

THE CONCHOLOGISTS' NEWSLETTER

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CORRECTIONS

Page 50, line 29: for Risso read Rissoa.

line 32: for Caner pugurus read Cancer pagurus.

Page 124: for Pinctata read Pinctada.

Page 312, line 3: for bidenta read bidentata.

Page 339, line 15: for dessication read desiccation.

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Produced by THE CONCHOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND

UNUSUAL HABITATS OF AZECA MENKEANA (C.PFEIFFER) IN THURINGIA

The English call it Azeca goodalli (Férussac), we in Germany say A. menkeana (C.Pfeiffer). As I never saw English specimens, I am not competent to say whether they are one species, within the common amplitude of variation, two varieties, or two distinct species. So I keep the name we are used to.

In the older literature it was considered a rare species, and Goldfuss (1900: 183) cites only 5 places within my collecting area; the valley "Annatal" (= Dragoon glen) near Eisenach, on lower Permian red conglomerate, and the other places on Triassic limestone: the Krahnberg near Gotha, the forest "Schieshauswald" near Weimar, Ihlefeld in the Hainich mountains, and Vollenborn in the Eichsfeld.

Today I know that in the Eichsfeld and Hainich Mountains the species occurs almost everywhere, if the conditions are suitable for it. I found it at 10 places round Eisenach, at 5 places near Weimar etc., and am convinced that it will be found at many more places yet to be searched.

Though it occurs mostly on limestone, it is not bound to that substrate. It is also found on dolomite, but not so often, on lower Permian red conglomerate and on crystalline stone in the Thuringian Mountains.

The degree of moisture also varies in its habitats, but it must be sufficient to allow of "soft-leaved" trees to grow there. This being so, then Azeca lives as well on the crest of a mountain as on the floor of a valley dripping with moisture. The vegetation controls its distribution. The forest must consist of mainly soft-leaved trees, it may also have a good undergrowth of shrubs, but it must have plenty of herb vegetation (? ground cover NFMcM). This, then, is a forest suitable for many other snails, and so we find a rich snail fauna. In Thuringia an "Azeca-forest" is the optimal habitat for any woodland snail.

If the wood is cut, the snails may survive, unless trees of another kind are planted: spruce or pine are worst, but nearly as bad are "hard-leaved" trees such as oak and beech.

Such trees by their fallen leaves influence the soil, cover it and damage the ground vegetation. This change is fatal for all the more delicate snails. Their sphere of action is narrow, they cannot go to seek a new place more suitable for them, unless some of the original woodland is left near by. I will describe two such places where Azeca has managed to survive.

1). The mountain "Kühmstedter Berg" near Mühlhausen. The plateau of this mountain is a nature reserve because of its pure forest of beech and oak (Quercus petrae), and this forest has only a few snails of the most euryoek species. There is one small place at the edge of the reserve, a dry ditch along the road with a rather dense growth of nettle (Urtica), always favourable to snails, together with some other smaller herbs, and there were to be found at once the following snails:

Carychium tridentatum (Risso)

Aegopinella pura (Alder)

Cochlicopa lubrica (Müller)
Azeca menkeana (C.Pfeiffer)
Columella aspera Waldén
Discus rotundatus (Müller)
Arion rufus (Linnaeus)
Arion circumscriptus Johnston
Vitrina pellucida (Müller)
Nesovitrea hammonis (Ström)

Aegopinella nitidula (Draparnaud)
Oxychilus cellarius (Müller)
Euconulus fulvus (Müller)
Cochlodina laminata (Montagu)
Clausilia sp. apices only
Perforatella incarnata (Müller)
Trichia hispida (Linnaeus)
Cepaea hortensis (Müller)

The ribbed apex of a Clausilia may belong either to C. bidentata Ström or Iphigena ventricosa (Draparnaud), both species occurring in the neighbourhood.

Evidently the growth of Urtica makes possible the survival of Azeca and some other species in such an unfavourable forest. And the facts show also that this reserve "hard-leaved" woodland is not native to the place.

2). The right tributary valley of the brook "Alter Fischbach" near Eisenach. The mountains that surround that little valley and that of the Fischbach as well consist of Permian dolomite, and of the three small colonies of Azeca only one is of special interest. The floor of the tributary valley is mainly grassland, on the slopes there are forests, hard-leaved (oak and beech) with sparse herbs on the right, spruces on the left side.

About halfway up the valley a rather small area immediately adjoining the oak-and-beech forest has been planted with poplars (Populus nigra) and under those trees are not only grasses but also herbs such as Urtica, Ulmaria filipendula, Ficaria verna, Colchicum autumnale and others. Poplars are not endemic forest trees there but they are evidently better than oak or beech for snails, for the following species were collected under them:

Cochlicopa lubrica (Müller)
Azeca menkeana (C.Pfeiffer)
Arion fasciatus (Nilsson)
Vitrina pellucida (Müller)
Eubresia diaphana (Draparnaud)
Vitrea diaphana (Studer)
Vitrea crystallina (Müller)
Vitrea contracta (Westerlund)
Aegopinella pura (Alder)
Aegopinella nitidula (Draparnaud)

Aegopinella nitens (Michaud)
Oxychilus cellarius (Müller)
Laciniaria biplicata (Montagu)
Bradybaena fruticum (Müller)
Perforatella incarnata (Müller)
Trichia hispida (Linnaeus)
Isognomostoma isognomostoma (Schröter)
Cepaea hortensis (Müller)
Helix pomatia Linnaeus

Evidently here the poplars form a refuge for the whole snail association; the list of species given here must not be regarded as complete because I collected only once at this place. It is certainly the very best collecting place in the whole valley.

Here we see that both the hard-leaved woodland on the one side and the coniferous woodland on the other side were planted deliberately and are not native. The snails, as former inhabitants of a native woodland of soft-leaved trees, having migrated as far as they were able to, the neighbouring poplars provide evidence of this fact.

It is not by chance that in both cases Urtica dominates the herbs. It is not only soft-leaved and fast decaying, so giving suitable food (decaying vegetable matter, microfungi, etc.) for snails, but also it protects them from being trodden down by animals and men.

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Malak. Abh. Mus. Tierkunde, Dresden 5/...

Hildegard Zeissler, Leipzig

USE OF XEROGRAPHY IN MAKING MOLLUSCAN DRAWINGS

Shells are extremely difficult to draw in a manner which clearly conveys the specific character. It may accordingly be of interest to record that in the vast majority of cases they can be copied adequately by a Xerox machine - either directly for record or as a basis for drawings.

The Xerox 3100 machine has sufficient depth of focus to make recognisable illustrations of shells which are simply laid on the glass copying surface and covered with a shallow white-lined card tray to exclude extraneous light (otherwise they appear on an off-black background). Though not suitable for journal reproduction without retouching, these illustrations are excellent for record purposes. In genetical surveys, for example, large numbers of e.g. white helices can be scored and recorded for banding analysis in this way. The main use of the method, however, is in producing a faithful flat reproduction which can be traced, and a conventional ink drawing prepared for purposes of illustration, with a great saving in time; Xerox copying of shells is obviously far easier than the use of a camera lucida. I recommend experiment with it to anyone who has the task of drawing large numbers of shells. A colour Xerox might give even better results.

Alex Comfort, Institute for Higher Studies, Santa Barbara, Ca.

A RARE SCAPHOPOD FROM THE N.E. ATLANTIC

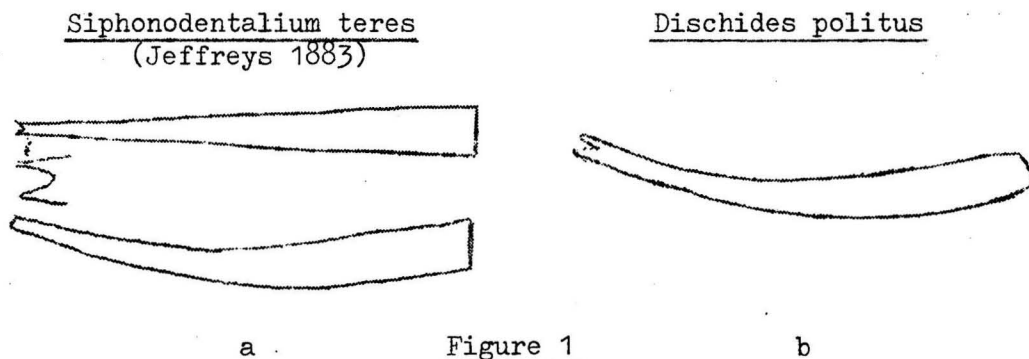
More than a hundred years ago, when Darwin had just punctured Victorian self-esteem, when railways were opening up both popular travel and geological exposures, and during the year (1869) in which the Cutty Sark was launched at Dumbarton on the Clyde, the naval survey ship 'Porcupine' was beginning to explore (1869-70) the deep sea floor of the N.E. Atlantic and the Mediterranean. Previously (1868) the 'Lightning' had explored further north around Faroes and Shetland and given its name to the Lightning Channel separating the two groups of islands. These two expeditions, led by W. B. Carpenter and W. Thomson, were pioneering oceanography and putting the last nails in the coffin of Forbes' theory that marine life was impossible below 300 fms. The first nail was struck when, in 1858, a submarine cable in the Mediterranean was brought up from more than 1000 fms. encrusted with marine animals.

Between them the two ships, 'Lightning' and 'Porcupine', carried out nearly 200 dredge hauls, reached a depth of 2435 fms., and made "The waters immediately to the north and west of the British Isles ---- the cradle of oceanography" (A. Hardy, *The Open Sea*, p. 10). The molluscan material brought back was described by Gwyn Jeffreys between 1878 and 1883, and in 1883 (part 5, *Proc. Zool. Soc.* for 1882: pp. 656-666, pl. 49) he described the scaphopods. Three of these were new to science, Cadulus amphora, Cadulus gibba and Siphonodentalium teres; the last being dredged from around 1000 fms. about 60 miles N.N.W. of Lisbon.

In 1973 the Scottish Marine Biological Association was looking again at the 'cradle of oceanography' and their ship 'Challenger', dredging across the continental slope, brought up, among other things, many scaphopods. I was lucky enough to meet Miss B. Rae, who was helping SMBA determine some of their molluscs, and astonished to find, among scaphopods sent to me for determination, numerous examples of Siphonodentalium teres. These were dredged at four stations approximately 90 miles N.W. of Malin Head in northern Ireland, and came from depths between 1271 and 2540 metres.

The shells of these small scaphopods, the animal is not yet known, are hardly impressive being barely 7mm long, white, smooth, narrow, and distinguished by a dorso-ventral notch in the apex. Discheds politus, a cadulid with constricted aperture, has a similar apical notch but in that species it is lateral; compare figures 1a & b over-

leaf. To the best of my knowledge this scaphopod has not been reported during the whole century between 'Porcupine's first discovery of it in 1870, and 'Challenger's rediscovery in 1973.



I am grateful to Miss B. Rae of Mull for letting me see scaphopod material entrusted to her, and to Dr. J. Gage of SMBA Oban for permission to make this brief preliminary report.

C. P. Palmer

A LIST OF MUSEUMS IN THE BRITISH ISLES WITH MOLLUSCAN COLLECTIONS

The following list was compiled from a number of reference works and personal information. It is intended for the collector of recent and fossil molluscs, both amateur and specialist, and gives some idea of the location and size of molluscan collections in larger museums throughout the British Isles. The majority of these are based on the efforts of collectors during the 19th. century when shell collecting was fashionable. The 'cabinets' of the more serious collectors are now in the possession of the national and large provincial museums, and often contain extremely rare if not unique material. The Saul collection at Cambridge contains the only specimen of the cowry Cypraea barclayi. The important collections are stored for the purpose of research and as such are not normally available to the general public although selected specimens are often exhibited. The small local museums contain the work of less serious collectors. Nearly every local museum with a natural history section has some sort of shell collection and these are often worth visiting if only to discover the species present locally.

Whilst I have taken every care in compiling this list there may well be errors and omissions. I would be delighted to hear of any corrections and additions that would improve this list.

P. Lingwood
Department of Invertebrate Zoology, Merseyside County Museums, Liverpool

KEY

Town

Title, Postal address, Telephone number STD where connected

Governing body. Exhibits: Research collections: Opening times

Days when closed. Admission charges

R, Recent. F, Fossil.

Size of research collections: Small - less than 1,000 specimens; Medium - 1,000-10,000 specimens; Large - 10,000-100,000 specimens; Very large - over 100,000 specimens.

The number of types are listed to indicate importance of the research collections.

(A type specimen is one chosen as being representative of a particular species, etc.)

N.B. Details of the collections are correct to 1970; details of the museums are correct to 1975.

ENGLAND

BATH

Victoria Art Gallery and Museum, Bridge Street and 18 Queen Square, Bath, BA1 2HP. Tel: 0225-48144. Bath County Council. Exhibits: R, small. Open: Mon.-Fri. 10-6, Sat. 10-5. Closed: Good Friday, Christmas Day, Boxing Day. Admission free.

BIRMINGHAM

Birmingham City Museum and Art Gallery, Congreve Street, Birmingham, B3 3DH. Tel: 021-235-2834. City of Birmingham. Exhibits: R. Research collections: R, large. Open: weekdays 10-6, Sunday 2-5.30. Closed: Good Friday, Christmas Day, Boxing Day. Admission free.

BRIGHTON

The Booth Museum of Natural History, Dyke Road, Brighton, Sussex, BN1 5AA. Tel: 0273-552586. Borough of Brighton. Exhibits: R and F. Research collections: R. Open: Weekdays 10-6, Sunday 2-5 (closing at 5.00 in winter). Closed: Christmas Day, Boxing Day, Good Friday. Admission free.

BRISTOL

Bristol City Museum, Queens Road, Bristol, BS8 1RL. Tel: 0272-299771. Bristol District Corporation. Exhibits: R. Research collection: R, large. Open: Weekdays 10-5.30. Closed: Christmas Day, Boxing Day.

Geology Museum, Department of Geology, University of Bristol, Queen Building, Bristol. University of Bristol. Research collections: F, large. Admission by appointment.

CAMBRIDGE

Sedgwick Museum of Geology, Downing Street, Cambridge, CB2 3EJ. Tel: 0223-51585/8. University of Cambridge. Exhibits: F. Research collection: F, very large. Open: Mon.-Fri. 9-1, 2.15-5, Sat. 9-1 (University term only). Closed: one week at Christmas, one week in August. Admission free.

University Museum of Zoology, Downing Street, Cambridge, CB2 3EJ. Tel: 0223-58717. University of Cambridge. Exhibits: R. Research collections: R, medium. Open: Mon.-Fri. 2.15-5.15. Closed: Public holidays. Admission free.

COLCHESTER

Colchester and Essex Museum, Museum of natural history, All Saints Church, High Street, Colchester, Essex, COL 1TJ. Tel: 0206-76071, ext. 344; after hours 73669. Colchester Borough Council. Exhibits: R and F. Research collections: R, small, F, small. Open: weekdays 10-1, 2-5 (October to March closes 4.00 Saturday). Closed: Christmas Day, Boxing Day. Admission free.

DEVIZES

Devizes Museum, 41 Long Street, Devizes, Wiltshire, SN10 1NS. Tel: 0380-2765. Wiltshire Archaeological and Natural History Society. Exhibits: F. Research collections: F, very small. Open: Tues.-Sat. 11-5. Closed: Christmas Day, Boxing Day. Admission 15p, students 5p, children 2½p.

DORCHESTER

Dorset County Museum, High West Street, Dorchester, Dorset, DT1 1XA. Tel: 0305-2735. Dorset Natural History and Archaeological Society. Exhibits: R and F. Research collections: R, small, F, very small (9 types). Open: Weekdays 10-1, 2-5. Closed: Christmas Day, Boxing Day, Good Friday. Admission 15p, children (10-16 yrs.) 5p.

DUDLEY

Dudley Museum and Art Gallery, St. James Road, Dudley, West Midlands. Tel: 0384-56321. Dudley Metropolitan Borough. Exhibits: F. Open: Weekdays 10-6. Closed: Bank holidays. Admission free.

EXETER

Royal Albert Memorial Museum and Art Gallery, Queen Street, Exeter, Devon, EX4 3RX. Tel: 0392-56724. Exeter City Council. Exhibits: R and F. Research collections: R, large, F, medium. Open: Weekdays 10-5.30. Closed: Christmas Day, Boxing Day. Admission free.

HALIFAX

Bankfield Museum and Art Gallery, Akroyd Park, Halifax, West Yorkshire, HX3 6HG. Tel: 0422-54823. Calderdale Borough Council. Exhibits: R and F. Research collections: R, small, F, small. Open: Weekdays 11-5 (11-7 April to September), Sunday 2.30-5. Closed: Christmas Day, Boxing Day. Admission free.

HUDDERSFIELD

Tolson Memorial Museum, Wakefield Road, Huddersfield, West Yorkshire, HD5 8DJ. Tel: 0484-30591. Kirklees Metropolitan Borough Council. Exhibits: R. Research collections: R, probably small. Open: April-Oct. weekdays 10-6, Sundays 1-5; Nov.-March weekdays 10-5, Sundays 1-5. Closed: Christmas Day, Boxing Day. Admission: 5p, children 2¹/₂p, O.A.P.'s free.

HULL

Wilberforce House, 25 High Street, Hull, Humberside. Tel: 0482-27625. Hull City Council. Research collections: R, medium (50 types, some doubtful). Open: Weekdays 10-5, Sundays 2.30-4.30. Closed: Christmas Day, Boxing Day, Good Friday. Admission free.

