

# Porcupine Newsletter

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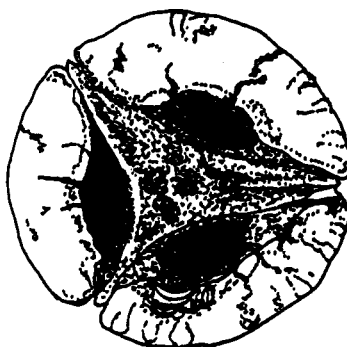
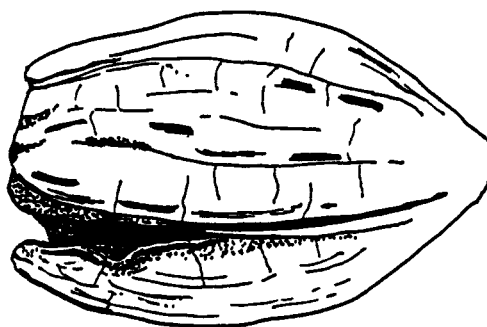
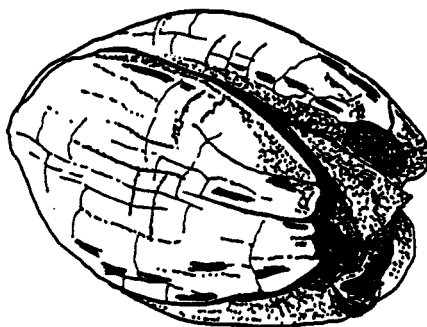


**STOP PRESS:** Don't forget, your 1989 Membership Fee was due on January 1st. Membership remains at £5.00.  
The Annual General Meeting is on April 2nd (see p.72).



*ATTALEA FUNIFERA* SUPPLEMENTARY

Readers will recall the article by Gerhard Cadée on *Attalea funifera* Mart. seeds in the previous NEWSLETTER (PN 4 [3], 51-54). Three 7 to 8 cm long seeds of this tropical palm were reported from the Dutch coast, and the author originally enclosed a photograph to illustrate the article. Unfortunately, reproduction of the photograph was inadequate for publication. We are therefore pleased now to be able to publish a figure of one of the seeds, drawn by Gerhard's wife.



*Attalea funifera*

*Attalea funifera* seed from the beach of Texel, the Netherlands.  
Drawing by J. Cadée-Coenen. Addition to Cadée G.C. (1988);  
PORCUPINE NEWSLETTER, 4 (3); 51-54.

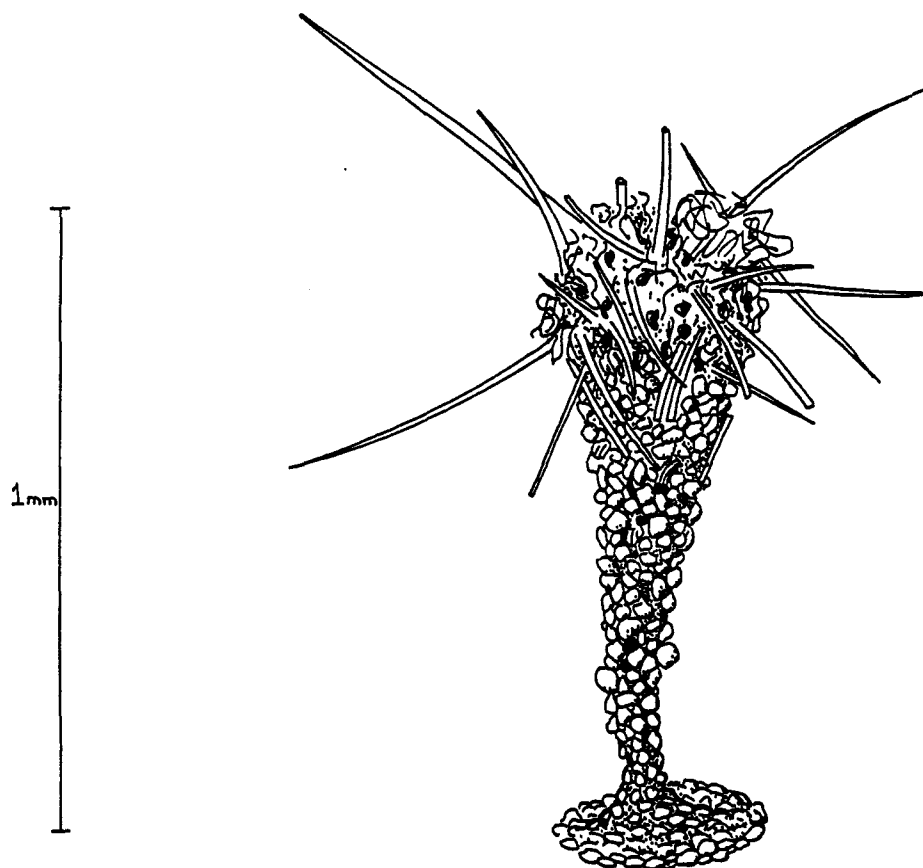
Porcupine Newsletter, 4 (4), 1989.

## THE WONDROUS *HALIPHYSEMA TUCMANOWICZI*

by R.L. Manuel

Department of Zoology, South Parks Road, Oxford, OX1 3PS

Do you ever get the feeling that you have been missing something? Well, in my case it was *Haliphysema tucmanowiczi*.... Admittedly it took years of experience, splashing around in the sea, admiring nature's rich bounty, collecting divers animals (sorry about that) before I started to notice it.



R.L.M.

*Haliphysema tucmanowiczi*

Now what, you are asking yourselves, whilst desperately wondering how to pronounce it, is *H. tucmanowiczi*? 'It' is a foraminiferan - a member of that great phylum (?)/subkingdom (?)/kingdom (?) Protozoa, which for most zoologists and the NCC only exist in books, never in real life. *H. tucmanowiczi* was first described by Bowerbank who thought it was a sponge (but then he thought everything was a sponge). It is not one of those tiny calcareous creations that look like transistorized snails but an 'arenaceous' foram - covering its nakedness with bits of sand, sponge spicules and other crud. Presumably there is some kind of class distinction involved here as *H. tucmanowiczi*, to my mind the commonest inshore foraminiferid, is omitted from Murray's British Nearshore Foraminiferids (1979).

Porcupine Newsletter, 4 (4), 1989.

I first noticed its tiny but prominent clusters attached to rock faces in sublittoral Pembrokeshire (Dyfed to pedants) and, by chance, happened to have a copy of Nellie Eales' excellent Littoral Fauna of Great Britain available to help me identify it. This seems to be the only work on marine life to admit the existence of *Haliphysema*, although it appears in Plymouth Marine Fauna (1957). Subsequently I started seeing it almost everywhere I looked, on west, south and east coasts, even on other people's photo's. It can be very abundant in the shallow sublittoral, especially in kelp forests where it encrusts the holdfasts and the gaps between the kelps' toes. Individuals tend to form clusters of tens, hundreds even, which makes the animal fairly conspicuous once recognised.

