with the prevalence of southwesterly winds, means that flushing is poor and rubbish remains near its source. Port Howard Creek is rapidly deteriorating owing to pollution, of which domestic sewage is the least problem. The shore is littered with the bones of old unwanted sheep dumped into the inlet, added to by portions of the carcases of sheep and cattle not wanted for consumption being thrown onto the shore. The numerous scavenging kelp gulls, giant petrels and turkey vultures cannot keep up. The people stiil eat the mussels!

SEA LION ISLAND

Sea Lion Island lies some 90 km south of East Falkland. Other than Beauchene Island, it is the most southerly island of the archipelago. It is 8 km long and a maximum of 2.25 km wide, fairly flat but rising to 40 m near the west end. Were it not surrounded by extensive kelp beds Sea Lion's shores would be very exposed indeed. Much of the western part has vertical cliffs, some with rock platforms at the base. There are also beaches with very large boulders and storm beaches. Most of the rock is horizontal flags. The east end is lower with a low neck of sand some 500 m across protected by storm beaches. On each side there are sloping sandy beaches with rocks and the kelp beds offshore. In places the cliffs have rock platforms up to 100 m wide at their bases. The tidal range is little more than 1 m, which means that shore surveying requires calm conditions. The rock platforms on the eastern shores contain pools with a considerable quantity of the smaller algae and a huge number of *Fissurella*. The boulder beaches and rock ledges on the south side, which is very exposed, appear to have a reduced fauna, with chitons and limpets below low-water-mark. *Durvillea* holdfasts contained *Scurria scurria*, a larger version of our *Helcion*. Most of the shells collected here were from strandline deposits.

N.B.: All natural history specimens brought out of the Falklands required an export licence which was easy to obtain for invertebrates and most bits of very dead vertebrates which I also collected. The invertebrates did not need an import licence into the U.K., which confused the customs, the vertebrates did under CITES legislation. All specimens should have been individually named to genus and species while still in the Falklands and numbers of each given (try explaining unsorted shell-sand and weed-washings and undescribed species new to science!). Quite rightly, restrictions on collection and transport of natural material are increasing, and anyone proposing to collect abroad is advised to find out about requirements in advance.

* * * * * * *

Footnote from Hon. Ed.: Shelagh also kindly brought back a few rather fine pycnogonids, all from Pebble Island, which turned out to be *Achelia assimilis* (Little Wreck Point), *Anoplodactylus pygmaeus* (Marble Shanty - a common British species!, not easy to account for even considering the possibilities of ship's-hull transport), and *Achelia communis* and an as yet undescribed species of *Pycnogonum*, both from Settlement Bay.

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NOTICE OF ANNUAL GENERAL MEETING

The 16th Annual General Meeting of **PORCUPINE** will be held at the Central Library, Peterborough, on Sunday 14th March 1993 at 9.30 a.m.

The Agenda will include:

1. Minutes of the 15th Annual General Meeting (published in PORCUPINE NEWSLETTER, Vol.5 No.4)
2. The Hon. Secretary's Report
3. The Hon. Treasurer's Report
4. The Hon. Editor's Report
5. Election of Office Bearers and Council

In connection with Item 5, attention is drawn to the relevant Rules of Procedure:

(2) The maximum and minimum numbers of Members on the Council shall be left open.

(4) The Office-Bearers retire annually and are normally available for immediate re-election.

(5) Council members shall at present serve for three years, at least two retiring each year, who are not normally available for immediate re-election.

(6) Voting shall take place at the Annual General Meeting and shall be restricted to Members present.

(7) Names of persons seeking election to the Council (as chosen by the Council) will appear in a notice prior to the AGM together with an intimation that proposals from ordinary Members of additional candidates are welcome. Candidates must give their assent in person or in writing before voting takes place.

The present Office-Bearers are as follows:

Hon. Secretary	Ian Killeen
Hon. Treasurer	Jon Moore
Hon. Editor	Roger Bamber

The present Council Members are as follows:

Mark Davis	Robin Harvey	Ralph Robson
Iain Dixon	Christine Howson	Dennis Seaward
Frank Evans	Antony Jensen	Martin Sheader
Bill Farnham	Jan Light	Shelagh Smith
Willie Fowler	Ivor Rees	Fred Woodward

Proposals from the floor are welcome.

6. Election of auditors. The present auditor is Nick Light.
7. Future Meetings
8. Any Other Business.

If Members have a point which they wish to have discussed, particularly if they are unable to attend the AGM, please will they contact the Hon. Secretary Ian Killeen.