IPSWICH

Ipswich Museum, High Street, Ipswich, Suffolk, IP1 3QH. Tel: 0473-213761/2. Borough of Ipswich. Exhibits: R and F. Research collections: R, medium, F, large (6 types). Open: Weekdays 10-5, Sundays 2.30-4.30. Closed: Christmas Day, Boxing Day. Admission free.

LEEDS

City Museum, Municipal Buildings, Leeds, West Yorkshire, LS1 3AA. Tel: 0532-31391. Leeds City Council. Exhibits: R and F. Research collections: R, medium, F, medium. Open: Weekdays 10-5.30, Sunday 2.30-5. Closed: Christmas Day, Boxing Day. Admission free.

LEICESTER

Leicestershire Museum and Art Gallery, 96 New Walk, Leicester, Leicestershire. Tel: 0533-53911. Leicestershire County Council. Exhibits: R and F. Research collections: R, medium, F, large. Open: Weekdays 10-5.30, Sundays 2-5.30. Closed: Christmas Day, Boxing Day. Admission free.

LINCOLN

Lincoln City and County Museum, Grey Friars, Broadgate, Lincoln, Lincolnshire, LN2 1E2. Tel: 0522-30401. Lincolnshire County Council. Research collections: R, medium, F, medium. Open: Weekdays 10-5.30, Sunday 2.30-5. Closed: Christmas Day, Boxing Day. Admission free.

LIVERPOOL

Merseyside County Museums, William Brown Street, Liverpool, Merseyside, L3 8EN. Tel: 051-207-0001. Merseyside County Council. Exhibits: F. Research collections: R, very large (400 types), F, medium. Open: Weekdays 10-5, Sunday 2-5. Closed: Christmas Day, Boxing Day, Good Friday. Admission free.

LONDON

British Museum (Natural History), Cromwell Road, South Kensington, London, SW7 5BD. Tel: 01-589-6323. Exhibits: R and F. Research collections: R, very large (26,000 type lots), F, very large (many types). Open: Weekdays 10-6, Sunday 2.30-6. Closed: New Years Day, Good Friday, 24-26th. December. Admission free.

The Passmore Edwards Museum (Essex Museum of Natural History), Romford Road, Stratford, E15 4LZ. Tel: 01-882-1354. Exhibits: R and F. Research collections: R, medium. Open: Weekdays 10-6 except Thursday 10-8 and Saturday 10-1, 2-5. Closed: Bank Holidays. Admission free.

LUTON

Luton Museum and Art Gallery, Wardown Park, Luton, Bedfordshire, LU2 7HA. Tel: 0582-36941-2. Borough of Luton. Research collection: R, small. Open: Weekdays 10-6, Sunday 2-6, closing at 5 Oct.-March. Closed: Christmas Day, Boxing Day, New Years Day, Sundays December and January. Admission free.

MANCHESTER

Manchester Museum, The University, Oxford Road, Manchester, M13 9PL. Tel: 061-273-3333. University of Manchester. Exhibits: R and F. Research collections: R, large (600 types), F, very large (300 types). Open: Weekdays 10-5, Wed. 10-9. Closed: A few days at Christmas, Good Friday. Admission free.

NEWCASTLE UPON TYNE

Hancock Museum, Barras Bridge, Newcastle, Tyne and Wear, NE2 4PT. Tel: 0632-22359. University of Newcastle Upon Tyne. Research collections: R, small. Admission by appointment.

NORWICH

Norwich Castle Museum, Norwich, Norfolk, NR1 3JU. Tel: 0603-22233. Norfolk County Council. Exhibits: R and F. Research collections: R, very large, F, large (7 types). Open: Weekdays 10-5, Sunday 2-5. Closed: Christmas Day, Good Friday. Admission 10p (except Spring holiday to Sept. 25p), children free.

OXFORD

Oxford University Museum, Parks Road, Oxford, Oxfordshire. Tel: 0865-57467. University of Oxford. Exhibits: R and F. Research collections: R, large, F, very large. Open: Weekdays 10-4. Closed: Christmas Day, Boxing Day. Admission free.

PLYMOUTH

City Museum and Art Gallery, Drake Circus, Plymouth, Devon, PL4 8AJ. Tel: 6752-6800, ext. 3092. City of Plymouth. Exhibits: R. Research collections: R, medium. Open: Weekdays 10-6 (10-8 Friday), Sunday 3-5. Closed: Christmas Day, Boxing Day. Admission free.

PORTSMOUTH

Cumberland House Museum and Aquarium, Eastern Parade, Southsea, Portsmouth, Hampshire. Tel: 0705-32654. Portsmouth District Council. Research collections: R, small. Admission by appointment.

READING

Museum and Art Gallery, Blagrove Street, Reading, Berkshire, RG1 1QL. Tel: 0734-55911, ext. 478. Reading District Council. Research collections: R, small. Open: Weekdays 10-5.30. Closed: Christmas Day, Boxing Day. Admission free.

SCARBOROUGH

Woodend Museum, The Crescent, Scarborough, North Yorkshire. Scarborough Corporation. Exhibits: R. Research collection: R, large, F, medium. Open: Oct.-March, Weekdays 10-1, 2.30-5; April-Sept., Weekdays 10-6, Sunday 2-5. Closed: Christmas Day, Boxing Day. Admission free.

SHEFFIELD

Sheffield City Museum, Western Park, Sheffield, S10 2TP. Tel: 0742-27226/7. Sheffield Metropolitan District Council. Exhibits: R and F. Research collection: R, medium, F, medium. Open: Weekdays 10-5, Sunday 11-5, Spring Bank holiday to Summer Bank holiday. Closed: Christmas Day, Boxing Day. Admission free.

TAUNTON

Somerset County Museum, Taunton Castle, Taunton, Somerset. Tel: 0823-3451, ext. 374. Somerset County Council. Exhibits: R and F. Research collection: R, small, F, medium. Open: Oct.-March, Weekdays, Sunday 10-4; April-Sept., Weekdays 10-5.30. Closed: Christmas Day, Boxing Day. Admission 10p, children 5p.

YORK

The Yorkshire Museum, Museum Gardens, York, North Yorkshire, YO1 2DR. Tel: 0904-29745/6. North Yorkshire County Council. Exhibits: F. Research collection: R, medium, F, large (103 types). Open: Weekdays 10-5, Sunday 1-5. Closed: Christmas Day, Boxing Day. Admission 11p, children 5p.

SCOTLAND

DUNDEE

Dundee Museum and Art Galleries, Albert Square, Dundee, DD1 1DA. Tel: 0382-25492/3. Dundee District Council. Exhibits: R. Research collection: R, medium. Open: Weekdays 10-5.30. Closed: Christmas Day, Boxing Day. Admission free.

EDINBURGH

Royal Scottish Museum, Chambers Street, Edinburgh, EH1 1DF. Tel: 031-225-7534. Exhibits: R. Research collection: R, very large, F, large. Open: Weekdays 10-5, Sunday 2-5. Closed: Christmas Day, Boxing Day. Admission free.

GLASGOW

Hunterian Museum, Geology Department, University of Glasgow, G12 8QQ. Tel: 041-339-8855. University of Glasgow. Research collection: F, large. Open: Mon.-Fri. 9-5, Sat. 9-12. Closed: Christmas Day, Boxing Day. Admission free.

WALES

CARDIFF

National Museum of Wales (Amgueddfa Genedlaethol Cymru), Cathays Park, Cardiff, South Glamorgan, CF1 3WP. Tel: 0222-26241. Exhibits: R and F. Research collection: R, large (2,500 types), F, (4 types). Open: Weekdays 10-5 Oct.-March; 10-6 April-Sept., Sundays 2.30-5. Closed: Bank holidays and Tuesday following 10-6, Christmas Day, Boxing Day, New Years Day, Good Friday. Admission free.

TENBY

Tenby Museum, Castle Hill, Tenby, Dyfed, SA70 7BP. Tel: 2809. Trustees of Tenby Museum. Exhibits: R, small. Open: Daily 10-6 (10-4 in winter). Closed: Christmas Day, Boxing Day. Admission 10p, children 3p.

IRELAND

BELFAST

Ulster Museum, Botanic Gardens, Belfast, N. Ireland. Tel: 0232-668251/5. Ulster Museum Board of Trustees. Exhibits: R and F. Research collection: R, large, F, large. Open: Weekdays 11-6, Sunday 2.30-5.30. Closed: Christmas Day, Boxing Day. Admission free.

DUBLIN

Department of Zoology, Trinity College, Dublin, Eire. University. Exhibits: R. Research collection: R, small. Open: Weekdays 9-5. Closed: Christmas Day, Boxing Day. Admission free.

National Museum of Ireland, Kildare Street, Dublin, Eire. Tel: 65521. Research collection: R, large, F, small. Open: Tuesday-Saturday 10-5, Sunday 2-5. Closed: Christmas Day, Boxing Day. Admission free.

FURTHER RECORDS OF NON-MARINE MOLLUSCA FROM ARABIA

Recently, Mr. Martin Brunt of the Land Resources Division of the Ministry of Overseas Development handed over to me a sample of subfossil shells from Arabia. This was collected by a soil surveyor, Mr. Brian Acres, on the Montane Plains to the north and east of Mabar which lies on the road between Dhamar and Sana'a and comes from a persistent shell horizon he had discovered at a depth of from 50-100 cm below the surface in some of the soils on these plains. The shells also occur on the surface of the soil over an area of 35 square km. The horizon where they occur in the soil profile is characteristically grey and has a silty clay loam texture. The hydrologists working with the team in the Yemen have suggested that the Montane Plains are mainly comprised of lacustrine deposits and that in some places deltaic material can be identified; wind blown material may also be present. It was thought that an examination of the sample might throw some light on the environment in which the snails lived. The main bulk of the sample was found to be made up of Lymnaea truncatula (Müll.) and what is usually recorded as Gyraulus convexiusculus (Hutton) together with many shells of a succineid, probably Oxyloma elegans (Risso) (what is usually called Succinea pfeifferi Rossmassler in Great Britain) and a very few of Bulinus truncatus (Audouin); a number of very small species were also present in the sample, namely a Vertigo, a Gastrocopta, a Vallonia and a Punctum. The Lymnaea, Gyraulus and Bulinus are well-known from the Yemen but none of the other genera mentioned is recorded. The Vallonia is unquestionably V. pulchella (Müll.), a species which prefers much damper places to many of its congeners and is very widely distributed. The Vertigo is almost certainly V. anti-vertigo (Drap.) which has been found together with Zonitoides nitidus (Drap.) (Z. africanus Boettger) in a subsoil state in Bechuanaland (Connolly 1939, 403) and the same pair have been found at Kharga Oasis in Egypt (Adam 1954, 751). If V. congoensis (Darteville) and V. c. garambae Adam described from Zaire are forms of V. anti-vertigo as Adam thinks likely, then he suggests they resulted from importation by man; equally likely I feel is that V. anti-vertigo was once common over much of Africa and the Zaire taxa are derived from that population. Certainly its presence in Arabia is not due to man. The other two species have proved very much more difficult. The Gastrocopta does not appear to be any species described from Africa, the only one with the requisite dentition being G. pleimesi (Jickel) from Ethiopia, Habab Mts, Nakfa in the gorge of Asraq, 5664 ft. Neither I, Pilsbry nor Adam have seen this species but the original figure does not agree. The affinities of the Gastrocopta seem to be with G. baudoni (Mich.) from the Tertiary of Haut-Rive in France and the recent Asian species G. hirasei Pilsbry, G. coreana Pilsbry, G. avanica (Bens.) and G. huttoniana (Bens.). It appears that the European species of sections Albinula and Sinalbinula were derived from Asia in early Oligocene times so probably this Arabian species is of Asian origin. Time has not been available to pursue the very difficult task of identifying it. The identity of the Punctum is equally complicated but its affinities are not with P. pygmaeum (Drap.) and its allies but rather with P. cryophilum (von Martens), an Ethiopian species. It is natural to expect a meeting of geographical affinities in this area of the Yemen with some species having their origins in Europe, others in Asia and others in Africa. The population as a whole certainly suggests that at the time these molluscs were living the site was a marsh with some shallow pools and extensive areas of sedges, rather than a true lake.

Dr. G. Mandahl-Barth has kindly confirmed my determination of the Lymnaea, Gyraulus, Bulinus and Vallonia and also suggested a name for the succineid; he also agrees with my conclusions about the environment. It is hoped to publish a fuller report when more work has been carried out and a C¹⁴ dating is available.

B. Verdcourt

AN UNEXPECTED EARLY SPAWNING OF PETRICOLA PHOLADIFORMIS

Several weeks before the spawning season which starts about mid-July and reaches

its peak in August, and after a heatwave of uncertain duration, when low tide was morning and evening, a morning collection of Petricola pholadiformis was made. The animals were brought back to the laboratory in a screw-topped glass jar containing sea water, during which time a certain amount of joggling must have occurred.

The specimens were placed in an open dish on a laboratory bench in daylight and the sun shone on the dish. In due course and quite accidentally the animal became induced to spawn. It is thought it was a female, but this was not established. Spawning is more complete in the male, and this may therefore indicate an error.

Subsequent attempts to induce spawning later on in the season and the next season failed completely. Shaking in water and warming in water in front of a small electric fire were tried to no avail. Probably both were tried on the same specimens. Unfortunately warming the closed shells of the live animals, and subjecting them to electric light, were not tried. Perhaps the sun had warmed the shell valves abnormally and this triggered off the early spawning recorded above.

It seems an obvious conclusion that normally warmth, and perhaps a little extra light, trigger off spawning, the latter probably serving to keep the planktonic larvae nearer the shore ready for settlement when the spat are ready for this; this would be an adaptation to intertidal life. The nearer the true spawning season the less stimulus of warmth would be required.

It is thought that Petricola could colonise the Mediterranean coasts if suitable substrates were available there, but this is to be avoided on account of the erosion caused by the boring.

D. M. Duval

CONCHOLOGISTS' COLLECTING-GEAR OF THE PAST

Nowadays the conchologist goes forth equipped with diving-gear, under-water camera, etc., etc., and no doubt equally sophisticated equipment for collecting the less glamorous land or freshwater molluscs. It was not always so, however.

The majority of mid-Victorian and late-Victorian shell-collectors seemed to specialise in the British non-marine species, perhaps because access to the seashore was not so easy in those days, and a staunch insularity often caused them to accept only British-taken specimens. I have vivid memories of going out about 1921 with one who might be termed (only he would not have liked to be so described!) a veteran of the past, then in his late seventies. He wore a sort of sports jacket with vast "poachers' pockets" which he filled with bags of moss and leaf-litter for sorting over at home for the lesser land-snails. He normally returned home in a highly inflated condition!

Another veteran carried an ingenious affair (which I now possess) for keeping his snails safe until he reached home; this was a polished copper container, rather like a hip-flask with a sliding top; one slid back the top, dumped snail and some damp moss within, and pocketed the "flask".

Before the days of plastic bags most conchologists had their own "personalized" bags, usually made by long-suffering wives. My friend of the "poacher's pockets" had linen bags, carefully numbered and marked with his name in indelible ink.

Various sorts of "shell-scoops" existed, mostly home-made, for winnowing freshwater snails out of waterweeds and mud; my own scoop belonged to A. W. Stelfox and has done yeoman service since 1898! Some commercial firms (e.g. Flatters & Garnett) used to supply quite pleasant-looking scoops of brass with wire gauze bottoms. Sometimes the scoop part was made to be attached by a split pin to a walking-stick (Stelfox's was). D. E. Allen (1976, pp. 153-4) has pointed out the desire not to be seen carrying

anything at all unusual and this seems to be another manifestation of the same trait. Arrived at a suitable pond one whipped the scoop from one's pocket, attached it to the walking-stick, and got to work!

In the middle of the last century the Cleveland Natural History Supply Depot (of Great Ayton, Yorkshire) (see McMillan 1957) offered natural history books, catalogues, collections of non-marine Mollusca, and collecting apparatus generally. This included a "shell spoon" for dredging (presumably some sort of a scoop) and a "conchological kettle" for boiling molluscs. To my great regret I have never seen an example of this conchological kettle.

No doubt most present-day workers have their own techniques and impedimenta for use in the field, but after all, it all resolves into having "an eye for a snail"!

REFERENCES

- Allen, D.E., 1976 The Naturalist in Britain. Allen Lane, London.
McMillan, N.F., 1957 Notes on Dixon and Watson's "Descriptive Manual of British Land and Fresh-water Shells". J. Conch. 24: 209-210.

Nora F. McMillan

WEST INDIAN SHELLS ON STAMPS

Whilst living in Jamaica I formed a small representative shell collection, and found that this could also be combined with my other main interest - stamp collecting. This article is extended to cover the whole Caribbean which, because of the large number of islands, reefs and shallow waters, provides an ideal breeding-ground for a rich variety of marine shells.

There are a large number of early stamps from Bahamas, on which shells are peripheral to the main design. These were intended to give a slightly individualistic approach for the colony. Examples of these stamps are: Bahamas 1859; 1863; 1884; 1902; 1912; 1938.

Additionally Cayman Islands (KG VI and QE II) and Turks and Caicos Islands (QE II) have followed this tradition and included shells unobtrusively at the corners. In all cases the shell depicted, however stylised, is the Queen Conch (Strombus gigas). This reflects both its abundance in the West Indies (in shallow water), its size and importance as a food source and economically at that time. Indeed Turks and Caicos include a Queen Conch on the shield of their formal 'Arms', and in their 1971 Tourist Development set (3c.).