The  $\pm$  1 mm height body is sort of wine-glass shaped with a sand-encrusted stem flaring out to a broad attachment disc. The head has a spiky punk hair-do of long sponge spicules with an undergrowth of fluffy silty flock. Apparently, when the animal is switched on a halo of fine anastomosing pseudopods (reticulopodia) surrounds the head. Under a low power microscope, the spiny appearance strongly suggests some affinity with another frequently overlooked species, *Thalassiohystrix scuba*, albeit smaller by an order of magnitude.

So, for a protozoan, *H. tucmanowiczii* is pretty distinctive and easily large enough to be recognised by the unaided eye. Why then has it gone unsung for so long in the testaments of biological surveys? Surely someone else must have noticed it occasionally, or has it even evaded Hawkeye Picton?

There is not truth in the rumour that *H. tucmanowiczii* exists only before noon on April 1<sup>st</sup>.



#### FURTHER ON THE *ZOSTERA* OF STANSWOOD BAY by Roger Bamber

The feedback from my request for recent information on *Zostera* in the Solent (PN 4 (1)) was largely of the "also requiring information" kind, and with the apparent lack of data corroborating my own hunt at the historic *Zostera* site, I published last year the disappearance of this plant from the Bay (Bamber & Stockwell, 1988). It was of course inevitable that I should subsequently rediscover a bed of *Zostera marina* at LWMST in the Bay last October, though far removed from the original site.

Unfortunately the good low spring tides have since been in the dark, so to date I have only determined an area of some 600 m<sup>2</sup> of eel grass. This bed is archetypically grazed by brent geese (*Branta bernicla*), and colonised by *Lacuna vineta* and the tubicolous *Erichthonius punctatus*; better yet, it also supports the rare hydroid *Laomedea angulata* (see Cornelius, 1982), though only two very small colonies so far. This is evidently a recent stand of *Zostera*, and not only would I still appreciate recent data on eel grass in this area, but also ideas on how to age the stuff - cut the rhizome and count the rings?

#### References:

- Bamber R.N. & Stockwell T., 1988. The littoral sedimentary fauna around Fawley. CEGB Internal Report L/3291/R88.  
 Cornelius P.F.S., 1982. Rediscovery in Britain of the hydroid *Laomedea angulata*. A request for records. P.N. 2(5); 113-117.

## NOTICE OF ANNUAL GENERAL MEETING

The 12<sup>th</sup> Annual General Meeting of PORCUPINE will be held at Lancaster University on Sunday 2nd April 1989 at 09.30 a.m.

The Agenda will include:

1. Minutes of the 11th Annual General Meeting
2. Hon. Secretary's Report
3. Hon. Treasurer's Report
4. Hon. Editor's Report
5. Hon. Records Coordinator's Report
6. Election of Office Bearers and Council

In connection with Item 6, 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 AGM 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 Office Bearers available for re-election are as follows:

|                          |                |
|--------------------------|----------------|
| Hon. Secretary           | Martin Sheader |
| Hon. Treasurer           | Antony Jensen  |
| Hon. Editor              | Roger Bamber   |
| Hon. Records Coordinator | Jonathan Moore |

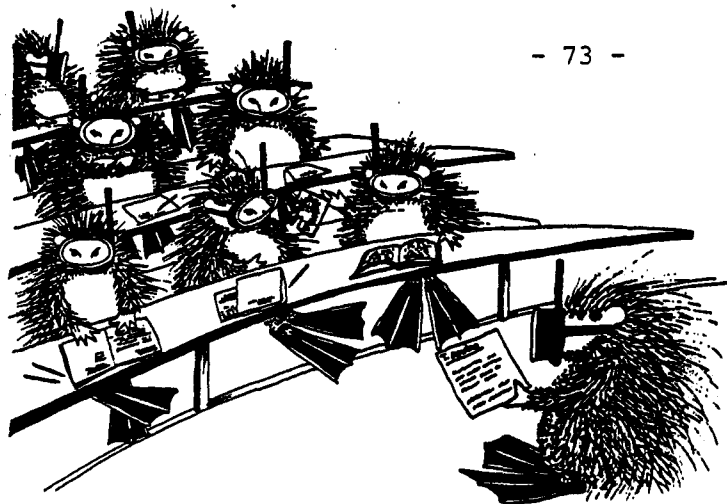
The present Council Members are:

|               |                 |
|---------------|-----------------|
| Iain Dixon    | Ivor Rees       |
| Frank Evans   | Ralph Robson    |
| Bill Farnham  | Dennis Seaward  |
| Robin Harvey  | Shelagh Smith   |
| David Heppell | Brenda Thompson |
| David Lampard | John Wilson     |
| Jan Light     | Fred Woodward   |

Proposals from the floor are welcome.

7. Election of Auditors
8. Future Meetings
9. 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. Sec. Martin Sheader.

\*\*\*\*\*



## FUTURE MEETINGS

The 1989 PORCUPINE Spring Meeting is being held at The University of Lancaster on the weekend of 1st and 2nd April 1989 on the theme "THE IRISH SEA". Accommodation and catering are available at the University from the evening of Friday 31 March, and the Conference Dinner is arranged for the Saturday night.

### Programme:

- Sat. 1st:
- Bob Williams - 'The Irish Sea - the PML programme'
  - Hubert Rees - 'Benthic studies at a dredge spoil site in Liverpool Bay'
  - Antony Jensen - 'Bioturbation processes in the North-East Irish Sea'
  - Martin Preston - 'Waste input and pollution in the eastern Irish Sea'
  - Eric Perkins - 'Colliery waste off the Cumbrian Coast'
  - Elizabeth Lake - 'Fouling on Morecambe Bay platforms'
  - Peter Dare - 'Underwater TV and 35 mm camera surveys of scallop grounds'
  - Steve Hutchinson & Lawrence Hawkins - 'Stress monitoring of benthic bivalves'
  - Bill Cook - 'Lobster stock enhancement in Cardigan Bay'
- Sun. 2nd:
- Joanna Kain - 'Kelp farming in the Irish Sea'
  - Stuart Rogers - 'The ecology of juvenile flatfish in the eastern Irish Sea'
  - Ivor Rees - 'Patterns of acoustic scattering layers at the margins of stratified waters'
  - Duncan Jackson - 'Monitoring of radionuclides in the Irish Sea'
  - David Massey - 'Landward sources of threats'

For further details, contact Dr Shelagh Smith, Woodleigh, Townhead, Carlisle, Cumbria CA4 9JH (Tel. 0228 70676) or the Hon. Sec..

\*\*\*\*\*

## Summer 1989 Field Meeting

A PORCUPINE Field Meeting, based at the Dove Marine Laboratory, will take place on 20th and 21st of July, running into the weekend as necessary. Using Newcastle University's vessel M.V. *BERNICIA*, the participants will be studying an offshore site off Northumberland known as 'The Trink'. This site, some 10 km east of Cresswell, comprises an unusual and understudied habitat of sublittoral (Ca. -20 m) boulders on soft-sediment, supporting a dense and diverse epifauna. Previous samples from the site have contained species very rarely recorded in British waters (for example see PN 1 [5], p.88): it is ideal for a concerted investigation by the combined expertise of PORCUPINE.

Field sampling is planned for the Thursday and Friday; the material from the samples will be available at the weekend for intending participants unable to be present during the week. Numbers of people able to go out on the boat work may be limited.