Porcupine Newsletter, 5 (6), 1992.

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EASTWARD PROGRESSION OF THE LUSITANIAN ISOPOD *SYNISOMA LANCIFER* (DOLLFUS)

Roger Bamber

Synisoma lancifer is an elegant, elongate and distinctive idoteid isopod, distributed from the southwestern coasts of England through western France to the Mediterranean, where it occurs in algae and beneath boulders around low-water-mark. The structure of the pleotelson in particular is sufficiently characteristic that it is most unlikely to be confused with any other idoteid (including its somewhat more widespread congener, *S. acuminatum*); we may therefore assume that recording of this species is accurate. Naylor (1972) records its British distribution as Devon, Cornwall, the Scilly Islands and the Channel Islands. It was thus a pleasant surprise when, earlier this year, Roger Herbert collected two specimens on the Isle-of-Wight, which appear to mark a recent eastward progression of this Lusitanian species. In fact, Ventham (1990) also had a few records of this species from the Brighton (East Sussex) area.

While at the CBRU during the Autumn Meeting I was able to extract the recent records for Cornwall; in addition, Martin Sheader has kindly supplied recent records of his own from the Dorset Coast; all these follow.

CBRU Records:
Occasional, Marazion (SW517303), 24 September 1984, rock, gravel & *Zostera* (coll. Shelagh Smith & Julia Nunn)
1 specimen, Crow Bar, Scilly (SV913136), 6 July 1983 (coll. Dale Rostron & Iain Dixon)
"Few", Trevone-Newtrain Reefs (SW887758), 19 January 1980, weed (coll. Stella Turk)
1, Battery Rocks (SW477297), 1 December 1968; 1, ditto, 12 May 1968; 1, ditto, 11 May 1968 (coll. Stella Turk)
[also ; 1, Lode Island (SX25), 29 March 1914, (MBA, 1957, Anon); ?some, Polperro, 1906; Norman & Scott].

Dorset Records:
Common (males, females and juveniles), Kimmeridge Ledges amongst *Cystoseira*, 8 November 1977

Isle-of-Wight Records:
1, Hanover Point, Isle-of-Wight (SZ379837), 21 February 1992 (coll. Roger Herbert).
1, Horse Ledge, Shanklin, ELWST, 25 September 1992 (coll. Roger Herbert)

Brighton Records (all +0.5 to +1.0 m CD):
1 ♂, Roedean amongst *Fucus serratus*, 28 Dec 1982.
1 juvenile, amongst *Polysiphonia nigrescens*, 3 Nov 1983; 1 ♀, amongst *P. nigrescens*, 28 Sept 1984;
1 ♂, amongst *Cystoclonium purpureum*, 10 Mar 1985; all at Ovingdean.
1 ♂, Saltdean, amongst *Gracilaria verrucosa*, 19 March 1984.

References

Naylor E., 1972. British marine isopods. Synopses of the British Fauna (N.S.) No.3. Linnean Society of London. Academic Press; London, 86pp.

Ventham D., 1990. The shore fauna of Brighton, East Sussex. Vol.1. Cnidaria, Annelida, Chelicerata, Crustacea and Uniramia. Nature Conservancy Council Report CSD 1139, xv + 236pp.

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REQUEST FOR ECHINODERM INFORMATION, MATERIAL ETC.:

We have received a request from Alexey Vladimirovich Smirnov of the Academy of Sciences, St Petersburg, whose interests are the taxonomy of Echinodermata, especially Holothuroidea, Asteroidea and Crinoidea, the zoogeography of Echinodermata, and the history of benthic investigations in the Arctic and Northern Pacific.

"I am interested in working with collections (and identification) of Echinodermata from the Arctic, North Atlantic and from other localities. I would be very grateful for any information about unidentified echinoderm collections in Great Britain and neighbouring countries. I shall also be very grateful to receive specimens of common English echinoderms, especially holothuroids, asteroids and crinoids."