This pattern of including Queen Conch shells peripheral to the main design has been continued up to present times by these three islands, including an appropriate appearance on the Bahamas 1954 Postal Centenary.

Other islands which have issued stamps with shells as a minor part of the design are Haiti, Queen Conch (1968 Revolt of the Slaves) and Virgin Islands, Virgin Island Latirus (Latirus virginensis) - 1966 Definitive Set.

The first West Indian stamps which had a shell as the main design were included in the 1935 KG V issue from Cayman Islands. This is a most attractive pictorial set and includes the Booby Bird, Hawksbill Turtles (now sadly declined) and on the 1½ and 10/-, the Queen Conch. Both the Hawksbill and the Queen Conch were considered significant identification of the Cayman Islands for the 1972 Royal Silver Wedding pair.

During the late 50's and early 60's the winds of change blowing in Africa, were also affecting the British West Indian Islands. The first to gain full independence

were the two largest British islands, Jamaica and Trinidad, in 1962. As a result a set of stamps relating to Jamaica was issued (1964) and this included 2 shell stamps, 2½d Land Shells (and landscape) and 4d Murex antillarum - deep water species (with Sea Fan background). The set also included an interesting 5/- stamp for the exploration of the Sunken City of Port Royal.

The murex design has been particularly long-lived, being overprinted 'C' Day in 1969 (currency conversion) and issued as 4c in 1970.

Other definitive shell issues during this period were:

Bahamas	1965	10/-	)	Queen Conch (same design)
	1966	£2 on 10/-		
	1967	£2		Queen Conch (revised design)
Barbados	1965	8c		File Shell (Lima?)
		£1		Queen Conch
Turks & Caicos	1957	6d		Queen Conch

By now shells on stamps were becoming a more popular topic, with full sets of shell stamps being issued.

In 1966 Cuba was the first West Indian island to issue a full set. This had 2 land shells and 5 marine shells, including the West Indian Fighting Conch (Strombus pugilis) and the Measled Cowrie (Cypraea zebra). This is one of the very few cowries found in the West Indies.

Cuba had previously issued 5 land snails on their 1961 Christmas set, together with 5 Birds and 5 Butterflies. These sets were followed by 7 Land Snails in 1972 and 2 shells in a 1974 set of 7 commemorating Felipe Poey.

Some of the smaller islands now began to issue shell sets:

Anguilla (4v) 1969 (A reflection of the political changes consequent upon the split-up of St. Kitts-Nevis-Anguilla). The 40c in this set is particularly attractive showing the Royal Bonnet (Sconsia striata), Scotch and Smooth Scotch Bonnets (Phalium granulatum and P. cicatricosum).

Antigua (4v) 1972 This set shows very common and widespread West Indian shells, Reticulated Cowrie Helmet (Cypraecassis testiculus), Measled Cowrie, West Indian Fighting Conch and the Hawking Conch (Strombus raninus).

The 1973 Marine Life set from Haiti includes one shell (5c) - Miniature Melo (Micromelo undata).

Then in 1974 The Grenadines of St. Vincent replaced their definitive set with a most attractive issue of 18 values all depicting local shells (1c to £5), followed in 1976 by the addition of a £10 value. A full list is shown in the following checklist, but particularly attractive shells and stamps are:

4c	Music Volute	(<u>Voluta musica</u>)	East Caribbean distribution
6c	Angular Triton	(<u>Cymatium caribbaeum</u>)	
8c	Flame Helmet	(<u>Cassis flammea</u>)	
£1	Green Star Shell	(<u>Astraea tuber</u>)	

In 1974 the Cayman Islands issued a definitive series featuring Marine Life, Pirates and Treasure. Those featuring shells are:

1c	Hermit Crab	(Triton)
3c	Lions Paw	(<u>Lyropecten nodosus</u>)
15c	Cabrits Murex	(<u>Murex cabriti</u>)
20c	Queen Conch	(<u>Strombus gigas</u>)

A recent development is the addition of a Miniature sheet to the basic shell sets. So far there have been 3 included in sets from the West Indies:

1974 British Virgin Islands (4v) + M/S. These include the Bleeding Tooth Nerite (*Nerita peloronta*), and the large attractive Trumpet Triton (*Charonia variegata*) with the sheet repeating the 4 stamp designs plus a border design showing the Virgin Island Lattus.

1975 Grenada (7v) + M/S. This long set includes the tiny Emerald Nerite (*Smaragdia viridis viridemaris*) in the single values. The M/S features the Music volute against an interesting Chiton background.

1975 Grenada-Grenadines (7v) + M/S. This set is surprisingly the first to feature the attractive King Helmet (*Cassis tuberosa*); it also repeats various common species but has an interesting Distorsio (*Distorsio clathrata*). The M/S shows the Trumpet Triton (*C. variegata*) above a pot-pourri of shells.

A final mention must be made of the Trinidad and Tobago 1962 Independence 5c featuring the Buccoo Reef of Tobago. Although not specifically showing shells this is a very good example of one of the basic shell habitats.

A. Grainger A.C.A.

Member: Roses Caribbean Philatelic Society

SOURCES: Germaine L. Warmke M.S.) Caribbean Seashells
R. Tucker Abbott Ph.D.)
Stanley Gibbons Stamps of the World British Commonwealth

WEST INDIAN SHELL STAMPS

Shells As Main Design

Anguilla	1969	10c	Turbans and Star Shells (possibly <i>Turbo canaliculatus</i> , plus others)
		15c	Spiny Oysters (<i>Spondylus americanus</i>)
		40c	Royal, Scotch & Smooth Bonnets (<i>Sconsia striata</i> ; <i>Phalium granulatum</i> and <i>P. cicatricosum</i>)
		50c	Trumpet Triton (<i>Charonia variegata</i>)
Antigua	1972	3c	Reticulated Cowrie - (<i>Cypraeassis testiculus</i>) Helmet
		5c	Measled Cowrie (<i>Cypraea zebra</i>)
		35c	West Indian Fighting Conch (<i>Strombus pugilis</i>)
		50c	Hawking Conch (<i>Strombus raninus</i>)
Bahamas	1965	10/-	Queen Conch (<i>Strombus gigas</i>)
	1966	£2 on 10/-	Queen Conch (<i>S. gigas</i>)
	1967	£2	Queen Conch (revised design) (<i>S. gigas</i>)
Barbados		8c	File Shell (Lima ?)
	1965	£1	Queen Conch (<i>S. gigas</i>)
	1966	8c & £1	As 1965, but revised watermarks
Cayman Islands	1935	1½d 10/-	Queen Conch (<i>S. gigas</i>) (Also perforated 'specimen')
	1972	12c, 30c	Queen Conch (& Hawksbill Turtle) Royal Silver Wedding
	1974	3c	Lions Paw (& Treasure Chest) (<i>Lyropecten nodosus</i>)
		15c	Cabrits Murex (& Treasure) (<i>Murex cabriti</i>)
		20c	Queen Conch (& Treasure) (<i>S. gigas</i>)
Cuba			Christmas (Navidad 1961/62)
	1961		Set of 15 values, 5 Snails (1c); 5 Birds (2c); 5 Butterflies (10c)

1c	<u>Polymita p. fulminata</u>	)	
1c	<u>P. p. nigrofasciata</u>	)	
1c	<u>P. p. fuscolimbata</u>	)	
1c	<u>P. p. roseolimbata</u>	)	
1c	<u>P. p. flammulata</u>		Single square stamp

These five stamps were printed in sheets, containing 20 stamps - 4 times the above designs, plus labels of peeling bells (5) with a star centrepoint.

	1966	Cuban Handicrafts		
		13c	Snail Shell necklace and earrings (probably moon shell)	
	1966	Cuban Shells		
		1c	Flamed Tree Snail	(<u>Liguus flammellus</u>)
		2c	Measled Cowrie	(<u>C. zebra</u>)
		3c	West Indian Fighting Conch	(<u>S. pugilis</u>)
		7c	Scallops	(<u>Aequipecten muscosus</u>)
		9c	Striped Tree Snail	(<u>L. fasciatus cranatus</u>)
		10c	Trumpet Triton	(<u>Charonia variegata</u>)
		13c	Banded Tree Snail	(<u>L. fasciatus archeri</u>)
	1973	'Molluscos Liguus'		
		1c	<u>Liguus fasciatus f.</u>	
		2c	<u>Liguus fasciatus guitari</u>	
		3c	<u>Liguus fasciatus whartoni</u>	
		4c	<u>Liguus fasciatus angelae</u>	
		5c	<u>Liguus fasciatus trinadendense</u>	
		13c	<u>Liguus fasciatus blainianus</u>	
		30c	<u>Liguus vittatus</u>	
	1974	175th. anniversary of Felipe Poey (6v, Butterflies, Fish & Shells)		
		2c	<u>Pineria terebra</u>	
		13c	<u>Hemitrochus fuscolabiata</u>	
Dominican Republic	1972	Taino Arts and Crafts		
		10c	Shell Trumpet	(Trumpet Triton)
Grenada	1975	1/2c	Leafy Jewel Box	(<u>Chama macerophylla</u>)
		1c	Emerald Nerite	(<u>Smaragdia viridis viridemaris</u>)
		2c	Yellow Cockle	(<u>Trachycardium muricatum</u>)
		25c	Purple Sea Snail	(<u>Janthina janthina</u>)
		50c	Turkey Wing	(<u>Arcae zebra</u>)
		75c	West Indian Fighting Conch	(<u>S. pugilis</u>)
		81	Noble Wentletrap	(<u>Stenorytis pernobilis</u>)
	M/S	82	Music Volute	(<u>Voluta musica</u>) with Chiton in the background of the sheet.
Grenadines of Grenada	1975	1/2c	Bleeding Tooth Nerite	(<u>Nerita peloronta</u>)
		1c	Wedge Clam	(<u>Donax desoticulatus</u>)
			(Common Caribbean Donax)	
		2c	Hawk Wing Conch	(<u>S. raninus</u>)
		3c	Atlantic Distorsio	(<u>Distorsio clathrata</u>)
		25c	Scotch Bonnet	(<u>Phalium granulatum</u>)
		50c	King Helmet	(<u>Cassis tuberosa</u>)
		75c	Queen Conch	(<u>S. gigas</u>)
	M/S	82	Trumpet Triton	(<u>Charonia variegata</u>) with pot-pourri of shells in the background of the sheet.
Haiti	1973	Marine Life and Fish (14v)		
		5c	Miniature Melo	(<u>Micromelo undata</u>)

Jamaica	1964	2½d	Land Shells	
		4d	<u>Murex antillarum</u>	
	1969	4d	overprinted 4c	(Decimal currency change date)
	1970	4c	<u>Murex antillarum</u>	(as 4d)
Grenadines of St. Vincent	1974	1c	Atlantic Thorny Oyster	(<u>Spondylus americanus</u>)
		2c	Zigzag Scallop	(<u>Pecten zigzag</u>)
		3c	Reticulated Cowrie Helmet	(<u>C. testiculus</u>)
		4c	Music Volute	(<u>Voluta musica</u>)
		5c	Amber Pen Shell	(<u>Pinna carnea</u>)
		6c	Angular Triton	(<u>Cymatium femorale</u>)
		8c	Flame Helmet	(<u>Cassia flamma</u>)
		10c	Caribbean Olive	(<u>Oliva caribaeensis</u>)
		12c	Common Sundial	(<u>Architectonica granulata/A. nobilis</u>)
		15c	Glory of the Atlantic Cone	(<u>Conus granulatus</u>)
		20c	Flame Auger	(<u>Terebra taurinus</u>)
		25c	King Venus	(<u>Chione paphia</u>)
		35c	Long-spined star-shell	(<u>Astraea phoebia</u>)
		45c	Speckled Tellin	(<u>Tellina listeri</u>)
		50c	Rooster Tail Conch	(<u>S. gallus</u>)
		£1	Green Star Shell	(<u>A. tuber</u>)
		£2.50	Incomparable Cone	(<u>Conus dominicanus</u>)
		£5	Rough File Clam	(<u>Lima scabra</u>)
	1976	£10	Measled Cowrie	(<u>C. zebra</u>)
	1976	Also 4c, 5c, 6c, 8c, 10c, 20c, 35c, 50c, £1 issued with 1976 printed on them		
Turks & Caicos Islands	1957	6d	Queen Conch	(<u>S. gigas</u>)
	1967	4d	Conch Industry	)
	1969	4c	on 4d Conch Industry	) all same design (<u>S. gigas</u>)
	1971	4c	Conch Industry	)
	1971	3c	Queen Conch	(<u>S. gigas</u>)
			(Tourist Development)	
British Virgin Islands	1974	5c	*Trumpet Triton	(<u>C. variegata</u>)
		18c	West Indian Murex	(<u>Murex brevifrons</u>)
		25c	Bleeding Tooth Nerite	(<u>Nerita peloronta</u>)
		75c	Virgin Islands Latirus	(<u>Latirus virginensis</u>)
		Also a Miniature sheet comprising all 4 values with background of several Virgin Island Latirus		

* Also issued with the incorrect watermark of Lesotho (Basuto hat)

Hermit Crabs with Shell Homes

Additionally the following stamps show shells as a major part of the design, being the 'homes' for hermit crabs.

Anguilla	1967	60c	Cuba	1969	1c
Cayman Islands	1974	1c			

Shells as Peripheral Designs

Bahamas

From Queen Victoria (1859) onwards, many Bahamian stamps have had the Queen Conch shell in the basic design. The Queen Victoria stamps have a Queen Conch and a pineapple balancing each other in the design just above the value.

For the stamps of King Edward VII, King George V and King George VI, the Queen Conch and pineapple moved to the centre of the stamp, one each side of the head.

Being definitive issues, these stamps are available in many forms, including 'specimen', colour changes, overprints (Monetary, War Tax, and Landfall of Columbus).

In 1959 the Bahamas celebrated their postal centenary with an issue of 4 stamps. The design layout of these was very similar to the first Queen Victoria issue (S.G.1.).

Cayman Islands

After the attractive 1935 stamps, the Queen Conch was included in several values of the definitive sets of 1938, 1956, 1953 and 1962. For the recent 1974 definitive set shells were again brought into the main design.

Haiti

1968 Revolt of the Slaves (in 1971).

Design comprises: Slave breaking chains, torch and Queen Conch.

Postage 5c, 10c, 25c. Air 50c, 1g., 1g.50, 2g.

Turks and Caicos Islands

The Arms of Turks and Caicos are comprised almost entirely of relevant wildlife. Flamingoes flank the shield, surmounted by a Brown Pelican, and on the shield are a Turks Head Cactus, Spiny Lobster and a Queen Conch. As a result any stamp showing the Arms can be included in a shell stamp collection. Additionally there are other stamps where shells are included, sometimes with the cactus, etc.. These 2 types are shown separately.

Arms Stamps

1966	Bicentenary of 'Ties with Britain'	1/6d	Arms & Royal Cypher
1967	Definitive set	10/-	Arms
1969	Definitive set (Decimal)	$\frac{1}{4}$ c) \$1 on 10/-)	Arms (same design)
1970	New Constitution	7c & 35c	Arms (vertical)
1971	Definitive set	\$1 (as 10/- etc.)	
1973	Centenary of Annexation to Jamaica	15c & 35c	Arms of Jamaica and Turks & Caicos

Other Stamps showing Queen Conch

1967	Definitive set	£1	Portrait of QEII; shell in bottom left hand corner
1968	Human Rights Year	1d, 8d, 1/6d	Shell at bottom left (also cactus, flamingo, spiny lobster)
1971	Definitive set	\$2 (as £1)	

Virgin Islands (British)

Each stamp in the 1964 definitive series has a row of shells (Virgin Island Latirus). They appear in different positions - top, bottom and vertical. The main design shows relevant features of the Virgin Islands. The stamps are also unusual in stating the specific currency as (U.S. cy), following a currency change in 1962.

1964	Complete set	1c to \$2.80
1966	Overprints on above values	50c on 70c, \$1.50 on \$1.40, \$3 on \$2.80
1968	10c and 25c of 1964 overprinted for Human Rights Year	

REVIEW

The best of The Nautilus. A bicentennial anthology of American conchology. Edited by R. Tucker Abbott. viii + 280. 8vo. American Malacologists, P.O. Box 4208, Greenville, Delaware 19807. Price \$13.95.

Once in a while a reviewer is sent a book which is tailor-made for him. This is such a book. Sheer pleasure all the way, so here goes for a favourable review. The Nautilus, one of the leading malacological journals published in the U.S.A., was born nearly a century ago, in 1886, and complete sets of it are few and far between so this anthology from it is a welcome substitute. Since 1886 there have been many important developments in malacology, not least in the U.S.A., and many of the men and women who distinguished themselves in this field contributed to The Nautilus - not least its former editor, the incomparable Henry A. Pilsbry - and after recording their own exploits and discoveries many of them were themselves made the subjects of obituaries published in the journal. There is much in this anthology by and about such men and women. This being a frankly nostalgic compilation the editor has wisely included some of the original advertisements and these help to give the book the period flavour that a bicentennial anthology should have.

Nostalgia and piquancy aside, is there anything about this book of permanent value? As one who does not have ready access to a run of The Nautilus I shall certainly appreciate having this volume for reference. Charles Hedley's 'A day on the Great Barrier Reef' (January 1902) was exactly the kind of article I had been looking for in connection with something I had been writing, and I am sure that one day I shall want to quote from P. S. Remington's 'Rambles of a midshipman' (April 1922), an unaffected and absorbing account of shelling in the West Indies, Panama and Honolulu by someone who had very little spare time for shelling and always seemed to do the wrong things when he did have the time.