Enquiries to Frank Evans, Dove Marine Laboratory, Cullercoats, Tyne-and-Wear NE30 4PZ.

## MORE ON JANTHINA

by Fred Woodward  
Art Gallery & Museum, Kelvingrove, Glasgow G3 8AG

Following my recent paper in PORCUPINE NEWSLETTER (Vol 3 [9], 244-246) on British voucher material of *Janthina* in the collections of Glasgow Museums, the following two additional lots have come to my notice.

1. *Janthina janthina* (Linnaeus)  
Three examples, formerly mounted on a wooden tablet ex Zoology Displays, and presumably from the Alexander Sommerville Collection, registration number Z 1946-14- (sic)

These are labelled: "Blind snails of the Sea. Janthina rotundata Leach. Drifted, surface feeders. Hayle."

Their dimensions (mm) are:

|         | A     | B    | C    |
|---------|-------|------|------|
| Height  | 19.75 | 19.4 | 18.5 |
| Breadth | 24.0  | 22.6 | 22.2 |

The date of collection of this material is unknown, but presumably the second half of last century. A Miss Hockin collected material of this species at Hayle in November and January pre-1900, this being recorded by J.T. Marshall in 1900 in the Journal of Conchology (Vol.9, p.338). The present material is in all probability from this source (i.e. 'Miss Hockin via J.T.Marshall').

2. *Janthina janthina* (Linnaeus)  
Three examples from amongst material purchased from A. Moncur in 1985, registration number Z-1985-192-651.

These are labelled "J. planispirata Sennen July 10 '47."

Their dimensions (mm) are:

|         | A    | B     | C     |
|---------|------|-------|-------|
| Height  | 10.0 | 8.5   | 7.5   |
| Breadth | 12.0 | 11.25 | 10.25 |

There is no reference to the collector, but it would be reasonable to assume, from the date and locality, that this material forms part of the collection made by T.G.W. Fowler and referred to in the Journal of Conchology Vol. 22 (p.267).



## NOTICES

1. "SHERKIN ISLAND MARINE STATION is a small, privately funded Marine Station. We need to build up our library of reprints, journals, reports, etc.. We would like to hear from anyone who would like to have a good home for any duplicate material that they may have available." Contact Matt Murphy, Director, Sherkin Island Marine Station, Sherkin Island, Co. Cork, Ireland (Tel: 028 20187).

['Sherkin Comment' is the latest publication to originate from Matt's Station: the 1<sup>st</sup> edition of this "Newspaper of Sherkin Island Marine Station" appeared in Autumn 1988, price 50p. Keep up the good work, Matt.]



2. **UNDERWATER ASSOCIATION SYMPOSIUM**: Advances in Diving Research, the Symposium '89, will be held at The Zoological Society, London on Friday 17<sup>th</sup> and Saturday 18<sup>th</sup> March 1989 between 10.00 and 18.00 hrs, presenting a wide-ranging series of lectures including a special session on diving and decompression. For information and registration forms contact Dr S. Rogers, Fisheries Laboratory, Benarth Road, Conwy, Gwynedd LL32 8UB (Tel: 0492 593883).

3. **FIELD STUDIES COUNCIL RESEARCH CENTRE (FSCRC)**, formerly known as OPRU, is now (since 22 September 1988) based at Fort Popton, Angle, Pembroke, Dyfed SA71 5AD. Tel: 0646 641404.

4. **SIMILARLY, THE FORMER ANGLIAN WATER** Marine Laboratory of Elsham, South Humberside (see "Around the Marine Labs" No. 15; PN 3, p.207) has moved again, to become: Marine Biology Laboratory, Anglian Water NRA Unit, Aqua House, Harvey Street, Lincoln LN1 1TF. Tel: 0522 513100 x 179 & 178.

## Letters to the Editor



The British Museum (Natural History) has recently given its staff all back copies of the BMNH Bulletin up to about the end of 1983. Many staff therefore now have numerous copies of their works for disposal. For example, I now have the following:

|                  |  |
|------------------|--|
| Vol. 28 (Part 6) | <i>Obelia</i> 1975, 150 copies                             |
| Vol. 28 (8)      | Lafoeidae & Haleciidae 1975, 150 copies                    |
| Vol. 34 (6)      | Sertulariidae 1979, 150 copies                             |
| Vol. 39 (5)      | Coelenterates described by Joshua Alder, 1980, 100 copies. |
| Vol. 42 (2)      | Campanulariidae 1982, 150 copies.                          |

The normal total selling price for these five would be about £40. Researchers interested in relevant fields are welcome to request them; please give some brief justification - they are bigish items - and please do not request copies for institutions. The BM(NH) has asked that its mailing facilities are not used for this purpose since the total bill for the Museum for the publications of all authors together would be extremely high. I cannot afford it either! So please request what you wish - duplicate copies if useful. I shall let you know what the postage will be and send the items when I receive it. Those coming to the Spring meeting of the Coelenterate Group or to the Southampton International Conference on Coelenterate Biology can collect them from me there by prior arrangement.

Paul Cornelius  
Department of Zoology, British Museum (Natural History), London SW7 5BD. (01 938 9453).

Porcupine Newsletter, 4 (4), 1989.

## OBITUARY

It was with deep sadness that we learned of the death of Dr Norman A. Holme on the 10<sup>th</sup> January. That rare combination of experienced ecologist and natural historian, Norman Holme was born in 1926 in the West Country. In 1945-47, while still an undergraduate, he worked at the Marine Biological Association's Plymouth Laboratory on molluscs and crustaceans, and began a quantitative survey of the ecology of the Exe Estuary, thence extending his benthic infaunal work to the sea bed off Plymouth, where comparisons with previous quantitative studies were possible. Norman joined the staff of the M.B.A. Laboratory in April 1949 to allow continuation of this work, which was extended to other Bays in the western Channel; ultimately he surveyed the benthos over most of the English Channel during his 38 years service to the MBA. In his earlier years at Plymouth he took part in the administration of the Laboratory, first as editorial assistant on the Journal and then as Bursar.

Norman Holme was well known for his practical approach in devising new quantitative methods for studying the benthos, such as the Holme scoop sampler. He improved the small dredges and trawls, and helped other members of the MBA staff in development of new benthic gear. He also devised photographic and televisual methods of assessing the epifauna to allow quick evaluation of the benthos: he hoped that this would form the basis for a new time-series to illustrate changes in marine life related to water movements, climate fluctuations and pollution. Active work in this field effectively ceased with his early retirement in October 1987. He was very interested in coastal and marine conservation, serving on several West Country committees devoted to this end, and being Chairman for some years of the Devon and Cornwall branch of the Institute of Biology. In the 1970's he was involved in NCC-funded surveys of the British coasts. Norman was also an expert on the taxonomy of the bivalve molluscs, and his knowledge of this group will be missed at Plymouth, as will his interest in and positive contribution to PORCUPINE, as well as the Conchological and Malacological Societies and other natural history associations.

Norman was present at the inaugural meeting of PORCUPINE in February 1977 (chairing the second session), and, with Charles Pettitt, took on the significant (and onerous) task of Honorary Auditor, which role he fulfilled most capably until February 1983, when he changed hats and was elected to Council. At the 11<sup>th</sup> Annual General Meeting in March 1988, he retired from Council, and was unanimously elected as our 3<sup>rd</sup> Honorary Member.