Please contact Alexey at **The Zoological Institute, Academy of Sciences, St Petersburg, 199034, Russia.** Tel: (812) 218-13-11; Fax: (812) 218-29-41; E-mail: ZISP.PM@PCNT.SPB.SU

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RECORDS OF MARINE NEMATODES FROM BRITISH COASTAL LOCALITIES

John F. Southey

4 Yeoman's Avenue, Harpenden AL5 3EQ, U.K.

Between 1961 and 1987, small samples of intertidal beach sand and estuarine sediments were collected from 24 localities during holiday visits around British coasts (Fig.1; Table 1). Sample size varied from *ca* 30 to 70 ml, each made up from at least ten points scattered over the sampled area. Samples were stored in a refrigerator if necessary and processed as soon as possible by stirring in a solution of proprietary "sea salt" made up to roughly average sea-water strength, settling for *ca* 15 seconds and decanting, repeating once or twice, then allowing nematodes and other supernatant material to settle. The volume was reduced by further careful decantation or aspiration, the suspension transferred to a glass tube and the nematodes heat-killed (65°C) by placing the tube in a water bath. Nematodes were fixed either by picking them out into TAF or 4% formaldehyde, or bulk-fixed by adding double-strength fixative to the suspension (Hooper, 1986). Most were permanently mounted in anhydrous glycerol, usually by the "slow" method (Hooper, 1986). However, some were stored in fixative and specimens kept in TAF for more than about 10 years were found to be badly deteriorated. The collection comprises 122 slides deposited in the Zoology Department, Natural History Museum, South Kensington, London.

Identifications were made using Platt & Warwick (1983, 1988 and in prep.), extending the search to original literature where specimens appeared not to fit any of their descriptions. Some specimens could not be identified to species, or even to genus, because of damage, poor condition or absence of adult stages (especially males).

Species identified, with localities, are listed in Table II. Many of the records are extensions of the published distribution of the species, although some are already known to be common on British Shores generally. One, *Paracyatholaimus proximus*, is believed to be a new record for the British Isles.

Acknowledgements: I am grateful to Dr H.M. Platt and staff of the nematode section, Zoology Department, Natural History Museum for laboratory bench space and facilities for the identifications during the visits between 1987 and 1990, to them and to Dr Richard Warwick (PML) for help with several difficult identifications, to the Biological Records Centre, Monks Wood, for copies of their base

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map and to my neighbour Peter G. New for his patience in word-processing my lists of slides, nematode names and locality data. Roy Neilson of the Scottish Crop Research Institute, Invergowrie, kindly types the manuscript.

References

Hooper D.J., 1986. Handling, fixing, staining and mounting nematodes. *In:* J.F. Southey (Ed.), Laboratory Methods for Work with Plant and Soil Nematodes, 6th Edition; London H.M.S.O., pp 59-80.

Platt H.M. & Warwick R.M., 1983. Freeliving marine nematodes. Part I. British Enoplids. Cambridge University Press, 307pp.

Platt H.M. & Warwick R.M., 1988. Freeliving marine nematodes. Part II. British Chromadorids. Leiden, E.J. Brill, 502pp.

Platt H.M. & Warwick R.M. (in prep). Freeliving marine nematodes. Part III. British Monhysterids.

TABLE 1. LIST OF SAMPLING SITES

Locality	O.S. National Grid Reference (1 km²)
ENGLAND	
Titchwell Beach, Norfolk	TF7544/5
Beach south of Winterton, Norfolk	TG5018
Walton-on-the-Naze, Essex	TM2521/2
Osea Island (S.W. beach), Essex	TL9106
Bosham, Chichester Harbour, Sussex	SU8003
Fishbourne, Isle-of-Wight	SZ5593
Seagrove Bay, Seaview, Isle-of-Wight	SZ6390/1
Shanklin (north beach), Isle-of-Wight	SZ5881
Studland, Dorset	SZ0382
Sandy Bay, Exmouth, Devon	SY0379
Carne Beach, Veryan, Cornwall	SW9038
St Anthony-in-Roseland, Cornwall	SW8532
Poldhu Cove, Mullion, Cornwall	SW6619
Porthgwarra, nr Land's End, Cornwall	SW3721
Polzeath, Cornwall	SW9379
Crantock Beach, Newquay, Cornwall	SW7861
Bude (mouth of estuary), Cornwall	SS2006
Shore by Harkness Rocks, N. of Bamburgh, Northumberland	NU1735
WALES:	
Lydstep Haven, nr Tenby, Dyfed	SS0998
Newgale, Dyfed	SM8520
Whitesand Bay, nr St Davids, Dyfed	SM7327
Criccieth (east beach), Gwynedd	SH4937
SCOTLAND:	
Iona (northeast beach), Strathclyde	NM2925
Portuairk Beach, Sanna Bay, Ardnamurchan, Highland	NM4368