A large part of the book can only be fully appreciated by Americans or by those who have visited the U.S.A.. The best articles are those which tell of collecting trips in and around that country, the editor having organised them under several headings such as 'Early collecting on the Atlantic coast' and 'Tracking the terrestrials'. The articles dealing with non-marine material are the most interesting to read which is not surprising as the early years of The Nautilus were also boisterous pioneering years when railways were thrusting fingers into vast undeveloped lands, the motor car was a novelty and a good road a rare luxury. P. B. Randolph's article 'Collecting shells in the Klondike Country' (February 1899) shows, for instance, that gold was not the only attraction in that inhospitable part of the world in the 1890's. The delights and discomforts of hunting for the colourful Liguus snails are highlighted in several articles including one by William J. Clench (to whom this anthology is dedicated). Charles Torrey Simpson's 'A search for Liguus' (January 1922) tells of thickets 'not quite as dense as a haystack, but the next thing to it', 'swarms, or herds, or droves, whichever they may best be called, of an enormous black mosquito' and of growth 'so dense that we could not see the sun'. It made me realise that the one uncomfortable day I spent looking for Liguus on the edge of the Florida Everglades a few years ago was child's play by comparison.

The section 'Departed Friends' comprises a selection of obituaries of the famous and the not-so-famous, and this is followed by some assorted snippets such as 'Sea gull drops clam on policeman'. The book ends, rather lamely I feel, with a poem dating from 1960 by Henry Dodge, 'Salute to The Nautilus' the function of which was to drop conchologists' names in alphabetical order. This, the lack of an Index and adequate referencing to the component articles are the only faults I can find with this most enjoyable anthology. Adorning the dust jacket is a photo of a man smiling happily although up to his knees in murky water. This, being an accurate portrayal of the editor of this anthology as well as of The Nautilus itself, has suggested the following poetic lines:

How pleasant to know R.T.A.!
Who has written such volumes of stuff!
Delightful to see him so gay
And to know he's not saying 'Enough!'

Thoughts of retirement he'll banish
As long as there's something to say,
Ere the days of his pilgrimage vanish,
How pleasant to know R.T.A.!

(With apologies to Edward Lear)

S. Peter Dance

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(With apologies to Edward Lear)

S. Peter Dance

REVIEW

A Handbook to the Natural History of the Lizard Peninsula; including Supplement I: Flowering Plants arranged by Habitat. Compiled and edited by F. A. and S. M. Turk. Dept. of Extramural Studies, University of Exeter, 1976, n.p.

One by one the unique and mysterious regions of Great Britain (and no doubt of other places too) give up their secrets, yielding to the relentless pressure of Science or of Economics. There are some who would wish to retain oases of ignorance, to allow the imagination a little exercise, but things being what they are in this twentieth century, such thoughts are mere foolishness. Glastonbury has lost its glamourie in recent years, and the latest victim to thorough investigation is the remote and peaceful Lizard Peninsula.

Since it was bound to be done, it is good to know that it was done by the Turks, who love the area, and who accomplished their tremendous task with erudition and a meticulous thoroughness which is a characteristic of all they do, from Chinese calligraphy to dermatology.

The data comprising the handbook was gathered over a period of four years by classes of adult students working under the direction of Dr. and Mrs. Turk, and an enormous number of records was amassed both by fieldwork and by research of past literature, covering all relevant groups in the animal and vegetable kingdoms - and much else besides, for geology, agriculture, climatology and ecology have been fully reviewed and it seems likely that the thoroughness of the survey has rarely been equalled anywhere. As Prof. Daveney so truly says in his introduction 'a volume so compendious, so painstakingly assembled, so scrupulously documented and so thoroughly informative, must place it in the very highest species of its kind.' The result is good evidence of the students' enthusiasm, the tutors' devotion, and the scientific honesty of both. To anyone remembering the fruitful years during which Mrs. Turk was our Society's Marine Recorder, it would be a surprise if the Mollusca were not effectively dealt with; in this respect, the reader will not be disappointed. Useful data abound here, as everywhere else in the book. One gets the impression that there can be little left to discover on the Lizard, though doubtless the compilers feel that they have merely scratched the surface.

T. E. Crowley

REVIEW

The Atlas of Breeding Birds in Britain & Ireland. Compiled by J. T. R. Sharrock. Published by The British Trust for Ornithology, Beech Road, Tring, Herts. Price £9.00

In 1962 'The Atlas of the British Flora' brought an entirely new conception in Field Work. A thousand or more Botanical Recorders tramped the Countryside of the British Isles meticulously recording every plant species they found growing in every 10Km. square. Since 1962 many more Naturalists have followed the example set by the Botanists, with the result that we now have many groups mapped on a 10Km. grid system, although the coverage is far from complete.

1976 will be remembered as a milestone in the world of Natural History Atlases. First to be issued was 'The Atlas of the Non-Marine Mollusca of the British Isles', the work of some 200 Conchologists dedicated to surveying the Country in search of slugs and snails. In November 1976, we had the end product of the work of an estimated 10,000 Ornithologists who have, over a period of five years from 1968 to 1972, plotted all the known sites for birds breeding in the British Isles.

Maps at the beginning of the Atlas show how the coverage mounted (and obviously the enthusiasm) as each breeding season progressed. Each bird species has its own full-page map and on the page facing a full-length text giving details of habitat and status,

etc.. A very useful set of references also appears at the bottom of every page.

By studying series of maps such as the Botanical, Conchological and Ornithological, many questions will no doubt emerge. The overlays showing Geology, Humidity, Altitude, etc., that have been promised will now be more than ever necessary.

The Ornithologists, and especially Dr. Sharrock who had the mammoth task of compiling this work, are to be congratulated and I hope that the plans to re-do the study within the next 10-15 years will in fact bear fruit.

E. Beryl Rands

MARINE CENSUS 2

Latitude and Longitude versus National Grid.

Discontent over the unsuitability of the National Grid for offshore recording has prompted recorders to search for a means whereby both shore and offshore records could be referred to an unified system. The standard BRC base map of the British Isles, with its superimposed 10km grid, serves not only for terrestrial recording but also for the shore since, if *Cernula virgata* at the top of a cliff can be referred to a particular 10km square then so can '*Littorina*' *saxatilis* at the bottom. If marine recording were confined to the littoral zone, say down to the Laminarian zone, then the standard BRC base map would present no difficulties.

However, once offshore recording is introduced then several problems arise. The first is that positions at sea are given either in Latitude and Longitude or Decca Navigator coordinates, and relating these to the National Grid is difficult and introduces ambiguities. To my knowledge only one obtainable map, the O.S. 1:1250000, shows the British Isles, North Sea, English Channel and Irish Sea, covered with a 10km grid together with Latitude and Longitude around the margins. This map, unfortunately, does not extend northwards or westwards to the boundaries of the British Census Area. Consequently, we have a state in which recorders working solely on the shore have a system for recording, and relating, their finds; but one in which offshore workers are required to use other systems which do not relate directly to the 10km National Grid.

The second difficulty arising from the fact that, for non-marine purposes, the islands of Orkney and Shetland have been lowered and inset into the northern part of the North Sea, and these are clearly in the way of offshore records.

The incompatibility of the convenient 10km grid for shore recording with the necessary Latitude and Longitude system for offshore work has prompted Mr. D. McKay and Dr. S. M. Smith to search for an unified system for both shore and offshore recording. They have shown that a system, called I.C.E.S. does provide such an unified system of reference. It consists of a grid of 'statistical rectangles' covering the British Isles and extending out to the limits of the British Marine Census Area. The rectangles, from south to north, become more nearly square: at 50° Latitude they are distinctly oblong; but at 62° Latitude they are nearly square. The boundaries of the rectangles are formed by lines of Latitude and Longitude and separated by intervals of half a degree of Latitude and one degree of Longitude.

Each rectangle covers a sea area of roughly 30 x 30 nautical miles, and can be further subdivided into 25 sub-units, bounded again by lines of Latitude and Longitude with intervals of 6' of Latitude and 12' Longitude. The rectangles thus produced are nearly equivalent to 11 x 11km squares at 62° Latitude and, in the context of the incompatibility of the National Grid and Latitude and Longitude systems, this seemed like an excellent solution. I therefore visited BRC at Monks Wood in order to discuss this with Dr. F. Perring and Mr. J. Heath.

It came as no surprise to learn that they were aware of these 'problems', but I was surprised to learn that no practical problems existed. In the first place, the Orkney and Shetland Islands can be shifted back to their proper place to avoid blocking North Sea records. Secondly, BRC can handle records however they come - National Grid, Latitude and Longitude, or even Decca Navigator - and produce a distribution map from them. Apparently, Area Representatives, trying to fit offshore records into the 10km grid over the sea, have themselves generated the 'incompatibility' problem. It is not, and never has been, necessary to refer offshore records to a 10km square. These need only be given in Latitude and Longitude. Decca Navigator coordinates, though acceptable, require a special programme so that Latitude and Longitude is preferable.

When it comes to map-making a programme exists for putting a dot in the appropriate place for records using the National Grid, and another one exists for doing the same thing with offshore records in Latitude and Longitude. No laborious conversion is necessary for the computer completes the task accurately and swiftly. If distribution maps were to be made by hand an unified system would be essential but, with a computer to do the work, an unified system, though theoretically desirable, is not a practical necessity.

Nevertheless, a minority of offshore workers have a valid complaint and, though I do not admit that changing to an unified system is an immediate necessity, it is, in the long term, desirable that we should do so. We are not faced with a choice between a system that works and another which doesn't, for our present hybrid system is functional and will take us to the termination of the first phase of the Marine Census with the production of a first Marine Atlas. But then we should pause and reconstruct the Marine Census from the lessons learned in the first phase before embarking on the second. Changing horses in mid-stream is justified when the horse you are on will not take you to the opposite bank!

A plan, to be outlined in the next article, exists which will, with the willing cooperation of all marine workers, take us to a Marine Atlas in an estimated four years. This plan includes interim goals such as the publication of Area Master Cards, individual distribution maps, an interim atlas, a new marine species list, and, to conclude the first phase, our first Marine Atlas.

To Summarise:

There is no need to change to another system immediately, though it is desirable that we do so eventually, and sensible if we do so after production of the first Marine Atlas. It is essential, in order that future records should be easily related to existing ones, that Latitude and Longitude be inserted on all original site cards; shore cards only should also have grid references in addition to Latitude and Longitude.

C. P. Palmer - Marine Recorder

GENERAL NOTES

OPPORTUNITIES FOR BRITISH MARINE MOLLUSC ENTHUSIASTS

During 1977 there will be a unique opportunity for British marine mollusc enthusiasts to help in a project to map the distribution of sublittoral plants and animals. The project, 'Underwater Conservation Year 1977' is being run in conjunction with the British sub-Aqua Club to improve our knowledge of sublittoral communities. This should help us to understand the impact that pollution is having, and will have.

There are various sorts and levels of recording schemes, ranging from 'adopt a rock' to the nudibranch recording scheme, in which the divers may participate depending on knowledge and inclination. Members of the Conchological Society are needed to go along to the dives to encourage divers and to explain what they might find and where to

find it, and to identify the larger specimens on the spot. This last service should avoid the frustrating lack of feed-back which might result if eager collectors bear off the catch without telling the divers what they have found. The dives will provide living specimens of species rarely encountered by shore collectors so that divers and conchologists will have the excitement of seeing the live animals 'doing their own thing'.

For further details please contact Mrs. C. J. Pain, [REDACTED], Millbank, London, [REDACTED]. Telephone evenings only [REDACTED].

BIOLOGICAL RECORDING IN WALES

A symposium was held at the National Museum of Wales over 8-9 October 1976 to review the situation of biological recording and data banks in the Principality. Speakers represented those who were taking an active part in gathering data and assembling data banks and those who might be potential users of such data. (e.g. schools, Nature Conservancy Council, Planning authorities, Naturalists' Trusts, Forestry Commission, etc.). The meeting led to some useful co-ordination between individuals formerly working on the same problem in isolation and there was also a directive towards arranging a set of priorities for new field work and for the potential users of data to suggest sites which might be usefully surveyed by existing teams of recorders. Another directive from the meeting was for the formation of a local record centre for Welsh records. A working party will work on this.

It is important to know which records exist for particular sites (with an emphasis on named sites rather than 10 km squares). Any members who have lists of molluscs from Wales are asked to write to Dr. June Chatfield of the National Museum of Wales indicating (i) which sites are involved, (ii) the range of dates (e.g. 1969-1973), (iii) whether non-marine molluscs were recorded and (iv) your name and address so that you may be contacted when the data bank is ready to receive detailed site information.

June Chatfield

SLUGS AND SNAILS. Friday 2 September (evening) - Sunday 4 September 1977 (to 4.00 p.m.) at Preston Montford Field Centre, Montford Bridge, Shrewsbury, SY4 1DX. An introduction to the identification and natural history of the group. Tutor: Dr. R. A. D. Cameron. Fee: £18.50. Full details from Warden of Field Centre.

SLUGS, SNAILS AND OTHER MOLLUSCA. 17-24 August 1977, at Malham Tarn Field Centre, Settle, Yorkshire, BD24 9PU. Identification and ecology of land and fresh water molluscs in one of the richest sites in the country. High altitude mollusca will be a special feature this year. Tutor: Dr. R. A. D. Cameron. Fee: £45.00. Full details from Warden of Field Centre.

CASTAWAYS MISIDENTIFIED

The specimens which superficially resembled Musculus niger were identified by David Heppell and Dr. Shelagh Smith as Brachydontes exustus from brackish waters - North Carolina to Uruguay.

Margaret Brockbank

SNAILS AND BLOOD TRANSFUSION TESTS

Certain snails contain a protein which is of use in Blood Transfusion tests. I am at the moment investigating an apparently new blood group which reacts with extracts of Helix pomatia, imported from West Germany, but not with the same species from Surrey.

If any readers are able to supply me with examples of any of the following snails I would be very grateful. Only one or two of each are required from any one locality:

Helix aspersa

Cepaea hortensis

Helix pomatia - particularly this species

Cepaea nemoralis

Pomatias elegans

Helicella virgata

Bithynia tentaculata

Monacha cantiana

Arianta arbustorum

(Full list of species and possible sources with Newsletter Editor).

As I have no idea how to identify these beasts, perhaps any sent to me could be labelled with species and locality where harvested. Richard J. Myers, Chief Technician Blood Bank, Bath Clinical Area Pathology Service, Area Central Laboratory, Royal United Hospital (North), Combe Park, Bath, BA1 3NG

THE FOLLOWING NEW MEMBERS OF COUNCIL were elected at the A.G.M. - Miss Eleanor Fogan, Mr. Martin Willing and Mr. Fred Woodward.

MR. L. W. HILL, THE BIRDLAND ZOO GARDENS, Bourton-on-the-Water, Gloucestershire, will be grateful if someone will undertake to name and label his collection of shells. Please write.

SINISTRAL FUSINIDS. Mrs. Kathleen Smythe has some specimens of Sinistralia from the Persian Gulf and we are trying to give them a name. There are very few references to Sinistralia in the literature and few specimens in museums. We would be very grateful to hear from anyone who has specimens of these which we could either have a photograph of or borrow, or who could help in any other way with information on references in the literature. June Chatfield (National Museum of Wales, Cardiff)

CORRECTIONS. Page 526. Ilex aquifolium, Geranium robertianum, Circaea lutetiana, Dryopteris austriaca, Narcissus.

EXCHANGE OF PUBLICATIONS WANTED - FINLAND. Societas Biologica Fennica Vanamo, Snellmaninkatu 9 - 11, 00170 Helsinki 17, Finland, wish to receive the Journal of Conchology regularly and offer 'Annales Zoologici Fennici' (quarterly) in exchange. Anyone interested, please write. Index - in English - showing contents of vol. 12 as a sample is available from the Newsletter Editor.

JOHN LLEWELLYN-JONES, [REDACTED], Thundersley, Essex, wishes to obtain the Conchologists' Newsletter, Nos. 13, 15, 22, 23, 25, 27, 28, 31, 32, 40 & 46. Also any copies of the Journal of Conchology, singles or runs. Please write to arrange price and transport.

THE SOCIETY'S PUBLICATIONS. Back numbers of the Conchologists' Newsletter may be obtained from J. Collins, The Bookshop, 45 Westow Street, Upper Norwood, London, S.E.19 (tel. 01-771-9719) at 25p each plus post, or from the Hon. Secretary, Mrs. E. B. Rands who can also supply copies of the Marine Concordance, 30p to members and 50p to non-members, The Atlas of Non-Marine Mollusca, £2.50 to members, plus 85p post/packing and £3.00 to non-members plus 85p post/p. Mrs. Rands can also take orders for back numbers of the Journal of Conchology.

Papers for Students can be obtained from Mr. A. Norris, Natural History Dept., City Museum, Municipal Buildings, Leeds, LS1 3AA

SHELLS FOR SALE. A fine selection of shells for the collector is available at Eaton's Shell Shop, 16 Manette Street, off Charing Cross Road, London, W1V 5LB (Tel. 01-437-9391)

"UNUSUAL SPECIMEN SHELLS FOR SALE at THE SHELL COLLECTOR", 1 High Street, Weston-super-Mare, Somerset. We are open Saturdays only during the winter, but normal hours during the holiday season (no mail order from this address).

SHELL STAMPS FOR SALE. Send SAE for Extensive Lists of Shell and Marine Stamps. All new issues available. Also nature subjects, e.g. Birds, Butterflies, Flowers. Write to: A. Grainger, [REDACTED], Horsforth, Nr. Leeds, [REDACTED]

THE CONCHOLOGISTS' NEWSLETTER

No. 62

Newsletter Editor: P.E. Negus,

September 1977

Chelsea Bridge Road,
London, [REDACTED].