Norman was physically a big man who enjoyed field work, but he was not as strong as he looked, and several times in his career he had to fight against serious illness. At sea, after he gave up smoking, he was noted for the way he kept up his strength with mint toffees, tea and sweet biscuits. After his retirement, which was partly forced upon him by ill-health, he intended to devote more time to the writing of a book on marine conservation; it is hoped that this may be completed by Kieth Probert, who worked with Norman in St Austell Bay.

\* \* \* \* \*

## REPORT OF THE PORCUPINE AUTUMN MEETING

by Roger Bamber

As MEMBERS will be aware, the 1988 Autumn Meeting evolved to a field meeting based at Ipswich Museum (not a field!), over the weekend of October 29<sup>th</sup>-30<sup>th</sup>, supported by the normal small (11) but select band of intrepid Members, spouses, etc.. The lot of reporting the meeting has fallen to me. A diverse and complementary range of expertise was present, from plants and plankters to polychaetes, pycnogonids and pbirds (not to spoil an alliteration - should I mention pints as well?).

The masses assembled on the Friday (28<sup>th</sup>) at the Rose & Crown, or rather a moving seven did (mean sample size 4.75!), what with prior and post-sampling of the Greek and Indian influences of the town. Saturday morning was more entertaining, when we met at the Museum for the local amusement of "coffee making".

And so down to the serious stuff, as we sped away to Shingle Street to investigate the brackish lagoons. For overall convenience, the locations visited during the weekend are shown as Fig.1 (1A Saturday, 1B Sunday). Lagoons 1 to 3 were examined in the morning, as was the unusual local topography; those present with NCC affinities were careful to inform us of species which may be protected by a £2000 fine. Other entertainment was gleaned from gazing down the portable refractometer (which developed into a 'guess the salinity' competition), or photographing unfortunate colleagues at the moment of their assuming an indelicate pose in order to collect or sieve a sample! A timely adjournment was made to the pub in the village: alas, having instigated the idea and then shot off, I had forgotten that there were two pubs! The party scientifically sampled both sites, before gathering at The Fox (*Vulpes* indet.) to discuss why so many venues were offering swordfish (*Xiphias gladius*), and how our morning's sampling had missed it.

Thence we returned to the southern Shingle Street lagoons 4 to 7. Dick Hamond decided to guard the vehicles (≡took his afternoon nap, not without envy), while the rest of us experienced a greater diversity of salinity (34 - 16‰) and vertebrates (of water vole [lagoon 4], swan [lagoon 7] short-eared owl and skua varieties); even a high density of planktonic copepods was found [lagoon 7] to keep Frank Evans happy. Much conjecture and deep scientific debate ensued over the 'kamikaze grebes', which were observed at certain ponds, when flushed from the margin, to swim out into the middle of the lagoon, then dive and disappear, never to be seen again: the favourite theory assumed them to be stuck headfirst in the bottom mud. We returned to the nearby tidal creeks to admire the sunset (*var rubrum*) and barn owl, and despite raptures over the extent of intertidal mud and dripping marsh, no sampling ensued.

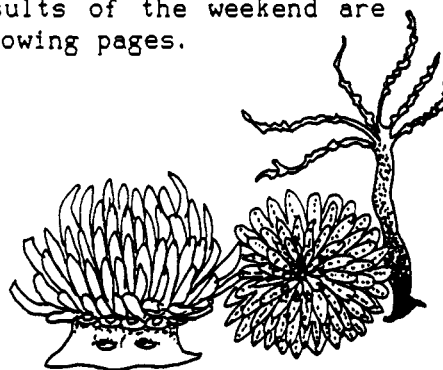
The party returned to the Museum, some of us at least getting lost in the town on the way (and not only once!); the coffee-making ritual seemed to work much better this time, and we were all able to enjoy Frank Evans' videos, including by great demand another showing of his early transatlantic expedition. It was during our evening's invasion of the Golden Panda (?*Ailurus auratus*) Chinese Restaurant, wherein the seaweed was of course particularly appreciated, that Fred Woodward joined us.

Sunday morning found us speeding directly to Aldeburgh to catch the low tide (not a problem with these brackish ponds). The party frolicked about the local salt marsh and delved into its pools; Fred Woodward was to be seen on his knees collecting spiders (a terrestrial group of no relation to larger marine 8-legged beasts), and Martin Sheader eventually risked wandering about on the muddy beach below the marsh while the rest of us were content to let him collect for us. We enlarged the diversity of sampled habitat by proceeding to the adjacent fucoid-covered boulder shore (with added hydroids) and thence to the drainage ditches on the inshore side of the shingle bank (more interesting than expected), before Fred, Frank and Dave Lampard had to depart in deference to the train schedules ("Time, tide and trains wait for no Porcupine...etc."). Amid suspicion and veiled protest, I relentlessly led the remainder of our party many a kilometre along the shingle bank backing Sudbourne Beach to lagoon 8, possibly the finest of the weekend, with its many breeding opisthobranchs, amphipods, algae, *Ruppia* and its eel. Anna Sheader helpfully noted the departure of the Gothenburg ferry at 11.30 hrs.



Thence we proceeded to The Victoria at Aldeburgh for much constructive lunchtime conversation, particularly with Dick Hamond and Sarah Fowler swapping anecdotes of the Antipodes. And so we went our various ways, committed to identifying and reporting back on the various samples and species collected or observed, Frank Evans with his copepods, Martin and Anna Sheader with their plastic bags, I with my jars, and Dave Connor with his ?*Molgula*. Also, not forgetting various people with their photographic record, which we will hopefully enjoy at some future Meeting unless they are required for blackmail purposes.

As ever a good and fruitful time was had by all, and the available ecological and biogeographic results of the weekend are reported in a more serious vein in the following pages.



THE FAUNA OF LAND-LOCKED LAGOONS AND SALTMARSHES  
- ALDEBURGH TO SHINGLE STREET

Martin Sheader & Roger Bamber

THE BRACKISH LAGOONS

The area between Aldeburgh and Shingle Street has been the subject of fairly intense study in the past, particularly in relation to the land-locked lagoons behind and amongst the shingle banks. Studies on the geomorphological history and ecology were undertaken by Cobb (1958), Barnes & Heath (1980) and most recently Barnes (1985; 1987). Barnes & Heath (loc.cit.) discuss the formation and loss of the lagoons in this area since 1890, establishing that they are ephemeral features; at present they receive sea water by percolation through the shingle, supplemented by overtopping on extreme high tides.

Cobb introduced a numbering system for the lagoons at Shingle Street, which system was subsequently adhered to by Barnes; his lagoons #3 and #2 no longer exist, and his #5 was dry in October 1988; otherwise, for the four of his lagoons which were available, his numbers are also quoted below for comparison. In the text (though not the Table), our numbering system (as shown on Fig. 1) will be prefixed by 'P' for convenience.

The October trip was able to study 7 lagoons on 29<sup>th</sup> around Shingle Street, and another on the 30<sup>th</sup> at south Sudbourne Beach; these lagoons, numbered in order of study, are described below. There appear to be no previous surveys *in litt* for lagoons P5, P6, P7 or P8.