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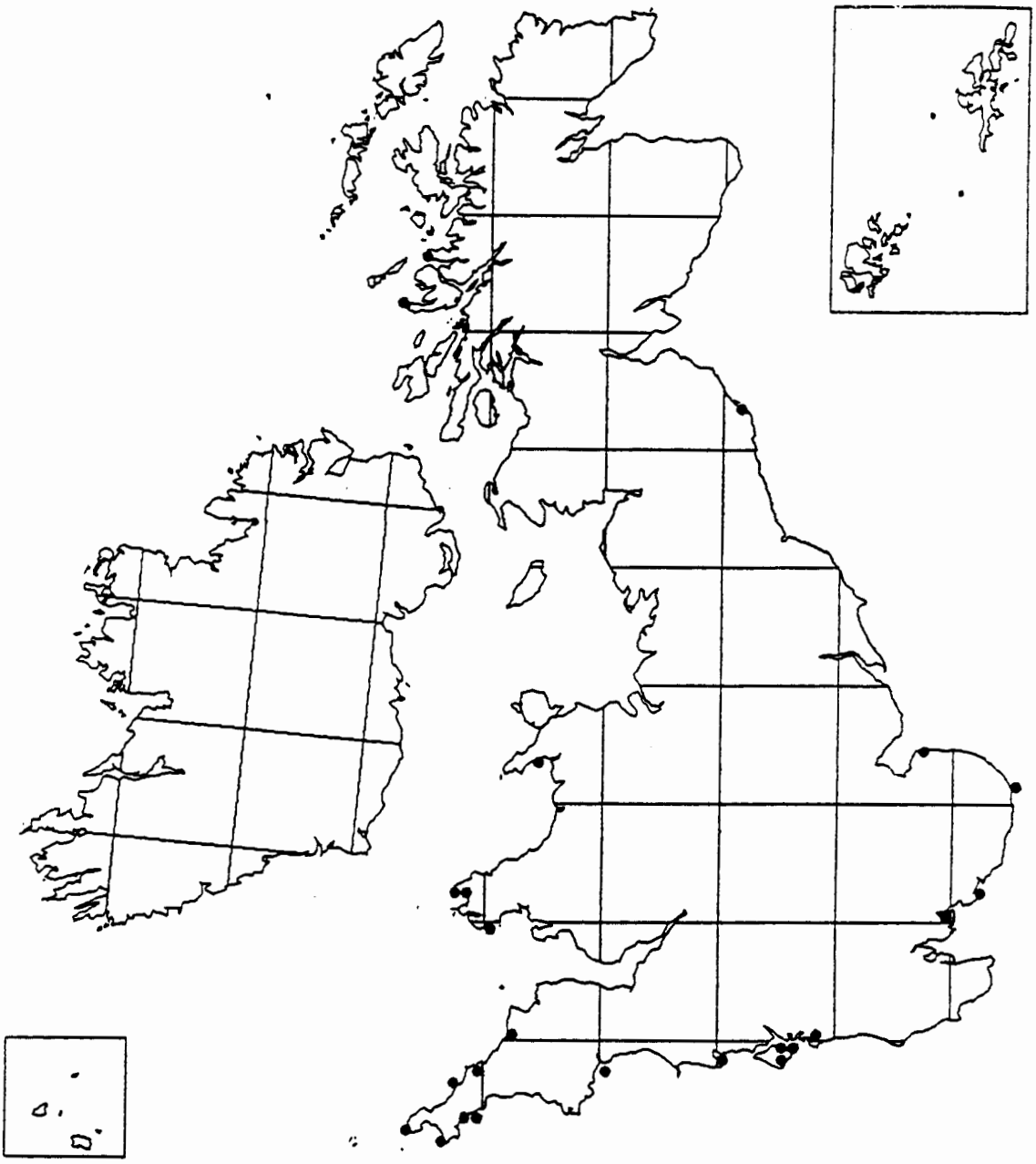

FIGURE 1. Distribution of marine nematode sampling locations on a 10 km square basis.