Produced by THE CONCHOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND

FERRISSIA - A GENUS OF FRESHWATER LIMPET NEW FOR BRITAIN

Towards the end of 1976 I received a small freshwater limpet (Ancyliidae) belonging to the genus Ferrissia from Dr. T. A. J. Reader of Portsmouth Polytechnic. It had been obtained in an aquarium stocked with Lymnaea peregra from a pond at Bishop's Waltham in Hampshire. Perhaps this specimen of Ferrissia is the first to be obtained from a natural habitat in Britain. I am indebted to Dr. Michael Kerney for confirming that he knows of no other comparable records and for recalling that some small ancyliids of uncertain identity had been found in the Royal Botanic Gardens at Kew. He kindly got in touch with Dr. Adrian Rundle who, on 20th. February, visited hothouse No. 10 at Kew accompanied by Mrs. Marjorie Fogan. After a long search she succeeded in finding one specimen of Ferrissia on the underside of a leaf of Pistia stratiotes growing in the Victoria amazonica tank. Dr. Rundle brought this limpet to me alive and told me that previously he had sent a similar limpet away for identification but apparently it had been lost.

Ferrissia evidently is living under artificial conditions and perhaps also in natural habitats in at least two areas of southern England. I hope the present note will encourage searches for this little limpet, which rarely exceeds 4mm in length, in aquariums, garden ponds and indeed any standing or slowly flowing waters. Possibly it is widespread but overlooked and specimens perhaps already exist unrecognised in collections.

The genus has an interesting recent history in Europe, being unknown here until 1944 when specimens were found in central France (Calas, 1946, "Gundlachia"). A report followed for Italy (Mirolli, 1960, "Watsonula wautieri") and numerous records for France, Italy, northern Germany, Austria, Czechoslovakia, Hungary, Yugoslavia and Romania are reviewed by Wautier (1974). Wautier refers to an examination by I. Pintér of shells collected in Hungary, which led to the recognition of 916 specimens of Ferrissia, labelled previously as Acroloxus lacustris. The genus is cosmopolitan and there appears to be a single species present in Europe, properly named Ferrissia wautieri (Mirolli) and held to be related to F. clessiniana (Jickeli, 1882) of Egypt (Hubendick, 1970).

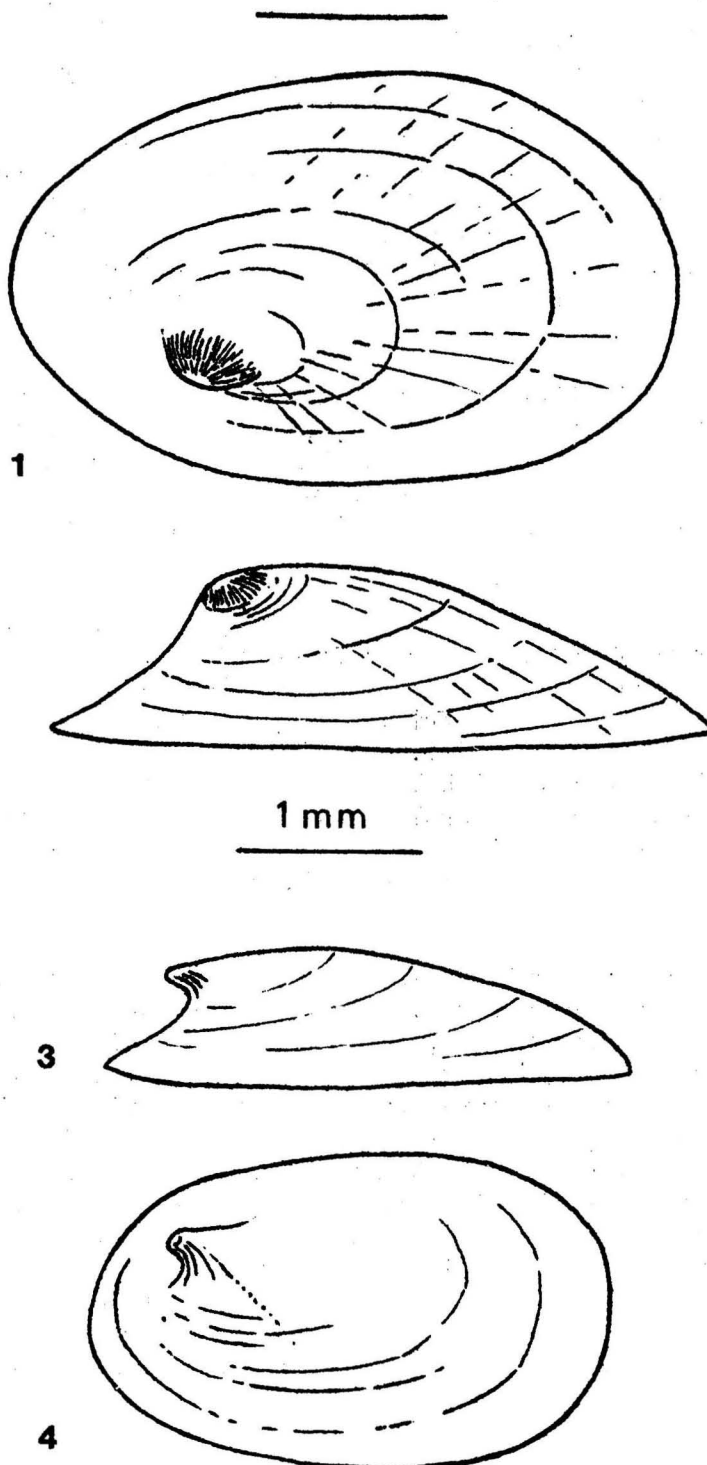
Besides being small, a Ferrissia is sometimes difficult to detect because the shell is coated with algae or detritus. On the other hand, a clean shell is inconspicuous because it is nearly transparent, allowing the animal to be seen clearly with a lens. The limpets are commonly found on floating leaves, the submerged stems of reeds and grasses, and I have obtained large numbers from plastic rubbish in Africa. The egg capsule has a circular base, a domed roof and it contains only one or two eggs. At first sight a Ferrissia might be mistaken for a young Acroloxus lacustris, but the distinctly hooked apex of the latter is turned to the left when pointing towards the observer, whereas the apex of Ferrissia is blunt and turned to the right. Another characteristic of the apex of Ferrissia is the large number of very fine radial ridges. Sometimes a septum is formed which partly closes the bottom of the shell, and as the result of subsequent growth a small shell comes to be perched on top of a large one. The septum seems to be formed in response to drying out of the habitat.

I would like to thank Mrs. Fogan, Dr. Reader and Dr. Rundle for sending their specimens for identification and Dr. Kerney for stimulating the search at Kew.

24th February 1977 David S. Brown Zoology Department, British Museum (Natural History)

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Figs 1 & 2. Ferrissia sp. From aquarium in Portsmouth Polytechnic. Viewed from above and from the side. Full-grown specimen of 3.5 mm.

Figs 3 & 4. Acroloxus lacustris. Basingstoke Canal, England. Viewed from above and from the side. Young specimen.

Scale lines represent 1 mm.

Note that the apex of Ferrissia is comparatively obtuse and is not "hook-shaped".

FURTHER SPECIMENS OF CHARONIA LAMPAS (L.)

discovered off the coast of Co. Kerry, Ireland

In recent years attention has been drawn to the re-discovery of the gastropod mollusc Charonia lampas (L.) in the English Channel, and to its discovery off the Co. Kerry coast. In brief, three or four living specimens were dredged off the coast of Guernsey, Channel Islands, between 1825 and 1847 (Crowley, 1961). One hundred and twenty five years elapsed before Brehaut (1973) reported on three further live specimens taken off Guernsey and the Casquets. Turk (1976) reported on a further living specimen taken off the Cornish coast some 5 - 6 miles SE of Wolf Rock in 1975.

In 1970 this mollusc was discovered for the first time in Irish waters and during 1971 three further live specimens were taken off the Co. Kerry coast (O'Riordan, 1972). Since that date two further living specimens have been found off the Co. Kerry coast, making a total of six specimens at the date of writing.

Set out below, in brief, are the particulars of the six Irish specimens, the first four of which have already been reported upon (O'Riordan, op.cit.). The nature of the bottom where these molluscs were taken was not stated but has been deduced from Admiralty Chart No. 2679.

- NMI 3, 1970; 125 x 63 mm; P. Flannery, "Guiding Star"; between Sybil Head and Inishtooskert, 50 fm; 8 April 1970.
- NMI 13, 1971; 145 (originally 175?) x 73 mm; J. Walsh, "Morning Star"; just south of Great Blasket, (20-25fm?); 8 June 1971; coarse sand?
- NMI 36, 1971; 97 x 58 mm; J. Walsh, "Morning Star"; 9 miles SW of Great Blasket, 50 fm; 15 November 1971; mud.
- NMI 37, 1971; 178 x 95 mm; "Naov Deararca"; Wild Bank (3 miles S. of Sleah Head), (21-29 fm?); 16 November 1971; Sand or coarse sand.
- Owner's specimen; 148 x 73 mm; J. Walsh, "Morning Star"; Wild Bank, (21-29 fm?); 2 July 1975; sand or coarse sand.
- NMI 109, 1975; 145 x 75 mm; J. Walsh and crew, "Morning Star"; 2 miles S. of Great Blasket; c. 22 fm; 18 August 1975; sand.

It can be readily seen that all but NMI 3, 1970 have been taken at the western approaches to Dingle Bay. Four of the remaining specimens were taken in an area south of a line from Sleah Head to Blasket Island. Despite attention being drawn locally to the presence of these molluscs only a few specimens were reported taken. It would appear, therefore, that the species is very rare indeed in the region.

Though the exact measurements of the English Channel specimens are not given it would seem that all specimens except one were 200 mm or over in height. The Co. Kerry specimens were considerably smaller than this. This may be connected with the fact that the Irish specimens are at the northernmost limit of their distributional range in the Eastern Atlantic.

Sincere thanks are due to Mr. Michael Long of Dingle, Co. Kerry, and the skippers and crews of the trawlers concerned for drawing my attention to the occurrence of this

mollusc off the Irish coast, and for presenting the specimens to the National Museum of Ireland.

C. E. O'Riordan, National Museum of Ireland, Dublin 2

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COLLECTING SHELLS IN BARBADOS

In our endless quest for shells and the beach of our dreams, we had got as far as Jamaica. Although the total of the species found there had come to 139, at the time we were rather disappointed and this was not helped by other holiday-makers there telling us "If you want shells, you should have gone to Barbados! There's a reef within a few yards of the beach, you know!" So of course Barbados became our next goal and two years later we found ourselves on a plane on our way there. The price of the package tours drops dramatically at the start of their "summer", which is about mid-April, so we had booked a flight soon after; we also hoped that the dry winter weather would extend a couple of weeks and that we would therefore not have as much rain as we had in Jamaica in July. This proved to be true and although there were some heavy showers, these were soon over and the only difficulty was being caught in one (they start very suddenly) on the beach and being unable to get back to shelter in less than 5 minutes, by which time one could be very wet, or if one was just starting out to walk to the dining room, fully dressed! The reason for that was that in Barbados most of the hotels seem to have the bedrooms away from the main block, either in bungalows or in blocks of 4, so that one might have quite a walk to get to dinner.

As we arrived in the dark - it gets dark around 7 p.m. all the year round - and of course went straight to bed after our long journey, we did not see the beach till about mid-morning the next day. We were quite disappointed. Apart from a number of Diodora and Fissurella lying on the sand or just at the edge of the waves, there was very little else. As soon as we could we started to walk along the beach. Our hotel was on the West Coast (Sandpiper Inn) nr. Holetown, and we were able to walk roughly a mile north or south of there without much obstruction. The beach there is rather narrow and sandy. We found more varieties of Diodora, Acmaea, Fissurella and Hemitoma, quite a lot of single Chama, Lima and Hipponix, Columbella mercatoria L. and a few other species, and many interesting pieces of different corals, but otherwise it was pretty boring! We could hardly believe it. Fortunately we had arrived within a few days of the full moon, so we banked on a super Spring tide and the reef - which could be seen at low tide - being full of surprises to cheer us up.

In the meantime we hired a Mini-Moke for a week, which enabled us to get around the island a bit and visit many of the other beaches. The island of Barbados is 21 miles by 14, but due to the fact that it is rather like a piece of Devon plonked down in a tropical sea, i.e. the narrow roads are hilly and winding and vision obscured by high hedges, which here are of sugar cane, the journey across to the East coast could take an hour, even though the distance was no more than 14 miles. The flora is absolutely beautiful and children were playing cricket everywhere.

On the East coast, which is wild and beautiful, rather like North Cornwall, we found more interesting shells such as Astraea and Spirula and Trivia. This was at Bathsheba and the coast road north of there, where we used to stop and investigate the

wide flat sandy beach; but we never found many shells. On the South-East coast we stopped at the Cranebank Hotel, which has a wonderful view, but if I remember, no shells at all, then at Shell Bay near there, where we did find a great many shells, but pretty well all of the slit-limpet type or other limpets. Further south, we stopped at the beach by the Silver Sands Apartment, which was fairly productive. When I say productive, I mean one had to search the sands for shells and of course hope the waves would deposit something at one's feet. The sea there is rather rough and not suitable for snorkelling.

Then at the South Coast, the beach at the Southern Palms Hotel was quite good, better at Worthing, and at the Asta Apartment hotel, which is near the hideous Hilton. It quite spoils the view of the island as one approaches Bridgtown from the south.

As regards the West coast, we did not go further south than the Sandy Lane Hotel, so maybe there are untold treasures nearer to Bridgtown.... Going north from Holetown, we found the beach at the Cobblers Cove Hotel (set in the most beautiful grounds I have ever seen) quite useful; but the best beach of all would seem to be Maycock's Bay, which I did not visit. By then I had got fed up with seemingly useless searches and left my husband to go there alone. It is a little inaccessible as one has to walk about a quarter of a mile or more from where parking is possible, then climb down a cliff, but he came back with quite a large bag full of Cymatium, Pisania, Pusio, Nerita, Tegula and many others. Most of them were broken, it is true, but I feel that if one were able to go there several times in a fortnight, one would have a good selection of shells. Cittarium pica L. we found on the East coast. Quite good ones, too, as they are often rather worn.

Finally the Reef was fully uncovered. Yes, it really is within a few yards of the beach and it had not been seen so well since the November before! Oh joy, oh joy! Out we went in tennis shoes and gardening gloves, prepared to battle with the coral heads. But alas - it was the same story again. Very little and most of it rather abraded. (In fact, the quality of the shells altogether was not first-class, over the whole of the beaches we had visited.) Another dream gone west. I may add that I took home with me a plastic shopping bag full of shells, so we did manage to collect a great many, but when I finally got round to identifying them, I found that at least half had to be discarded and that many I have kept, because they were single specimens of a species, are either worn or a little damaged. But as every shell collector knows, one can go to the same beach on two different days and find the shells are either there or all broken, and so perhaps if we had gone at a different time of the year - who knows? Nevertheless we collected 114 species.

I may add that the Rev. Wrigley, who lived out there for several years, kindly sent me several boxes of West Indian shells and I noted that not only were they of better quality, but that also they were larger than mine.

The climate in Barbados at that time of the year was delightful - hot but with a gentle breeze at all times and cooler at night. The people are nice but we found them a little difficult to understand. Food rather English, except for Flying Fish perhaps. The island is beautiful and many rich people have a second home there, especially film stars. We saw many glorious sunsets and a most unusual rainbow - twice when the sun was shining and it rained, the rainbow was right above us in a circle, like a halo. The many flowering shrubs and trees give the island a particular beauty and even if we did not feel that the shelling came up to our hopes, it was a privilege to be able to spend our holiday there.

Hildegard Nash

(NOTE - List of species collected is available from the Newsletter Editor. Anyone interested please send S.A.E.)

A HISTORICAL NOTE - BARNEA CANDIDA AT WHITSTABLE STREET

Whitstable Street, believed to have been built originally by the Romans, knowing their thoroughness in matters of construction, projects into the Thames estuary where sea and estuary meet. On the eastern side of the Street, after the turn of the tide, a little sloping area of solid clay having a natural fracture is exposed on digging near the shore. Here excavation revealed a small area of very dense Barnea candida shells. These are of very uniform size, and point to an exceptionally heavy spat fall, as the shells are touching.

One or two similar but very small patches were observed on the great expanse of clay flats to the west of the Street, projecting a little above the surface of the clay. Erosion is thought to have removed almost all of a more extensive area of these shells, leaving a more or less flat area of clay. Spatfall must have been heavy here too, although the area is less sheltered. The age of the two areas is not necessarily the same, however.

The Street provides shelter from erosion for the clay slope on the east side, which is probably of sufficient durability to provide an extremely small and local fossil patch of Barnea which being, of course, a boring species, has all the shells arranged in an upright manner, posterior end upwards. The majority of shells of boring molluscs would normally ultimately be swept away, even if there was local uplift as at Pett Level on the south coast, where there is a temporary bed of dead Barnea candida shells. The only circumstance which would cause removal of the Barnea on the east of the Street would be a distinct geological subsidence. The presence of such a fossil patch of a boring mollusc is an unusual circumstance on the English coast and is worth recording.