P1. 52°02'16"N 1°27'39"E, O.S. Grid Ref TM372 434. 32%. Elongate lagoon immediately behind the shingle bank, with observed sea-water percolation; rapidly sloping gravel to a generally hard shingle bottom, no fine sediment near the edges; submerged macrophytes *Enteromorpha* sp. and some *Ruppia cirrhosa*; surrounded by saltmarsh plants. (≡Cobb's lagoon #4).

P2. 52°02'36"N 1°27'54"E, O.S. Grid Ref TM374 437. 34%. Large lagoon behind the shingle bank, generally shallow, with gravel and soft mud bed, *Enteromorpha* sp. and *Ulva* sp.; surrounding flora as lagoon P1. (≡Cobb's lagoon #7).

P3. 52°02'36"N 1°27'45"E, O.S. Grid Ref TM373 437. 33%. Elongate, narrow lagoon inland of lagoon P2, shallow with much plant life (including *Enteromorpha* sp., *Ulva* sp. and *Chaetomorpha* sp.) and muddy substrate; adjacent open gravel to the south, otherwise surrounding flora as lagoon P1. (≡Cobb's lagoon #6).

P4. 52°01'39"N 1°26'59"E, O.S. Grid Ref TM363 419. 34%. Largest lagoon of this group just to the south of Shingle Street, with a notable central island. Gravelly bed with softer muds, much plant life (*Chaetomorpha* sp. and *Ulva* sp.) and localised sulphuretum. (≡Cobb's lagoon #1).

P5. 52°01'36"N 1°26'50"E, O.S. Grid Ref TM362 418.5. 26%. Very small circular pond, surrounded by dense grasses, not notably faunistic.

P6. 52°01'36"N 1°26'47"E, O.S. Grid Ref TM361.5 418.5. 26%. Larger companion to pond P5, beneath the sea wall, muddy gravel bed showing signs of recent drying-out (cracking, etc.); some *Ruppia cirrhosa*.

P7. 52°01'50"N 1°26'56"E, O.S. Grid Ref TM363 421. 16%. Shallow lagoon in corner of sea walls, continuous with (though unconnected to) freshwater ditch inland of the sea wall; muddy bed again showing evidence of recent drying-out; much plant life, largely *Ruppia cirrhosa*, and dense swarms of planktonic copepods.

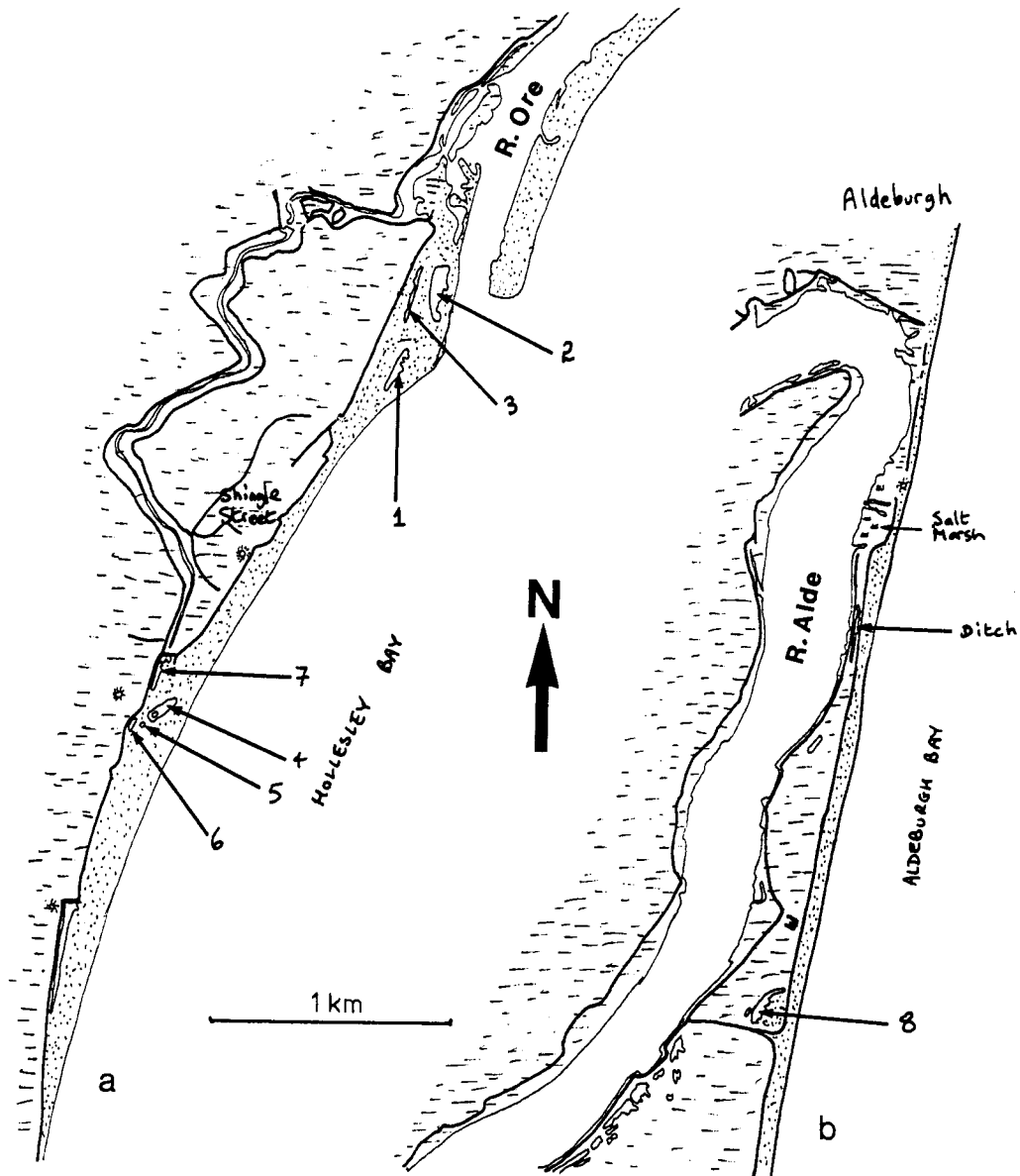


FIGURE 1. Lagoons and other sites sampled in October 1988 by the PORCUPINE field trip; a - Shingle Street, b - Aldeburgh. Lagoons 1 to 8 are numbered in sequence of sampling, and relate to the numbering sequence of Cobb (1958) as:

|                |                               |
|----------------|-------------------------------|
| Cobb lagoon #1 | Porcupine lagoon #4           |
| #2             | } no longer exist             |
| #3             |                               |
| #4             | #1                            |
| #5             | dried up                      |
| #6             | #3                            |
| #7             | #2                            |
| #8             |                               |
| #0             | not sampled (at south of 'a') |

The distance between the north of 'a' and the south of 'b' is 7 kilometres.

P8. 52°06.95'N 1°35.91'E, O.S. Grid Ref TM458 527. 37%. Large lagoon with smaller offshoots, south Sudbourne Beach, in corner of the sea walls and shingle bank, connected by a stream-like spur to shingle-bank percolation. Fine mud and gravelly bed, with *Ulva*, *Enteromorpha*, *Chaetomorpha* and *Ruppia spiralis*; local sulphureta.