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TABLE II

Records of marine nematodes from intertidal samples from British coasts.
[(?) = identification tentative owing to inadequate material]

Species	Localities (see also Table I)	Habitat	Comments
CHROMADORIDA			
Chromadora nudicapitata Bastian	St Anthony-in-Roseland, Cornwall	Fine sand	Very common species (Platt & Warwick, 1988)
	Ardnamurchan, Highland	Beach sand	
Desmodora (?) communis Bütschli	Bosham, Chichester, Sussex	Intertidal mud	Common in Britain (Platt & Warwick, 1988)
Dichromadora hyalocheile De Coninck & Stekhoven	Titchwell, Norfolk	Beach sand	
	Veryan, Cornwall	Sand from rock pool	
	Polzeath, Cornwall	Beach sand	
	Newquay, Cornwall	Beach sand	
	Bamburgh, Northumberland	Sand among rocks with seaweed	
	Iona, Strathclyde	Beach sand	
Euchromadora vulgaris Bastian	Fishbourne, Isle of Wight	Muddy sand	Very common species (Platt & Warwick, 1988)
Hypodontolaimus balticus (Schneider)	Bosham, Chichester, Sussex	Intertidal mud	
H. schuurmansstekhoveni Gerlach	St Anthony-in-Roseland, Cornwall	Fine sand	
Monoposthia costata (Bastian)	Titchwell, Norfolk	Beach sand	
M. mirabilis Schulz	Osea Island, Essex	Muddy sand	
	Titchwell, Norfolk	Beach sand	
Neochromadora poecilosoma (De Man)	Bosham, Chichester, Sussex	Intertidal mud	
Nudora bipapillata Platt	Ardnamurchan, Highland	Beach sand	Previously only from Tamar Estuary, SW England
Paracyatholaimus proximus (Bütschli)	Bosham, Chichester, Sussex	Intertidal mud	New British Isles record
Praeacanthonchus punctatus (Bastian)	Bosham, Chichester, Sussex	Intertidal mud	
	Fishbourne, Isle of Wight	Muddy sand	
Sabatieria pulchra (Schneider)	Bosham, Chichester, Sussex	Intertidal mud	
Sigmophoranema rufum (Cobb)	Sandy Bay, Exmouth, Devon	Beach sand	
	Walton-on-the-Naze, Essex	Beach sand	
Southernia zosterae Allgén	Ardnamurchan, Highland	Beach sand	
Spilophorella paradoxa (De Man)	Iona, Strathclyde	Beach sand	
ENOPLIDA			
Adoncholaimus fuscus (Bastian)	Osea Island, Essex	Muddy sand	
	Fishbourne, Isle of Wight	Muddy sand	
Anoplostoma viviparum (Bastian)	Bosham, Chichester, Sussex	Intertidal mud	
	Ardnamurchan, Highland	Beach sand	
Enoploides longispiculosus Vitiello	Fishbourne, Isle of Wight	Muddy sand	
Enoplolaimus litoralis (Schulz)	Winterton, Norfolk	Beach sand	
	St Anthony-in-Roseland, Cornwall	Fine sand	

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TABLE II (CONT/D)

Species	Localities	Habitat	Comments
E. propinquus De Man	Seaview, Isle of Wight Shanklin, Isle of Wight Bamburgh, Northumberland Newgale, Dyfed Iona, Strathclyde Ardnamurchan, Highland	Beach sand Beach sand Sand among rocks with seaweed Beach sand Beach sand Beach sand	
Enoplus quadridentatus Berlin	Ardnamurchan, Highland	Beach sand	Previously only from the Isles of Scilly
Mesacanthion hirsutum Gerlach	Shanklin, Isle of Wight	Beach sand	Previously only from Exe Estuary, Devon
Oncholaimus brachycercus De Man	Bosham, Chichester, Sussex Fishbourne, Isle of Wight Ardnamurchan, Highland	Intertidal mud Muddy sand Beach sand	
O. oxyuris Ditlevsen	St Anthony-in-Roseland, Cornwall	Fine sand	
Rhabdocoma (?) riemanni Jayasree & Warwick	Seaview, Isle of Wight	Beach sand	Previously only from Firth of Clyde, Scotland
Trippyloides gracilis Ditlevsen	Bosham, Chichester, Sussex	Intertidal mud	
Trissonchulus benepapillatus (Schulz)	Winterton, Norfolk	Beach sand	Previously only from Exe Estuary, Devon
Viscosia viscosa (Bastian)	Fishbourne, Isle of Wight	Muddy sand (tidal creek)	Very common in low salinity areas (Platt & Warwick, 1983)
MONHYSTERIDA			
Ascolaimus elongatus (Bütschli)	Studland, Dorset Fishbourne, Isle of Wight Bamburgh, Northumberland Iona, Strathclyde Ardnamurchan, Highland	Beach sand Muddy sand Sand among rocks with seaweed Beach sand Beach sand	
Axonolaimus spinosus (Bütschli)	Bosham, Chichester, Sussex	Intertidal mud	
Daptonema (?) biggi (Gerlach)	Criccieth, Gwynedd	Beach sand	Damaged specimen
D. (?) normandicum (De Man)	Bamburgh, Northumberland	Sand among rocks with seaweed	Widely distributed in British Isles (Platt & Warwick, in prep.)
D. (?) oxycerca (De Man)	Bosham, Chichester, Sussex	Intertidal mud	
D. setosum (Bütschli)	Bosham, Chichester, Sussex Fishbourne, Isle of Wight Ardnamurchan, Highland	Intertidal mud Muddy sand Beach sand	Widespread in British Isles (Platt & Warwick, in prep.)
Sphaerolaimus balticus Schneider	Bosham, Chichester, Sussex	Intertidal mud	
S. hirsutus Bastian	Fishbourne, Isle of Wight	Muddy sand	Widespread (Platt & Warwick, in prep.)
Therristus (?) acer Bastian	Porthgwarra, nr Lands End, Cornwall	Beach sand	Common species (Platt & Warwick, in prep.)
T. pertenuis Bresslau & Stekhoven	Ardnamurchan, Highland	Beach sand	
T. heterospiculum (Allgén)	Winterton, Norfolk	Beach sand	Previously in Isles of Scilly only
T. longus Platt	Polzeath, Cornwall	Beach sand	Previously from Northern Ireland only
T. (?) otoplanobius Gerlach	Lydstep Haven, Dyfed	Beach sand	Previously from Exe Estuary only
Xyala (?) striata Cobb	Newquay, Cornwall.	Beach sand	