It has a further historical implication that plankton was more dense at the time of the life of these bivalves than it is today. East of the Street there are no Petricola pholadiformis shells amongst the Barnea, which points to an age of at least 75 years for the Barnea, but the shells at least on this east side of the Street may well be older. Oysters may have benefited at this time, and have been more plentiful in times past, particularly in prosperous Victorian England, when the population was rising, and communication was improving.

The presence of small clusters of Barnea candida on the west side of the Street and harbour invite speculation as to the amount of erosion that has taken place within recent historical time, as the exposed clay, smooth now on its surface and not very much affected by exposure to marine factors, may have been covered by a dense layer of Barnea candida in not such far away times, at least on the middle shore and probably extending down to low water. This area, having been previously eroded away after the very extensive borings of Barnea, may then have made easy the colonisation of the area by the introduced American piddock, Petricola pholadiformis. Pholas dactylus, living at a lower tidal level, has survived both invasions, and live specimens are rare or absent now.

In 1956 plankton was still surviving off Whitstable, but Barnea, and Petricola perhaps, as adults were present in greatly reduced numbers. Further speculations of a historical nature about fish and fishing, tidal movements, drainage, pollution and even geological stability in spite of south coast uplift, are invited by this circumstance.

Reference: Thesis for PhD, University of London, 1961.

Some aspects of the biology of Petricola pholadiformis and reference to Barnea candida.

D. M. Duval

LYMNAEA STAGNALIS (L.)

An unusual variation of the species L. stagnalis (L.) is in the possession of Mr.

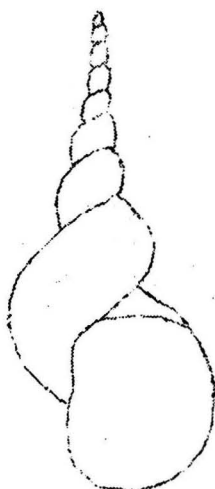
Douglas Noble of "La Rambla", Bagatelle Road, St. Saviour, Jersey, who obtained it in the mid-1950's as a 'once only' breeding variation reared within a small group of the species in a large indoor goldfish aquarium. Shortly after the emergence of young Lymnaea in the tank Mr. Noble noticed that one appeared to be distended and in due time this specimen was removed to a separate tank in the hope that others may be found among its own offspring. All the offspring, however, were true to type.

The original stock of Lymnaeas was drawn from a local pond, the remembered location of which has been lost with the passing years, but no other specimens showed any variation at all.

The variant, a sketch of which is included below, is 54 mm high and has a maximum width of 25 mm. It has a deeply channelled suture and 9 whorls. Growth striations and periostracum, etc., all appear normal.

Mr. Noble is unable to put forward any suggestions as to why this one specimen should show such variation.

Sketch of
Lymnaea stagnalis
(Linne)
in the
possession of
Mr. Douglas
Noble of
Jersey



Graham Long
Jersey
January 1977

REVIEW

The Penguin book of the Physical World and the Penguin book of the Natural World. 350pp., illustrated, £1.95 each. Penguin Books Ltd., London.

These two books are intended as fairly comprehensive introductions to the physical and life sciences. Both have similar layouts, are profusely illustrated and treat 160 different topics, each spread across two pages. The pages are not numbered, but the topics are and they are also grouped into sections.

The "physical world" has topics grouped under the following headings: the world we live in, our universe, the earth sciences, the atmosphere, mathematics, mechanics, energy, heat, heat engines, light, sound, electricity, electronics, nuclear physics and chemistry. Each topic is clearly explained in simple English without being patronizing. Topics follow on each other and it is easy to read a section, or indeed the whole book, without getting bored or bogged down by too much jargon. Factual errors are very rare. However, green is not a primary colour (topics 89, 120) and the former topic on colour photography needs attention. Also the statement that the mercury column falls by 100mm per 1km altitude may hold for the first km but not thereafter (topic 25). The U.S. 'explorer 1' was not the first satellite to orbit earth (topic 26) and 'Old Faithfull' erupts every few hours not days (topic 20).

There are also a few contradictory statements: "... by 1086, there were nearly six thousand waterwheels." (topic 2) "About seven hundred years ago man first harnessed

the power of running water". (topic 3) (are we still living in the 18th. century?) "Steam engines provided the first source of mechanical power." (topic 71) (are water-wheels not sources of mechanical power?). Equally topic 134 includes statements that there are "92 naturally occurring elements" and "92 other elements" (besides oxygen). Topic 147 translates "mer" as "part", topic 153 as "a unit".

Technical terms are best explained when first used. "Doppler effect" is first mentioned in topic 13 but explained under topic 98. Similarly Calorie (capital C) is used in topic 60 and distinguished from calorie (small c) in topic 65.

Nowhere is there any cross referencing, nor even reference in the text to the accompanying figures, which would be helpful in topic 23 on map projection. Indeed this is my main criticism of both books. I suppose it is no great difficulty to look up Doppler effect in the index, but cross reference would be quicker and simpler. After the last topic occurs a list of dates of significant discoveries in the physical sciences. Having read the entire book, I couldn't remember "the uncertainty principle" or "the exclusion principle". Neither are mentioned in the index so perhaps I didn't read about them, but the only way to find out will be to re-read the entire book.

The "Natural World" has topics grouped under headings: introduction, cells, evolution, the plant kingdom, the animal kingdom, natural communities and man and his body. Again the text is profusely illustrated in colour throughout; the two illustrations in topic 105 have the colours slightly out of register, but otherwise all the illustrations are excellent. Again factual errors are few. Topic 73 records a fossil dragonfly with a wingspan of nearly 1 meter, nearly 1ft (30cms) would be more accurate. Topic 88 states that crossopterygians (the ancestors of amphibians) crawled from pond to pond during drought. This often repeated myth has no foundation. No living animal, except man, is known to leave even a diminishing source of water during drought - to do so requires the ability to reason. Section 111 has orang-utans as ferocious apes. Topic 95 explains the extinction of dinosaurs badly. Since there is no general agreement on the cause of their extinction it might have been better not to try to explain it. Topic 104 repeatedly mentions marsupial and placental mammals without explaining what they are or how they differ.

The coverage of various groups reflects their abundance and popularity. The treatment of flowering plants seems random. Two topics are devoted to molluscs, 12 to arthropods, 42 to vertebrates with birds and mammals having the largest shares. The treatment of human anatomy and reproduction is very good.

I found both volumes very readable and they succeed in their effort to explain clearly without oversimplification. The photographic illustrations are excellent, the diagrams clear and easy to follow. Both volumes are very good value for money. With cross-references and suggestions for further reading, they could hardly be improved on. Neither are really serious faults and could easily be inserted in a second edition which, I suspect, will be needed in the not-too-distant future.

In conclusion, I would recommend both volumes to anyone who wants a cheap, simple introduction to the physical and life sciences. They are especially appropriate to children and would make very useful Christmas or birthday presents.

C. R. C. Paul

REVIEW

Bulletin No. 1 (New Series) of the Conchology Section of the Auckland Institute and Museum, April 1976.

The Conchology Section at Auckland has produced for many years a Journal entitled Poirieria under the editorship of the Gardners and this may be equated with our

Newsletter (although it is excellently illustrated), containing as it does, popular articles on the Mollusca, records of collecting trips, reviews and personalia. The Section must be flourishing and it now produces in addition a Bulletin which is more akin to our Journal, and strikes one as remarkably well printed and lavishly illustrated with both photographs and drawings. The Editors, the indefatigable Gardners, are evidently able to command the pens of most of the best-known and most competent of New Zealand conchologists and the contents of the first number can hardly fail to arouse interest. It includes notes on the genus Eudolium Dall by W. O. Cernohorsky, a review on the present state of knowledge of the systematics of New Zealand Mollusca by R. K. Dell; an article on the occurrence of Theora lubrica Gould by F. M. Climo, and one on Tertiary fossil localities at Waikeke Island, Auckland, by A. W. B. Powell. N. W. Gardner writes on the native landsnails of Resolution Island and C. A. Fleming on Pecten suteri Hertlium, a neglected Nom. nov. for P. radiatus Sutton (Preoccupied).

These Bulletins promise to make a most important contribution to the current literature on the Mollusca and all concerned are heartily to be congratulated on the new venture.

T. E. Crowley

FIELD MEETING REPORT

SOLENT DREDGING EXPEDITION: 8th. & 9th. MAY 1976

The boat's engine puttered to a standstill and was silent. The glassy sea was so calm that scarcely a ripple lapped against the hull of the boat. Not a fellow craft was to be seen through the dusky haze, a haze so thick that the radar system had been used to navigate the mere five miles from Christchurch Bay to the Isle of Wight. Above us, like new-washed sheets dazzling in the late afternoon sun, hung the high chalk cliffs of Tennyson Down. We looked at each other in consternation: no possibility of scaling those heights, even if one could swim as far as the shore. If a wind were to get up during the night the boat would be battered to pieces against those sheer walls. A bottle, a child's plastic machine-gun and a mass of green seaweed floated by in the "Sargasso Sea" of debris cast aside by the currents half a mile south of The Needles.

Eight members of the Conchological Society on a dredging expedition, becalmed on the quiet side of the Isle of Wight. Shock, acceptance - the silence of our realisation was broken by the skipper who needed our help in casting anchor to stop the boat drifting into the Channel shipping lanes. He hoisted a plastic buoy at the masthead as a sign of distress. There was no other means aboard of making a signal or of gaining the shore; (a point worth noting by future excursion organisers); just a couple of life-belts. The boat's fuel which had flowed out from a leak in the engine, now well-mixed with sea-water, slapped about dismally in the bilges. Nobody seemed particularly bothered about the prospect of spending a night at sea in an open boat - that curious lethargy that sets in with an unfamiliar situation; though one person at least was mindful of anxious friends waiting at the quayside, and of the delicious dinner booked at the expedition's hotel.

A speedboat came into view, streaking along under the white cliffs half a mile away. We shouted and waved but it sped on regardless, the noise of its engines drowning our efforts. On the cliff-top a dim outline showed the location of the Coastguard Station, but we were probably too close beneath the cliffs for our presence to be noted. Silence fell again. Then the shape of a large motor cruiser loomed like a shadow on the horizon. We shouted and waved. The shadow seemed inclined to pass by, moving across our bows and gliding farther away. Somebody thought of equipping the shouters and wavers with large white semaphore-like plastic boxes that had been destined, hopefully, for molluscan specimens. Everyone had clamoured to sail on this larger one of the two hired boats because of its greater range. We had dredged from it all day and found little for our pains, whilst the smaller boat, creeping along the Solent shore, had fished up a rich harvest, not to mention a bucketful of oysters! One could not avoid

the conclusion that there were some significant lessons about human nature to be gathered from this day's experience!

Eventually the motor cruiser responded to our signals and drew alongside. It was a converted gunboat out of Pompey with three naval types aboard, one of whom just happened to be an engineer! He found a leak in our starboard fuel tank and shut off the faulty system to enable us to use only the sound one. After fuel had been siphoned from the cruiser's full tanks into our empty one the engine was started and we were on our way back to base in Lymington.

As far as the Marine Census Scheme is concerned, this field meeting was highly successful. A large number of new records for Sea Area Wight were obtained. Three dredging trips were run from Lymington during the weekend expedition, two in Southampton Water and the Solent, and the other along the coast towards Bournemouth and across Christchurch Bay to Scratchers Bay just south-east of The Needles. The sea-bed encountered during this latter trip was invariably of shingle from which very few live records were obtained. However one exciting discovery was that of Gibbula tumida found live on shingle just off Hurst Castle Spit. The Southampton Water/Solent expeditions in the smaller boat met with a greater variety of "bottoms" and hence the different species found were more numerous. A combined list of species dredged is given below:-

<u>Acanthochiton crinatus</u>	A	<u>Onchidoris fusca</u>	A
<u>Lepidochitona cinereus</u>	A	<u>Philine aperta</u>	C
<u>Acmaea virginea</u>	A	<u>Dentalium vulgare</u>	C
<u>Alvania crassa</u>	AR		
<u>Buccinum undatum</u>	A	<u>Abra alba</u>	C
<u>Calliostoma zizyphinum</u>	B	<u>Anomia ephippium</u>	C
<u>Calyptraea chinensis</u>	A	<u>Barnea candida</u>	A
<u>Cingula semicostata</u>	B	<u>Cardium edule</u>	B
<u>C. semistriata</u>	B	<u>C. exiguum</u>	B
<u>Crepidula fornicata</u>	A	<u>Chlamys varia</u>	C
<u>Diodora apertura</u>	B	<u>Corbula gibba</u>	C
<u>Gibbula cineraria</u>	A	<u>Hiatella arctica</u>	C
<u>G. magus</u>	C	<u>Musculus discors</u>	B
<u>G. tumida</u>	A	<u>Mya truncata</u>	A
<u>Lacuna crassior</u>	B	<u>Mytilus edulis</u>	A
<u>L. parva</u>	A	<u>Nucula turgida</u>	A
<u>Littorina littorea</u>	A	<u>Ostrea edulis</u>	A
<u>L. saxatilis</u>	C	<u>Pecten maximus</u>	C
<u>Nassarius incrassatus</u>	A	<u>Pholas dactylus</u>	C
<u>N. reticulatus</u>	A	<u>Scrobicularia plana</u>	C
<u>Nucella lapillus</u>	A	<u>Solen marginatus</u>	C
<u>Ocenebra erinacea</u>	A	<u>Spisula subtruncata</u>	C
<u>Rissoa parva</u>	A	<u>Thyasira flexuosa</u>	C
		<u>Turtonia minuta</u>	A
		<u>Venerupis aurea</u>	C
		<u>V. decussata</u>	B
		<u>V. pullastra</u>	B

(For details of the dredging stations and species found please contact either Mrs. C.J. Pain or Mr. M. Goodchild)

J. T. Sawyer & C. J. Pain: Dec. 1976

SHELLFISH FOR DINNER

Mr. Burkill at a dinner -
 (One must eat or one gets thinner) -
 In Japan with strange new dishes was supplied.
 As he viewed the foods exotic,
 One dish caught his gaze quixotic
 When a winkle 'mongst the shellfish he espied.

'That one moved!!', thought Mr. Burkill,
'And to eat it I can't shirk-ill'
'Or I might offend a kindly Japanese'.

But he didn't have to worry,
Someone else was in a hurry -
Someone else who had no keen desire to please - - - - -

'I must rush!', announced that winkle,
And he blushed a trifle pink-le
As he left the plate and briskly crept away -

'Tis as true as I stand here,
Tho' it may sound slightly queer -
It's what Mr. Burkill told me, anyway!

Pat Halliday

SHELL MURMURS

I have seen
A curious child, who dwelt upon a tract
Of inland ground, applying to his ear
The convolutions of a smooth-lipped shell;
To which, in silence hushed, his very soul
Listened intensely; and his countenance soon
Brightened with joy; for from within were heard
Murmurings, whereby the monitor expressed
Mysterious union with its native sea.

Wordsworth, "The Excursion."

"This," said he,
"Is something of more worth;" and at the word
Stretched forth the shell, so beautiful in shape,
In colour so resplendent, with command
That I should hold it to my ear. I did so,
And heard that instant in an unknown tongue,
Which yet I understood, articulate sounds,
A loud prophetic blast of harmony.

Wordsworth, "The Prelude," Book Fifth.

The hollow sea-shell, which for years hath stood
On dusty shelves, when held against the ear
Proclaims its stormy parent; and we hear
The faint, far murmur of the breaking flood.
We hear the sea. The sea? It is the blood
In our own veins, impetuous and near,
And pulses keeping pace with hope and fear
And with our feelings' every shifting mood.

Eugene Lee-Hamilton, "Sea-shell Murmurs."

"The arteries supplying the walls and contents of the tympanic cavity are six in number. Two of them are larger than the others--the anterior tympanic branch of the maxillary artery, which supplies the tympanic membrane, and the stylomastoid branch of the posterior auricular artery, which supplies the posterior part of the tympanic cavity and mastoid air cells." Gray's Anatomy, 35th. edition, p.1145.

The link between the poetic and the prosaic was provided by Milton, in "Comus":

Sweet Echo, sweetest nymph that liv'st unseen
Within thy airy shell,

for it is the amplified echo of the arterial circulation in the middle ear that has so captivated the poets and vies with the 'house on its back' motif for the position of the most hackneyed molluscan theme.

The following quatrain is from a postcard issued by the Dexter Press (1956):

Remember the shell you used to adore
When held to your ear, the ocean would roar?
It's a favorite yet, and always will be
As everyone loves "The Song of the Sea."

Eugene Field presumably heard a fossil echo:

Upon a mountain height, far from the sea,
I found a shell,
And to my listening ear the lonely thing
Ever a song of ocean seemed to sing,
Even a tale of ocean seemed to tell.

Among poets who have listened entranced to the pulsation of their arteries are:
R. W. Gilder, "The Sonnet;" Felicia Dorothea Hemans, "The Forest Sanctuary;" Thomas Hood, "Hero and Leander;" Walter Savage Landor, "The Shells," Gebir; Amy Lowell, "Sea Shells," A dome of many-colored glass; Cosette Middleton, "Houses not made with hands," Tide Pool; Frank Dempster Sherman, "A Quatrain;" James Stephens, "The Shell;" J. R. R. Tolkien, "The Sea-Bell;" W. J. Turner, "Ecstasy;" Charles H. Webb, "With a Nantucket Shell;" Paul Dehn, "The Fern on the Rock," Mourne Mountains.

A. E. Ellis

INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE, ANNOUNCEMENT A.N.(S) 101

The required six months' notice is given of the possible use of plenary powers by the International Commission on Zoological Nomenclature in connection with the following names listed by case number: (see Bull. Zool. Nom. 33, parts 3 & 4, 31 March 1977).