Also in this category the drainage ditch at Aldeburgh, 52°07.76'N 1°36.26'E, O.S. Grid Ref TM461 542, was examined in passing, and found to support a rich fauna, including *Carcinus*, *Palaemonetes* and *Urticina*.

#### FAUNA

Sedimentary infauna was collected from unquantified samples of mud (where available), sieved *in situ* using a 500 µm mesh sieve to reduce the sample, fixed in formalin with Rose Bengal; final sieving before sorting was via a 250 µm mesh. Lagoon 1 had no soft sediment to sample; lagoon 5 was not sampled; examination of the sieved samples in the field at lagoons 6 and 7 indicated no obvious macrofauna, and no sample was retained. Weed-associated fauna was collected from all the lagoons, from sweepings through the aquatic plant life (or open water) with a similar mesh. Samples from deeper and more open water (for fish or prawns) were collected with a long-handled pond net of 1 mm mesh. The fauna from these samples is listed in Table 1, with indications of rare, occasional, frequent, common or abundant. Species recorded at the site, but not taken in the samples, are indicated by a ✓.

TABLE 1. Sedimentary and Weed-Associated Fauna from Lagoons 1 to 8.

|                                 | LAGOON: |    |    |    |    |    |    |    |
|---------------------------------|---------|----|----|----|----|----|----|----|
|                                 | 1       | 2  | 3  | 4  | 5  | 6  | 7  | 8  |
| species ↓ salinity (‰) →        | 32      | 34 | 33 | 34 | 26 | 26 | 16 | 37 |
| <b>FORAMINIFERA</b>             |         |    |    |    |    |    |    |    |
| <i>Elphidium williamsoni</i>    |         |    |    | r  |    |    |    | o  |
| <b>NEMATODA</b>                 |         |    |    |    |    |    |    |    |
| <i>Enoplus brevis</i>           |         |    |    |    |    |    |    | o  |
| Indet                           |         | a  | f  | f  |    |    |    | f  |
| <b>CNIDARIA</b>                 |         |    |    |    |    |    |    |    |
| <i>Sagartia troglodytes</i>     | c       | c  | c  | o  |    |    |    | a  |
| <i>Nematostella vectensis</i>   |         |    | o  |    |    | a  |    | c  |
| <b>NEMERTEA</b>                 |         |    |    |    |    |    |    |    |
| <i>Lineus ruber</i>             | o       |    | o  | a  |    | o  |    | a  |
| <i>Amphiporus lactifloreus</i>  |         |    |    | r  |    |    |    | r  |
| <b>SIPUNCULIDA</b>              |         |    |    |    |    |    |    |    |
| <i>Golfingia minuta</i>         | r       |    |    |    |    |    |    |    |
| <b>ANNELIDA</b>                 |         |    |    |    |    |    |    |    |
| <i>Tubificoides benedii</i>     | a       | a  | a  | c  |    | c  |    | c  |
| <i>T. cf diazi</i>              |         |    |    | r  |    |    |    | o  |
| <i>Tubifex costatus</i>         |         |    |    | c  |    |    |    |    |
| <i>Limnodrilus hoffmeisteri</i> |         |    | o  | o  |    |    |    | r  |
| <i>Capitella capitata</i>       | o       | a  | a  | c  |    |    |    | c  |
| <i>Arenicola marina</i>         |         |    | ✓  | ✓  |    |    |    | ✓  |
| <i>Nereis diversicolor</i>      | c       |    | c  |    |    |    |    |    |
| <i>Malacocerus fuliginosus</i>  |         | a  |    |    |    |    |    | o  |
| <i>Scolelepis foliosa</i>       |         | o  |    |    |    |    |    |    |
| <i>Manayunkia aestuarina</i>    |         |    | r  | r  |    |    |    |    |
| <i>Fabricia sabella</i>         |         |    |    |    |    |    |    | r  |

TABLE 1 (continued)

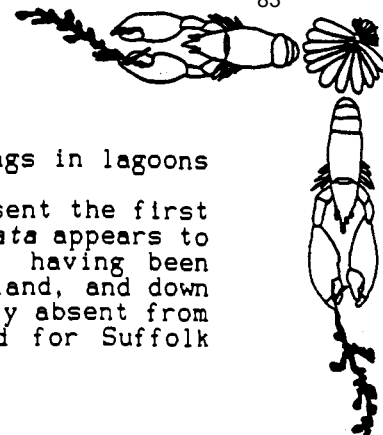
|                                      | LAGOON: | 1 | 2 | 3 | 4  | 5 | 6 | 7 | 8 |
|--------------------------------------|---------|---|---|---|----|---|---|---|---|
| <b>MOLLUSCA</b>                      |         |   |   |   |    |   |   |   |   |
| <i>Abra tenuis</i>                   |         |   | o | c | a  |   |   |   |   |
| <i>Cerastoderma glaucum</i>          |         |   |   |   | f  |   |   |   | c |
| ( <i>C. edule</i> )                  |         | * | * |   |    |   |   |   |   |
| ( <i>Acteon tornatilis</i> )         |         |   |   |   | f* |   |   |   |   |
| <i>Hydrobia ulvae</i>                |         |   | a |   |    |   |   |   |   |
| <i>H. neglecta</i>                   |         |   |   | c |    |   |   |   |   |
| <i>H. ventrosa</i>                   |         | a |   | c |    |   | a | a | a |
| <i>Leucophytia bidentata</i>         |         | a |   |   | r  |   |   |   |   |
| <i>Littorina saxatilis tenebrosa</i> |         |   |   | c | c  |   |   |   | a |
| <i>Akera bullata</i>                 |         |   |   |   |    |   |   |   | a |
| <i>Retusa obtusa</i>                 |         |   |   |   |    |   |   |   | a |
| <b>ARTHROPODA</b>                    |         |   |   |   |    |   |   |   |   |
| Chironomid indet.                    |         |   |   | c | o  | c | c |   | f |
| <i>Ephydra</i> sp.                   |         |   |   |   |    |   |   | r |   |
| Coleopteran indet.                   |         |   |   |   |    |   |   | r |   |
| Dipteran larva                       |         |   |   |   |    |   |   | r |   |
| <i>Sigara stagnalis</i>              |         |   |   | r |    |   |   | a |   |
| <i>Cyprideis torosa</i>              |         |   |   | o | r  |   |   |   |   |
| <i>Paramphiascopsis giesbrechti</i>  |         |   |   |   | c  |   |   |   | o |
| <i>Eurytemora velox</i>              |         |   |   |   |    |   |   | a |   |
| <i>Idotea chelipes</i>               |         |   |   |   |    |   |   | a |   |
| <i>Microdeutopus gryllotalpa</i>     |         |   | c | o |    |   |   |   | a |
| <i>Gammarus finmarchicus</i>         |         |   | c |   |    |   |   |   |   |
| <i>G. locusta</i>                    |         |   |   | o |    |   | a |   |   |
| <i>Orchestia gammarellus</i>         |         |   |   |   | c  |   |   |   |   |
| <i>Corophium volutator</i>           |         |   |   | c |    |   | o |   |   |
| <i>Melita palmata</i>                |         |   |   | a |    |   |   |   | c |
| <i>Palaemonetes varians</i>          |         |   |   |   |    |   |   |   | o |
| <b>ECHINODERMATA</b>                 |         |   |   |   |    |   |   |   |   |
| <i>Amphipholis squamata</i>          |         | c |   |   |    |   |   |   | c |
| <b>CHORDATA</b>                      |         |   |   |   |    |   |   |   |   |
| <i>Anguilla anguilla</i>             |         |   |   |   |    |   |   |   | r |
| <i>Gasterosteus aculeatus</i>        |         |   |   |   | r  |   |   |   | r |