RECORDS OF *CANCERILLA TUBULATA* (DALYELL) FROM THE NORTH EAST COAST

Debbie Evans & Judy Foster-Smith

Dove Marine Laboratory (University of Newcastle upon Tyne), Cullercoats, Tyne & Wear NE30 4PZ

In response to the call for information on the parasites of *Amphipholis squamata* (Porcupine Newsletter, Vol.4 (9), 'Notices' p.211) we made a point of looking out for the ectoparasite *Cancerilla tubulata* (Dalyell) during a brief study of the winter populations of this brittlestar on the Northumberland coast.

The copepod *C. tubulata* is described in Sars (1918: Crustacea of Norway, 6). Male and female are strongly dimorphic, the male being much more slender than the short, stout female. The males are generally free-swimming while the females, once attached to a host, tend to remain there for life. They can be found clasped to the arm base on the ventral surface of the *A. squamata* and are easily observed under the binocular microscope without the need for dissection of the brittlestar.

650 individuals of *A. squamata* were examined from four different sites on the north east coast between November 1991 and January 1992 - Newton-by-the-Sea (NU248255) [147], Amble (NU0492740 [176], Cullercoats (NZ366716) [312] and Staithes (NZ191783) [15]. Of these, only two were found to be parasitized by *C. tubulata*. In both cases the parasites were female and with heavily laden ovisacs. The brittlestars which were infected were both gravid and were of disc diameters 2.05 mm and 3.00 mm. Both were from Newton-by-the-Sea.

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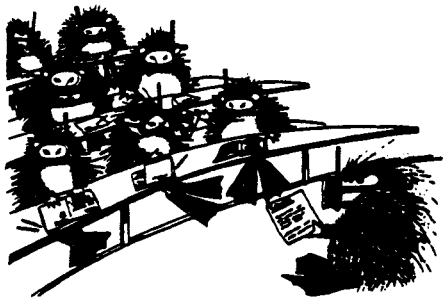
FUTURE MEETINGS



The 1993 Spring Meeting and 16th Annual General Meeting will be held on 13-14 March 1993 at the Central Library, Peterborough.

The meeting has the theme of **"Coastal and inshore marine communities: Conservation and Coastal Management"** and will be hosted jointly by the Marine Nature Conservation Review of the Joint Nature Conservation Committee (JNCC) and the Marine Habitats Branch of English Nature. We hope to cover topics on community classification, mapping of inshore habitats and the new EC funded BioMar survey of Ireland.

If you would like to offer a paper or poster, particularly on the subject of the meeting's theme, please contact David Connor on 0733 62626.

The first circular for the meeting is enclosed with this Newsletter. Please complete this if you wish to attend and want further details sent to you in the New Year. Peterborough may not be close to the sea, but we do not anticipate a totally "dry" weekend!