Z.N.(S.) 1891 Drupella Thiele, 1925 (Gastropoda): designation of type-species.

Comments should be sent in duplicate (if possible within 6 months of the date of publication of this notice), citing case number to: R. V. Melville, The Secretary, International Commission on Zoological Nomenclature, c/o. British Museum (Natural History), Cromwell Road, London, SW7 5BD, England.

Those received early enough will be published in the Bulletin of Zoological Nomenclature.

The following Opinion has been published recently by the International Commission on Zoological Nomenclature.

Opinion No. 1074 (Bull. zool. Nom. 33 (3 & 4) page 174) Murex rana bubo Linnaeus, 1758, under plenary powers designated as type-species of Tutufa Jousseaume, 1881 (Gastropoda).

The Commission cannot supply separates of Opinions.

ADDENDUM - LIST OF MUSEUMS WITH MOLLUSCAN COLLECTIONS

The list of molluscan collections in British museums appearing in the last issue,

No. 61, is, to the best of my knowledge, the first of its kind (although a much abbreviated version appeared in the Biology Curators Group Newsletter 1977, 5:16-19) and as such the coverage is patchy. It does not pretend to be comprehensive (especially for the smaller museums and the fossil molluscs) but is an initial step which it is hoped will prove useful, particularly as a basis for further corrections and additions and may act as a stimulus for further work.

Inevitably additions and corrections have come to light too late for inclusion; the more important of these are listed below.

ENGLAND: NOTTINGHAM

Natural History Museum, Wollaton Hall, Nottingham, NG8 2AE. Tel: 0602-281333. Nottingham County Council. Exhibits: R and F. Research collections: R, large, F, medium. Open April to Sept. daily 10-7, Sunday 2-5; Oct. to March 10 to dusk, Sunday 1.30-4-30. Closed Good Friday and Christmas Day. Admission Free.

SCOTLAND: GLASGOW

Glasgow Art Gallery and Museum, Kelvingrove, Glasgow, G3 8AG. Tel: 041-339-1134, 5, 6. Exhibits: R and F. Research collection: R, large, F, medium (35 types). Open Weekdays 10-5, Sunday 2-5. Closed Good Friday and Christmas Day. Admission Free.

WALES: SWANSEA

Royal Institution of South Wales and University College of Swansea Museum, Victoria Road, Swansea, SA1 1SN. Tel: 0792-53763. Research collection: R, medium, F, small. Open Weekdays 10-5. Closed Good Friday and Christmas Day. Admission 10p, children 5p.

Errata: 'Closed Boxing Day' should read 'Closed Good Friday' except where this is already stated. Thus nearly all Museums are closed for Good Friday and Christmas Day.

Also while in press, the Biology Curators Group circulated a questionnaire regarding material held by British museums (B.C.G. Newsletter, April 1977*). It requests information on the provenance, size and importance of collections of recent (i.e. non-fossil) botanical and zoological specimens. It is hoped that the returns will yield additional information on the molluscan collections.

Peter Lingwood

* This questionnaire has been circulated to B.C.G. members and institutions with biological material. If you have not been included and are willing to contribute please contact: P. J. Morgan, Honorary Secretary, Biological Curators Group, Merseyside County Museums, William Brown Street, Liverpool, L3 8EN as soon as possible as the returns are wanted urgently.

HAS ANYBODY SEEN ANY LAND FLATWORMS?

Platyhelminths are normally thought of as aquatic (planarian flatworms) or parasitic (liver-flukes or tapeworms). There is however a group of terrestrial triclad planarians, the Terricola. These are mainly tropical but there are three species, possibly four, which are found in Britain. These are rarely observed but are widespread in their distribution. They are found mostly in very damp situations on heavy clay soils under stones or logs in gardens or woods. They are not found necessarily near standing or running water, far from it. In other words they are found in similar situations to many species of land molluscs and many members of the Conchological Society may well come across specimens. All the species have been recorded in small numbers from a few widespread localities and with members' cooperation it may be possible to provide a more complete picture of their distribution and abundance. The Editor has kindly agreed to

include this appeal and I would welcome any records or specimens dead or alive with details of locality and habitat.

The species are as follows:

Microplana terrestris (Müller) formerly Rhynchodemus. Apparently the commonest British species also found in most of northern Europe. Body mucous-covered, cylindrical (none of them are flat-worms), up to 26mm long, more usually 15-20mm. About 2mm diameter but tapering towards the anterior end. Colour almost black or dark-brown, may be light-grey. Under-surface paler. Externally few features are visible. There are two black eye-spots at the anterior but these are obscured by the general pigmentation. The mouth is virtually indistinguishable but is mid-way along the ventral surface. A white pharynx may be protruded out of the mouth onto prey (earthworms). Found across the whole country but not often observed. In wet weather has been found crawling on vegetation, as well as under stones.

Microplana britannicus Percival. Rarely found in Britain with but one continental record (Belgium). Body again covered with mucous, vermiform up to about 80mm long and about 1.5mm diameter, but may contract to about one seventh of its extended length. Colour pale yellow or milk-white, often pinkish or pale brownish. Almost white narrow ventral surface. Anterior end has two black eye-spots with blackish tinted region behind the eyes. Other features more or less indistinguishable in life.

Records, largely of single specimens, from Plymouth, Bristol, Warwicks, Stockport, South Manchester, Yorkshire, Aberdeen. I have found it in my garden under stones, it has also been found under wet hardboard, and under logs in woods. Worms are very sensitive to dry air and heat, easily killed. Also it is readily mistaken at first glance for roots of plants under stones.

Microplana scharffi Graff. More or less identical to M. britannicus but recorded only from Dublin. May be conspecific with britannicus. More specimens are needed to sort out these two species.

Rhynchodemus bilineatus Mecznirow. Up to 8mm long, covered with mucous. Flattened anterior end, body brownish with two darker dorso-lateral stripes. Ventral surface white with six brown spots. Very rare, Cambridge, Cornwall, Devon.

Specimens of any species are best kept in sealed containers containing a little native soil. This will maintain natural humidity levels. They are all susceptible to heat and dryness and are best kept in a refrigerator. Preservation is best in 70% alcohol.

Dr. H. D. Jones, Zoology Department, University of Manchester, Manchester, M13 9PI
Telephone: 061-273 7121 Ext. 5519

GENERAL NOTES

In recent editions of Conchologists' Newsletter (Nos. 58 and 61) Margaret Brockbank has drawn attention to an interesting find in the Outer Hebrides. While walking on the beach at North Bay, Ardivachar, she noticed a melon stranded on the shore. It was encrusted with Balanus balanus and the young of Ostrea edulis, while some Lepas anatifera were showing through a hole in the side. Inside the melon she found 26 specimens of an unusual mussel later identified as Brachydontes exustus. These mussels are natives of the east coast of the U.S.A. and S. America from North Carolina to Uruguay and the West Indies. B. exustus likes slightly brackish waters, adhering to rocks and pilings.

Now B. exustus has turned up in Irish waters. Mr. Michael Long, Dingle, Co. Kerry, who is Area Recorder for Fastnet (Area 37) found nine specimens attached to a metal buoy

which was washed up on a beach just east of Dingle Harbour on 17th. March 1977. The specimens which ranged in size between 13.0 and 18.2mm, were identified by Mrs. Nora F. McMillan of Merseyside County Museums, Liverpool. Also attached to the buoy were a few Lepas anatifera and some oyster spat.

B. exustus has not previously been recorded from Irish waters. It seems likely that the buoy to which these molluscs were attached travelled from the east coast of America or the West Indies on the north Atlantic drift to the shores of Ireland.

Colm O'Riordan, National Museum of Ireland, Dublin

A COLONY OF HELIX POMATIA L. IN CHESHIRE

It seems advisable to record the existence of a free-living colony of the Roman or Edible Snail in my garden ("The Nook", Uplands Road, Bromborough, Cheshire. NGR SJ340828). It was founded with eight Austrian specimens in 1962 and, reinforced occasionally with additional specimens from Denmark and Austria (the latest additions were made in 1968), has maintained itself at a strength of between five and eight individuals ever since. Breeding has taken place, proved by the occasional sight of half-grown specimens, but I have not seen younger specimens (Boycott says how secretive the youngsters are!). Marked adults have had a lifespan of five years (dating from when I received them as adults), and all the original lot survived the severe winter of 1962/63.

They have a strong sense of territory, each keeping to its own area. Birds do not touch the adults, even our hardpressed thrushes and blackbirds this summer ignored Helix pomatia walking about the garden among lawn-grubbing birds.

My garden is on heavy wet boulder clay overlying Trias with no hint of lime, so the persistence of this Helix pomatia colony in such a habitat seems noteworthy.

Nora F. McMillan

ANNUAL GENERAL MEETING MARCH 1978

Members are reminded that they can nominate candidates for election to the Council.

Rule No. 11, Candidates for nomination to the Council shall be paid-up members of The Society and shall be nominated by two members. Nominations, other than those made by the Council itself, shall be sent in writing to the Hon. Secretary at least six weeks before the A.G.M., and shall be accompanied by a signed declaration of the candidate's willingness to serve.

NOTE: Nominations must be received by the Hon. Secretary NOT LATER THAN 31 December 1977.

COPY DATES FOR NEWSLETTER CONTRIBUTIONS

Copy for the March issue should reach me before 6th. January

"	"	"	June	"	"	"	"	"	6th. April
"	"	"	September	"	"	"	"	"	6th. July
"	"	"	December	"	"	"	"	"	6th. October

Newsletter Editor

EXCHANGES WANTED: Mme. Jamma, [REDACTED], 54280 Seichamps, France, would like to exchange cowries from the Red Sea & W. Africa, C. exusta, C. zonaria, picta, gambiensis, sanguinolenta and petitiana - please write.

Alex Menez, [REDACTED], Great Baddow, Chelmsford, Essex, [REDACTED], is anxious to obtain good specimens of Epitonium communis (Lamarck) and Capulus ungaricus L. and is willing to purchase.

Alan Klishans, [REDACTED], Port Lincoln 5606, South Australia, Australia, is keen to exchange shells with members of the Society. He is particularly interested in Cypraeidae, Volutidae, Pectinidae and Conidae, also shells from the Atlantic. Please write for details.

HELP WANTED: Samples of the Hydrobid snail *Potamopyrgus jenkinsi* from both inland and (particularly) coastal locations are required for a research project investigating the origins of this species in Britain. About 30 living snails from each location are needed and should be sent, wrapped in damp blotting paper, to: Brian Johnson, Department of Biology, University of York, Heslington, York, YO1 5DD. A six figure map reference and a brief description of the habitat (e.g. fresh/brackish; stream/river/lake) would be very useful. All samples received will be acknowledged and postage refunded. Samples of the rarer *Hydrobia ventrosa* would also be welcomed.

SHELLS FOR SALE: A fine selection of shells for the collector is available at Eaton's Shell Shop, 16 Manette Street, off Charing Cross Road, London, W1V 5LB (Tel:01-437 9391)

SHELL STAMPS FOR SALE: Send SAE for Extensive Lists of Shell and Marine Stamps. All new issues available. Also all nature subjects, e.g. Birds, Butterflies, Flowers. Write to: A. Grainger, [REDACTED], Horsforth, Nr. Leeds, [REDACTED].

FOR SALE: Allen, J.A., 1962. The Fauna of the Clyde Sea Area; Mollusca. 88pp. paper wrapper. 80p post paid.

Gordon, W.J. (ND). Our Country's Shells and how to know them; A Guide to the British Mollusca. Cloth, 152pp and 33 col. pls. £2.30 post paid.

Swanton, E.W., 1906. A Pocket Guide to the British Non-Marine Mollusca. Cloth, 134pp. £2.30 post paid.

Charles Pettitt, [REDACTED], Cheadle, Cheshire, [REDACTED].

FIELD MEETINGS 1977

Please note alteration to printed programme:- Weekend October 15/16.

Joint meeting with the Yorkshire Conchological Society. Marine meeting at Bridlington, Yorks. Full details from: Mrs. M. Maddrell, [REDACTED], Bridlington, North Humberside, [REDACTED] (Tel. [REDACTED]). Please apply early if accommodation details are required. S.A.E. essential.

T. Pain, Field Meetings Organiser

FIELD TRIPS IN THE NORTH-WEST

The following field trips are proposed. All are welcome.

Sat. 8 October, Blackpool. Meet at Blackpool North Railway Station (G.R. 34/309366) at 1 p.m. (HW 8.30 a.m., LW at 3.00 p.m.). To investigate the molluscs of this poorly-recorded stretch of exposed sandy shore. I hope that this date is sufficiently late in the season to avoid most of the holiday-makers. (British Rail offer a special day return from Liverpool and other stations).

Sat. 12 November, Leigh (between Wigan and Manchester). Meet at Newton-le-Willows railway station (GR. 33/577952) at 1 p.m. To investigate the molluscs in and around The Flash (GR. 33/ 6399) - a freshwater lake. Will those wishing to attend please contact Mrs. M. Fogan, 181 New Brook Road, Atherton, Manchester. Tel. 052 34-3074.

Will anyone offering or requiring transport from the Liverpool area to either of these meetings please contact Dr. Peter Lingwood, c/o. Merseyside County Museums, William Brown Street, Liverpool. Tel. 051-207-0001 Ext. 8.

Re. A Handbook to the Natural History of the Lizard Peninsula, reviewed in Conchologists' Newsletter No. 61. The price is £1.50 for the Handbook (88pp. + 5 maps) and 35p for Supplement 1 (50pp. Flowering plants arranged by habitat), postage and packing for the two being 40p. They are obtainable from the Regional Office, Extra-Mural Dept., Exeter University, 5 Walsingham Place, Truro, Cornwall.

THE SOCIETY'S PUBLICATIONS

Back numbers of the Conchologists' Newsletter may be obtained from J. Collins, The Bookshop, 45 Westow Street, Upper Norwood, London, S.E.19 (telephone 01-771 9719) at 25p each plus post, or from the Hon. Secretary, Mrs. E. B. Rands who can also supply copies of the Marine Concordance, 30p to members and 50p to non-members, The Atlas of Non-Marine Mollusca, £2.50 to members plus 85p post/packing and £3 to non-members plus 85p post/packing. Mrs. Rands can also take orders for back numbers of the Journal of Conchology.

Papers for Students can be obtained from Mr. A. Norris, Natural History Dept., City Museum, Municipal Buildings, Leeds, LS1 3AA

NATURAL ENVIRONMENT RESEARCH COUNCIL

A Marine Information and Advisory Service (MIAS) has been set up in the N.E.R.C.'s Institute of Oceanographic Sciences to help any organisation or private individual concerned with the marine environment. The most significant recent development within MIAS is the design and implementation of a storage and retrieval system for marine data. Further information may be obtained from MIAS, Institute of Oceanographic Sciences, Wormley, Godalming, Surrey, GU8 5UB

THE MALACOLOGICAL SOCIETY MEETINGS PROGRAMME: AUTUMN 1977

Friday 21st. October 1977

Prof. D. T. Anderson, F.R.S. (University of Sydney):

Reproductive Biology of the Mangrove Littorinid Littorina scabra

Department of Zoology, Chelsea College, Hortensia Road, London, SW10 0QX at 5.00 p.m.

Saturday 12th. November 1977

Joint Meeting with the Estuarine and Brackish-Water Sciences Association:

Estuarine Molluscs in Science and Commerce

Department of Zoology, Bedford College, Regent's Park, London, NW1 4NS

Wednesday 7th. December 1977

Mr. G. H. Brown (University of Bristol):

Diving for Marine Molluscs in East Africa

Mr. F. Pinn (London):

The Live Mollusca of the Kenya Reef

Royal Veterinary College, Royal College Street, London, NW1 OTU at 5.30 p.m.

All who are interested are very welcome to attend.

Further information concerning the meetings can be obtained from the Hon. Secretary, Dr. A. Bebbington, Department of Science, Bristol Polytechnic, Redland Hill, Bristol, BS6 6UZ

INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

The following Opinions have been published recently by the International Commission on Zoological Nomenclature, c/o. British Museum (Natural History), Cromwell Road, London, SW7 5BD, United Kingdom. (see Bulletin Zoological Nomenclature, Volume 34, part 1)

- 1079 (p.16) Agalaja Renier, (1807), A. depicta Renier (1807) and A. tricolorata Renier, (1807) (Mollusca: Gastropoda) rendered available under the plenary powers.
1084 (p.33) adspersus, Tergipes, Nordmann, 1845 (Mollusca, Opisthobranchia) placed on the Official List of Specific Names in Zoology.

1085 (p.35) The Author of Polycera faeroensis (Mollusca, Opisthobranchia) is Lemche, 1929.

The Commission cannot supply separates of Opinions.

MACTRA GLAUCA IN CORNWALL

This large and handsome bivalve appears as a Cornish species on the strength of single valves found at Hayle, on the north coast of the county. Because single valves only had been found it has been suggested that they were fossil, derived from a sub-merged deposit. However, I recently noted in The Edible Mollusca of Great Britain and Ireland with Recipes for cooking them, by M. S. Lovell, 2nd. Ed. 1884, the following (on p. 23) "a perfect pair of Macra glauca ex Hayle Sands". Assuming that a complete specimen with valves still connected is intended, this statement invites enquiry by our Cornish conchologists.