\* dead shell only

The fauna of these lagoons is similar to that previously described for the lagoons in this area (*vide* Barnes & Heath, 1980; Barnes, 1985). The infauna includes classic lagoonal species, such as the cockle *Cerastoderma glaucum*, the ostracod *Cyprideis torosa*, the harpacticoid *Paramphiascopsis giesbrechti* (rarely met with in such density as lagoon P4: 26 females, 23 of them bearing eggs, and 5 males were in the retained subsample), the isopod *Idotea chelipes* and the gastropods *Littorina saxatilis tenebrosa* and *Hydrobia ventrosa*. The presence of the oligochaete *Limnodrilus hoffmeisteri* in lagoons P3, P4 and P8 is a little surprising insofar as this is normally a low salinity species.

Of particular interest is the nationally rare *Nematostella vectensis*, an Edwardsiid anemone found only in lagoons in England, and protected under the Wildlife and Countryside Act: it was present at our lagoons P3, P6 and P8. It has been found at Cobb's lagoon #1 (our P4) (Williams, 1975), where it was still present in 1984, but not recorded by our 1988 survey. Recently, Barnes (pers.





comm.) found it at our lagoon P3 (Cobb #6); our findings in lagoons P6 and P8 represent new sites for *Nematostella*.

The records of *Akera bullata* in lagoon P8 represent the first live records of this species for East Anglia. *A. bullata* appears to show an extended Lusitanian distribution in Britain, having been recorded live from western and southern coasts of England, and down to the Scottish Border on the east coast: it is largely absent from the east coasts, there being one empty shell record for Suffolk (see Seaward, 1982).

#### THE SALT MARSH AT ALDEBURGH

The River Alde all but reaches the sea at Aldeburgh, before deciding to turn southwest and join the sea with the R. Ore some 15 km further down the coast. At the Aldeburgh elbow there is the area of salt marsh which drew the attention of the PORCUPINE trip (52°08'03'N 1°36'30'E; OS grid ref. TM462547).

Floristically, the marsh supported *Spartina*, *Halimione* and associated typical grasses. The marsh platform was frequently interrupted by small pools and drainage channels. The range of expertise of Members present meant most available subhabitats were individually investigated.

TABLE 2. The fauna recorded (with abundances) from the saltmarsh pools at Aldeburgh.

|                               |   |
|-------------------------------|---|
| <i>Lineus ruber</i>           | c |
| <i>Nereis diversicolor</i>    | r |
| <i>Hydrobia ulvae</i>         | a |
| <i>Ovatella myosotis</i>      | c |
| <i>Littorina saxatilis</i>    | o |
| <i>Praunus flexuosus</i>      | c |
| <i>Idotea chelipes</i>        | o |
| <i>Sphaeroma hookeri</i>      | a |
| <i>Chaetogammarus marinus</i> | o |
| <i>Orchestia gammarellus</i>  | c |
| <i>Carcinus maenas</i>        | o |
| <i>Palaemonetes varians</i>   | c |
| <i>Amphipholis squamata</i>   | a |
| <i>Pomatoschistus microps</i> | o |

Laying in one marsh pool was a sodden (*sic*) log, of no great proportion, but harbouring specimens of *Molgula manhattensis*. The subsample of superficial log scrapings taken away mainly comprised filamentous algae, much detritus and nematodes (all three indet.). Within this high-fibre matrix were vast numbers of the foraminiferan *Elphidium williamsoni* (mainly green), together with *Limapontia depressa*, the planarian *Uteriporus vulgaris*, an unidentified Chironomid, the mites *Copidognathus brevirostris* (Halacaridae) and *Macrocheles superbus* Hull 1918 (Mesostigmata, Macrochelidae), and six species of harpacticoid copepod, viz:

|                                 |                                |
|---------------------------------|--------------------------------|
| <i>Halectinosoma</i> sp.        | 2 ♀, one with eggs             |
| <i>Harpacticus obscurus</i>     | 1 egg bearing ♀                |
| <i>Paradactylopodia latipes</i> | 1 ♀ with eggs, 1 ♂, 1 subadult |
| <i>Stenhelia palustris</i>      | 1 ♀, 1 ♂, 1 subadult           |
| <i>Amphiascoides debilis</i>    | 1 ♀                            |
| <i>Mesochra lilljeborgi</i>     | 8 ♀, 1 ♂                       |

Examination of the mud cliff at the seaward face of the salt marsh eventually revealed the (predicted) presence of *Paragnathia formica*, specifically a female swollen with larvae.

## THE BOULDER SHORE AT ALDEBURGH

Just south of the salt marsh the upper shore supported a boulder rubble scree, the residue of spillage from nearby sea-wall construction. These boulders were well colonised by furoid algae, particularly *Ascophyllum nodosum* with its epiphyte *Polysiphonia lanata*, and *Enteromorpha*. Other common epiphytes were *Dynamena pumila*, actively growing and with empty gonotheca, on *Fucus vesiculosus*, *Chondrus crispus* and *Ascophyllum nodosum*; *Alcyonidium gelatinosum* on *F. vesiculosus*, *Electra monostachys* on *C. crispus*, and drift *Hydrallmania falcata*. Washings from the epiphytes were preserved and sorted under the binocular microscope (Table 3).

TABLE 3. Material from boulder shore and weed washings.

|   |                                       |
|---|---------------------------------------|
| FORAMINIFERA  | Cirripedia                            |
| <i>Protelphidium germanicum</i> (c)                 | <i>Elminius modestus</i>              |
|   | <i>Balanus balanoides</i>             |
| CRUSTACEA   | <i>B. improvisus</i>                  |
| Ostracoda   | <i>B. crenatus</i> (basal scars only) |
| <i>Paradoxostoma abbreviatum</i>                    | Decapoda                              |
| Isopoda   | <i>Carcinus maenas</i>                |
| <i>Jaera albifrons</i> agg. (o)                     |                                       |
| Copepoda  | ACARI                                 |
| Ectinosomatid indet (2)                             | <i>Copidognathus oculatus</i>         |
| <i>Microarthridion fallax</i> (2q, 1♂)              | <i>Thalassarachna baltica</i>         |
| <i>Harpacticus obscurus</i> (f)                     | <i>Rhombognathus notops</i>           |
| <i>Tisbe</i> sp† (1q)                               | <i>Rhombognathides mucronatus</i>     |
| <i>Parathalestris clausi</i> (o)                    | <i>Isobacterus setosus</i>            |
| <i>Stenhelia palustris</i> (1q)                     | <i>Copidognathus dentatus</i>         |
| Ameirid indet (o)                                   |                                       |
| <i>Enhydrosoma curticauda</i> (1q with eggs)        |                                       |
| <i>E. curvirostre</i> (subadult + q&♂ in precopula) |                                       |
| <i>Nannopus palustris</i> (1q, 1 subadult)          |                                       |
| <i>Pseudonychocamptus koreni</i> (1q)               |                                       |
| Laophontid indet. (q&♂ in precopula)                |                                       |
| Cyclopoid (1)                                       |                                       |

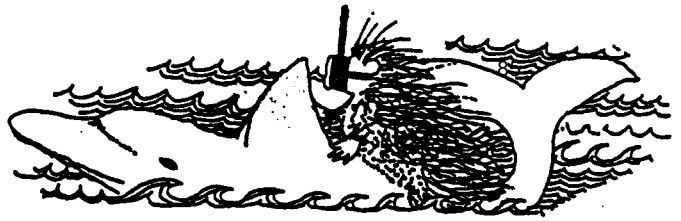
† (possibly of an undescribed species so far found only at one nearby site)

## ACKNOWLEDGEMENTS

We are most grateful to Anna Shearer for the plant identities and field notes, to Dick Hamond for the identities of the Harpacticoids, Frank Evans for the *Eurytemora*, Jan Light for certain tricky molluscs, Colin Taylor for the oligochaetes, and Miranda MacQuitty and Ann Baker for the Mesostigmatid identity.

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## CETACEAN STRANDINGS

by Richard Sutcliffe

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Since 1913, the coastguards, receivers of wrecks and other individuals have reported strandings of cetaceans to the British Museum (Natural History). It is clear, however, that many specimens go unrecorded. This is understandable with small cetaceans such as porpoises and dolphins, but quite surprising when larger animals are involved. When I reported to the BM(NH) that Glasgow Museums now have samples from the SIXTY FOOT long sperm whale, *Physeter catodon*, which was washed up dead near Bennane Head on the Ayrshire coast in March 1988, it was the first that they had heard of it!

This particular specimen was the first ever sperm whale to be washed up on the Clyde coast since records began. It had obviously been dead for some weeks before finally being washed ashore, and was already disintegrating! The local knacker's yard cut the whale into six pieces and took them away before any accurate measurements could be taken. All that you could tell for certain was that it was an adult male and EXTREMELY smelly. Several bones were removed from the carcass to the Museum in Glasgow, where everybody complained about the smell for the next fortnight! 1988 produced an above-average number of sperm whale strandings, with at least six known to have been stranded around the Scottish coast during the year, compared with the more normal one or two for the whole of Britain! (Sutcliffe, 1988).

Glasgow Museums and Art Galleries have been encouraging the reporting of stranded cetaceans for many years, but since 1986 we have been trying to do more than simply record what species were stranded where. A Risso's dolphin, *Grampus griseus*, stranded at Kilmelford, Argyll, was collected by museum staff in March 1986. It was accurately measured and weighed, and then several samples were taken. The stomach contents were removed and identified and proved to consist of the remains of five different species of cephalopods. Samples of muscle, liver and kidneys were also taken and were analysed for mercury levels by the Zoology Department of Glasgow University. The results are described in Zonfrillo *et al.* (1987).

We now automatically try to take such samples from any dead cetaceans that we come across; and, to encourage people to report strandings, we have recently issued a double-sided A4 sheet (shown, reduced, on adjacent page) in conjunction with the Royal Museum of Scotland. This includes a list of measurements which we would like taken if we are unable to get to the specimens ourselves. The sheets have been circulated to coastguards, environmental health officers and others likely to find stranded specimens. Hopefully this should prevent specimens simply being buried or carted away!

PORCUPINE Members finding stranded cetaceans are encouraged to record the specimens as fully as possible and pass on the information to myself (in the case of Scottish specimens) and to the British Museum (Natural History).

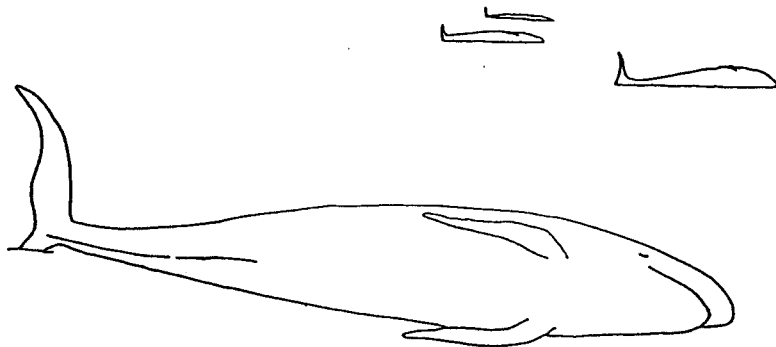
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Zonfrillo B., Sutcliffe R., Furness R.W. & Thompson D.R. 1987. Notes on a Risso's Dolphin from Argyll, with analyses of its stomach contents and mercury levels. *The Glasgow Naturalist*, 21 (3); 297-303.

**N.B.** Cetaceans are 'Royal Fish' and with few exceptions belong to the Crown. In Scotland, however, bottle-nosed whales (*Hyperoodon ampullus*), pilot whales (*Globicephala melaena*) and whales less than 25 feet long are not Royal Fish. Permission must be obtained from the British Museum (Natural History) to remove parts of or complete 'Royal Fish'.

## STRANDED WHALES, DOLPHINS AND PORPOISES

The National Museums of Scotland and Glasgow Museums and Art Galleries would like to hear about strandings of whales, dolphins or porpoises which occur on Scottish coasts.



Such records are of use for research on the distribution of these animals. Where practical we will collect the whole animal or samples from it. These can be used as museum specimens and/or for analysis of pollution levels, feeding habits, etc.

When you call, please try to have the following information about the stranded animal available if possible. This will help us to decide which species it is and therefore whether we would like to visit or collect it.

Location (with grid reference if possible)

Colouring/markings

Approx. length

Presence/absence of dorsal fin

Presence/absence of teeth and their number

Presence/absence of baleen (whalebone) plates and their colour

Thank you. Please contact

Andrew Kitchener/Jerry Herman  
Department of Natural History  
National Museums of Scotland  
Chambers Street  
Edinburgh EH1 1JF  
031 225 7534

or Richard Sutcliffe  
Department of Zoology  
Glasgow Museums and Art Galleries  
Kelvingrove  
Glasgow G12  
041 357 3929

The following information would be useful to us if we do not visit.

SPECIES:

SPECIMEN NO:

| Whalebone present?         | Yes/no | Teeth present?                           | Yes/no |
|----------------------------|--------|--|--------|
| Colour of whalebone plates |        | Number of teeth on one side of upper jaw |        |
| Colour of hairy fringes    |        | Number of teeth on one side of lower jaw |        |
|                            |        | Position of teeth in the jaw             |        |
|                            |        | Diameter of the largest tooth            |        |
|                            |        | Shape of teeth                           |        |

Total length

Middle of base of back fin to middle of tail

Length of snout

Tip of snout to blowhole

Length of flipper

Vertical height of back fin

Middle of reproductive opening to middle of vent

Shape of head

Colour of skin