Nora F. McMillan

DISPERSAL OF SNAILS IN WATER-CRESS

During February 1977, a local Public Health Dept. received a complaint about some water-cress which a lady had bought and found covered with tiny snails. The sample was brought to me, with a particular request that I should check whether Lymnaea truncatula, the carrier of sheep liver-fluke, was present. In fact I found four species of molluscs, but not L. truncatula: these were Lymnaea peregra (16 juvenile specimens), Planorbis planorbis (1 specimen), Bathymorphus contortus (2) and Physa sp. (possibly P. heterostrophus) (2). Since both the planorbids are distinctly rare in Cornwall - indeed there is only one 19th. century record for the whole of Cornwall for P. planorbis - it seemed unlikely that the cress had been grown in this county, and we learnt later that it had in fact come from Gloucester. It is unlikely that such casual introductions would ever become established since after being washed under a tap, any waste greenery would doubtless find its way on to the garden compost heap.

Stella M. Turk

FOR SALE. The following books and periodicals: J. Conch. Vols. 23-28 complete and Vol. 29, Pts. 1-3 (all published so far) - £25; Conchologists' Newsletter, a complete set from the beginning to date, 60 parts, as issued - £15; Papers for Students, a complete set from the beginning to date, 15 parts, as issued - £5; A. E. Ellis, British Snails, 1926 (1st. ed.) - £3; A. E. Boycott, Habitats of Land Mollusca in Britain, 1934 (paper wraps as issued) - £2; 4 annotated Sowerby & Fulton sale catalogues (rather dog-eared) - £3. Also some other conch. books and pamphlets, details on request. Postage extra on all items.

S. P. Dance, [REDACTED], Priory Wood, Clifford, Hereford (Tel: [REDACTED])

THE CONCHOLOGISTS' NEWSLETTER

No. 63

Newsletter Editor: P.E. Negus,

December 1977

Chelsea Bridge Road,
London, [REDACTED].

Produced by THE CONCHOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND

LAND MOLLUSCS OF THE ITALIAN PROVINCE OF NOVARA

The publication of an Atlas of non-marine Mollusca of the British Isles on a 10km grid has been a major achievement for the Society. As Dr. Kerney (1976a) has pointed out, the task is not completed but the major patterns are evident. Thoughts naturally turn again to the relationship of our fauna to that of continental Europe. There is a rich literature relating to European land and freshwater molluscs but also problems because organisms do not respect political boundaries. There has been a tendency to afford local populations sub-specific rank which may not always provide clarification of their relationships. Barriers to gene flow are such that in some species of land snails almost every population is recognisable on morphological grounds. The Caribbean genus Cerion comes to mind immediately in this regard (Gould et al, 1975) but some species of Abida and Clausilia, for example, may exhibit such behaviour.

The geological and physiographical evolution of Europe has been so complex that present distribution patterns may tell us little of past history. The early Tertiary land snail fauna of the ancient European archipelago bears very little relationship to that of the present day (Waldén, 1962). Gross changes in climate and vegetation have occurred. That large changes in distribution may be comparatively recent is emphasised by the discovery of a Canary Islands group Lyrodiscus in a British inter-glacial deposit (Kerney, 1976b). Perhaps the most exciting advances which could result from increased co-operation on a European scale might come from attempts to trace the evolutionary history of monophyletic lineages both from detailed studies of the anatomy and behaviour of living species and the examination of fossil shells. The work of Watson (1915) is an excellent example of the sort of study I have in mind. Recent advances in the formulation of phylogenetic hypotheses (e.g. Schaeffer et al, 1972) coupled with the availability of more characters from shell material made possible by scanning electron microscopy will aid the task. Such work is, of course, already in progress but may be hampered by local rivalries which arise when a given geographical area is considered the province solely of a particular group of workers. Participation in a European mapping scheme may hopefully generate the necessary spirit of co-operation where this does not already exist.

The study area

Readers of the Newsletter may be interested to hear of some work in northern Italy, to be published in detail elsewhere (Bishop, in press). The Province of Novara lies south of the Pennine Alps and shares common borders with the Swiss Cantons of Valais and Ticino. There are three main geographical divisions: plain, pre-alps and alps. The plain is highly altered by agriculture with little woodland apart from scrub formed by the introduced robinia, though natural heaths and marshes still remain. The pre-alps have woods of sweet chestnut and larch while the alps have woods of larch and fir. Above the tree-line there are scrubs of rhododendron and alder. The sands and gravel of the plain and the crystalline rocks of the pre-alps and alps give rise to a neutral to acid country. The acidity of the soil and the relative dryness in summer make the area less favourable for land molluscs than some adjacent limestone areas. For this reason the Province has been rather neglected by malacologists.

The species list

The species list may seem familiar from the large percentage of widespread European species. There are also alpine and Italian influences with only three species, Charpentieria diodon, C. thomasiana and Ariunculus spezzai endemic to the Piedmont. Species reported solely prior to 1900 are marked with an asterisk.

Acanthinula aculeata (Müller), Acicula lineata (Draparnaud), Aegopinella minor (Stabile), A. pura (Alder), Argna ferrarii (Porro), Arianta arbustorum (Linnaeus), Arion circumscriptus Johnston, A. rufus (L.), A. silvaticus Lohmander, A. subfuscus (Draparnaud), Ariunculus spezzai Lessona, Balea perversa (L.), Carychium minimum Müller, C. tridentatum (Risso), Cepaea nemoralis (L.), Charpentieria diodon (Férussac), C. thomasiana (Küster), Chilostoma zonatum (Studer), Ciliella ciliata (Studer), Clausilia cruciata Studer, C. dubia Draparnaud, Cochlicopa lubrica (Müller), C. lubricella (Porro), Cochlodina fimbriata (Rossmässler), Columella columella (Martens), C. edentula (Draparnaud), *Delima itala (Martens), Deroceras agreste (L.), D. laeve (Müller), D. pollonerai (Simroth), D. reticulatum (Müller), Discus rotundatus (Müller), D. ruderatus (Férussac), Drepanostoma nautiliforme (Porro), Ena montana (Draparnaud), E. obscura (Müller), Eucobresia diaphana (Draparnaud), E. nivalis (Dumont e Mortillet), Euconulus fulvus (Müller), Euomphalia strigella (Draparnaud), Helicodonta obvoluta (Müller), Helix pomatia L., Hygromia cinctella (Draparnaud), Insulivitrina glacialis (Forbes), Isognomostoma holosericum (Held), *Jaminea quadridens (Müller), Laciniaria plicata (Draparnaud), Lauria sempronii (Charpentier), Lehmannia marginata (Müller), Limax dacampoi Menegazzi, L. maximus B., L. tenellus Müller, Macrogastra lineolata (Held), M. plicatula (Draparnaud), Milax rusticus (Millet), *Monacha cantiana (Montagu), *M. cartusiana (Müller), Monachoides incarnata (Müller), Nesovitrea hammonis (Ström), N. petronella (Charpentier), Oxychilus draparnaudi (Beck), O. glabrus (Férussac), O. mortilleti (L. Pfeiffer), Phenacolimax major (Férussac), Pleuracme bayoni (Pollonera), Punctum pygmaeum (Draparnaud), Pupilla muscorum (L.), P. triplicata (Studer), Pyramidula rupestris (Draparnaud), Retinella hiulca (Jan), Succinea elegans Risso, S. putris (L.), *Truncatellina callicratis (Scacchi), T. cylindrica (Férussac), Vallonia costata (Müller), V. excentrica Sterki, Vertigo antivertigo (Draparnaud), V. moulinsiana (Dupuy), V. pusilla Müller, V. pygmaea (Draparnaud), V. substriata (Jeffreys), Vitrea subrimata (Reinhardt), Vitrina pellucida (Müller), Zonitoides nitidus (Müller),

Notes on certain species

Aegopinella minor completely replaces A. nitens/nitidula in the Province and has a distinct penial anatomy.

Ariunculus spezzai is an arionid slug found under logs and stones in the alps from 800 - 2100 m. It was previously known only from the type locality, Macugnaga, but has now been found in other valleys. Externally it looks rather like a young Arion rufus with sticky orange mucus.

Charpentieria spp. are clausiliids with shells somewhat resembling Cochlodina but anatomically they are closer to Delima. Pollonera recognised thirteen species but a modern revision is necessary.

Cochlodina fimbriata occurs in alpine woods from 1100 - 1400 m and is distinguished from C. laminata by the long penial papilla. The shell shows little difference from the latter species.

Columella edentula is the common species of this genus in the Province in the more eutrophic woods and marshes. Habitats which might have been expected to yield C. aspera were barren and perhaps the region is climatically unfavourable for this species.

Deroceras pollonerai is identical with the species called D. caruanae in Britain. There is a taxonomic and nomenclatural difficulty here which has not yet been resolved.

Limax dacampoi is very similar to L. cinereoniger but I consider it distinct on anatomical grounds. Here again the last word has not been said and further work is necessary to elucidate a very complex situation.

Oxychilus mortilleti seems to replace O. cellarius in the Province and O. alliarius is absent.

I would like to thank those Italian malacologists, C. Conci, A. Girod, F. Giusti, E. Pezzoli and F. Toffoletto, whose outstanding friendship and hospitality made my work in Italy so enjoyable.

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M. J. Bishop

SNAILS BY CHANCE

Herbarium specimens are an unexpected and quite fruitful source of molluscs. Of course delicate shells inadvertently pressed with the plants are usually broken but some tough shells survive intact. I have found, and had brought to me by others, many interesting shells during the past 25 years or so, including at least one new species (Tomichia hendrickxi (Verdcourt)) described from specimens fortuitously collected with duckweed in Lake Kivu, a find which extended the range of the genus by some 2000 miles - this was in fact the first snail I described. Recently the find of Potamopyrgus ciliatus (Gould) has been reported in the Journal of Conchology. Rather naturally most of the whole specimens found are very small or small and tough-shelled. Freshwater species predominate as would be expected. Most of the material found in this way has been passed to museums which deal with the area concerned. One great benefit of specimens obtained in this manner is that the exact locality and very often precise ecological data are given on the field label accompanying the plant. Interesting insects have also been found in the same way pressed on their food plants, often, especially in the case of beetles, very well preserved.

This present note concerns Pupisoma orcula (Benson), a member of the Valloniidae. Whilst working through a pile of botanical specimens in order to suggest identities to a colleague Dr. R. M. Brummitt, who had collected them in Malawi, my attention was drawn to some small lumps in the axils of the leaves of a Clerodendrum. These proved to be the minute shells of Pupisoma orcula which is well known to be arboreal. The

tree was collected in the Northern Region, Mzimba District, at the Kabumba River, 22 km. south of Enguwinini on the road from Rumpi to Kafukule and was growing on the bank of a dried-up river bed at 1180 m. altitude. Although not previously recorded from Malawi its occurrence there was to be expected. The distribution of the species is as follows - South Africa: Cape Province (Port Elizabeth; Grahamstown; Somerset E.); Natal (Pietermaritzburg; Ntimbankulu; Dargle; Edendale, Game Pass; Upper Mooi R.; Winkel Spruit); Transvaal (Pretoria, Elim, Sibasa; Mt. Manotsuri, Shiluwane District). Rhodesia (Victoria Falls). Zaire (Parc National Upemba, Kenia; Parc National Garamba). Kenya (Karura Forest; Kamiti Forest). There is a possibility that Pupisoma steudneri (Jickeli) described from Ethiopia is conspecific. Outside Africa P. orcula is recorded from Mauritius, Java, Savu I., Philippine Is., and India.

B. Verdcourt

THE MOLLUSC IN FABLES

To snails invet'rate haté I bear
Who spoil the verdure of the year.

John Gay, Fables, vol. 2, No. 12 (1738).

Mollusca have seldom formed the dramatis personae of fables, in fact invertebrates of any sort are rarely so honoured. Some thirty kinds of mammals and the same number of birds feature in old fables, besides half a dozen poikilothermous vertebrates and ten arthropods: see Aesop's fables: an anthology of the fabulists of all countries (of all time on pretitle page), edited by Ernest Rhys (Everyman's Library, J. M. Dent). Bunyan's poem "Upon the Snail" may perhaps be regarded as a fable, since it is followed by a 'comparison' or moral (see Conch. Newsletter, No. 47, p. 347). There are two eighteenth century verse fables featuring a mollusc. In "The Butterfly and the Snail" by Gay the Butterfly sneers at his old friend of his caterpillar days, but the Snail has the last word in a slanging match:

I own my humble life, good friend;
Snail was I born, and snail shall end.
And what's a butterfly? At best
He's but a caterpillar, drest:
And all thy race (a num'rous seed)
Shall prove of caterpillar breed.

In "The Poet, the Oyster, and the Sensitive Plant" by William Cowper, Ostrea edulis and Mimosa pudica, consumed with self pity, bemoan their hapless condition while envying the circumstances of the other. As in Gay's fable, the altercation tends to become acidulous:

"You shapeless nothing in a dish,
You that are but almost a fish"

sneers the plant, alike scorning oyster and scansion, but a peripatetic poet rebukes both disputants. To the oyster:

"You, in your grotto-work enclosed
Complain of being thus exposed,
Yet nothing feel in that rough coat,
Save when the knife is at your throat."

A negative assessment of the characteristics of the oyster comes from "The Philosopher and the Oyster" in Further Fables of our time by James Thurber (Hamish Hamilton, 1956): "It has no mind to be burdened by doubt," mused the Philosopher, "no fingers to work to the bone. It can never say, 'My feet are killing me! It hears no evil, sees no television, speaks no folly. It has no buttons to come off, no zipper

to get caught, no hair or teeth to fall out." Despite all these advantages, the oyster comes to a sticky end.

A few more molluscan fables have recently come to light:

THE HORTICULTURIST AND THE TERRESTRIAL GASTROPOD

Early one morning a Gardener met a Snail crawling away from his lettuce bed. "Here you, not quite so fast. May I ask what you have been up to?" inquired the Gardener.

"Nothing," replied the Snail.

"Nonsense," rejoined the Gardener, "no one can't do nothing, nohow."

"Well, if you must know, I spotted some naughty young slugs eating your lettuces, so I told them to give over."

"So there would be all the more left for you, greedy guts," sneered the Gardener.

"Not at all," expostulated the Snail indignantly, "lettuce does not agree with me."

"How right you are," agreed the Gardener, as he flattened the Snail under a size ten hobnailed boot.

MORAL

It would have been less messy to chuck the snail over the fence.

THE SQUATTERS

Two slugs lived inside a hollow potato. "We're all right, Jack," said Milax. "We have a comfortable hideout and no need to venture outdoors foraging: when hungry we just eat a bit more of our house."

"Suits me," agreed Arion, "and when we have finished this spud we just move into another."

Next day their board/residence was on a conveyor belt in a potato-crisp factory. "Free travel too," observed Milax.

MORAL

Watch it, chum!

HELIX AND CLAUSILIA

"What a ridiculous shape you are!" scoffed Helix to Clausilia. "Coiled the wrong way round, vital statistics almost nil - what sort of anatomy is there room for in such a spindly shell? How on earth can you squeeze even your skinny body in and out with all those futile folds obstructing the mouth of your shell? What a malformed little squirt! Why, you don't look like a snail at all."

Further ill natured criticism was cut short by a foraging thrush which, mistaking Clausilia for a beech bud, carried off Helix and battered him/her against a stone.

MORALS

1. Deception pays off.
2. Rudeness rebounds.

THE OYSTER AND THE SHIPWORM

An Oyster, which had settled on a submerged plank within which dwelt a Shipworm, boasted: "We oysters are by far the most esteemed of all molluscs. Our virtues have been extolled in verse and prose by classical and modern authors. Our products embellish the diadems of kings and adorn the necks of queens and film-stars. The most exquisite ornaments and objets d'art are fashioned from our shells. Oysters were the prime delicacy at the orgies of ancient Romans and top the menu at the banquets of to-day's millionaires and civic dignitaries (at the rate-payers' expense). We are cherished and protected, and our culture provides a livelihood for many. What other mollusc approaches us in fame and popularity?"

The Shipworm retorted: "We are the most dreaded and detested of all molluscs. The stout ships we have wrecked, the wharves we have ruined and the groynes we have destroyed throughout the ages defy computation. This very timber where we live we owe to our pernicious devastation."

Just then an oystercatcher inserted its bill between the gaping valves of the Oyster and deftly extracted the contents.

"So perish all do-gooders," muttered the Shipworm.

MORAL

Keep your mouth shut.

A. E. Ellis

A NOTE ON THE DISTRIBUTION OF GLOSSUS HUMANUS (L., 1758) IN BRITISH AND IRISH WATERS

On 15th. March 1977, while trawling some 32km. NW by Holborn Head, Caithness, the MFV Gleaners II took a living specimen of Glossus humanus (L.) from muddy sand at a depth of 55m. This specimen is a new record for Sea Area S2, Sutherland. Further research into the known distribution of this species in British and Irish waters produced the following facts. Glossus humanus apparently has only been taken alive from four Areas since 1950. Prior to 1950 the species was recorded from nine Areas, and in all has been recorded less than 100 times.

The poorness of records may be due to the offshore habitat, usually at depths of more than 7m in soft mud or muddy sand. Glossus humanus will remain poorly recorded until either the habitat is more fully investigated in a recording survey or communication with possible existing sources of catches improves. For instance, does it occur on bottoms inhabited by Nephrops? Contact with this section of the fishing industry could be fruitful.

If there are records, particularly recent ones, which I have not come across, I would be very grateful to hear of them. I wish to thank Dr. Shelagh Smith, Mr. Phil Palmer and Mr. W. D. McKay for the information necessary to compile this short note and accompanying map. (Page 47)

R. G. Meiklejohn, June 1977

MEMBERSHIP TRENDS IN THE LAST HUNDRED YEARS

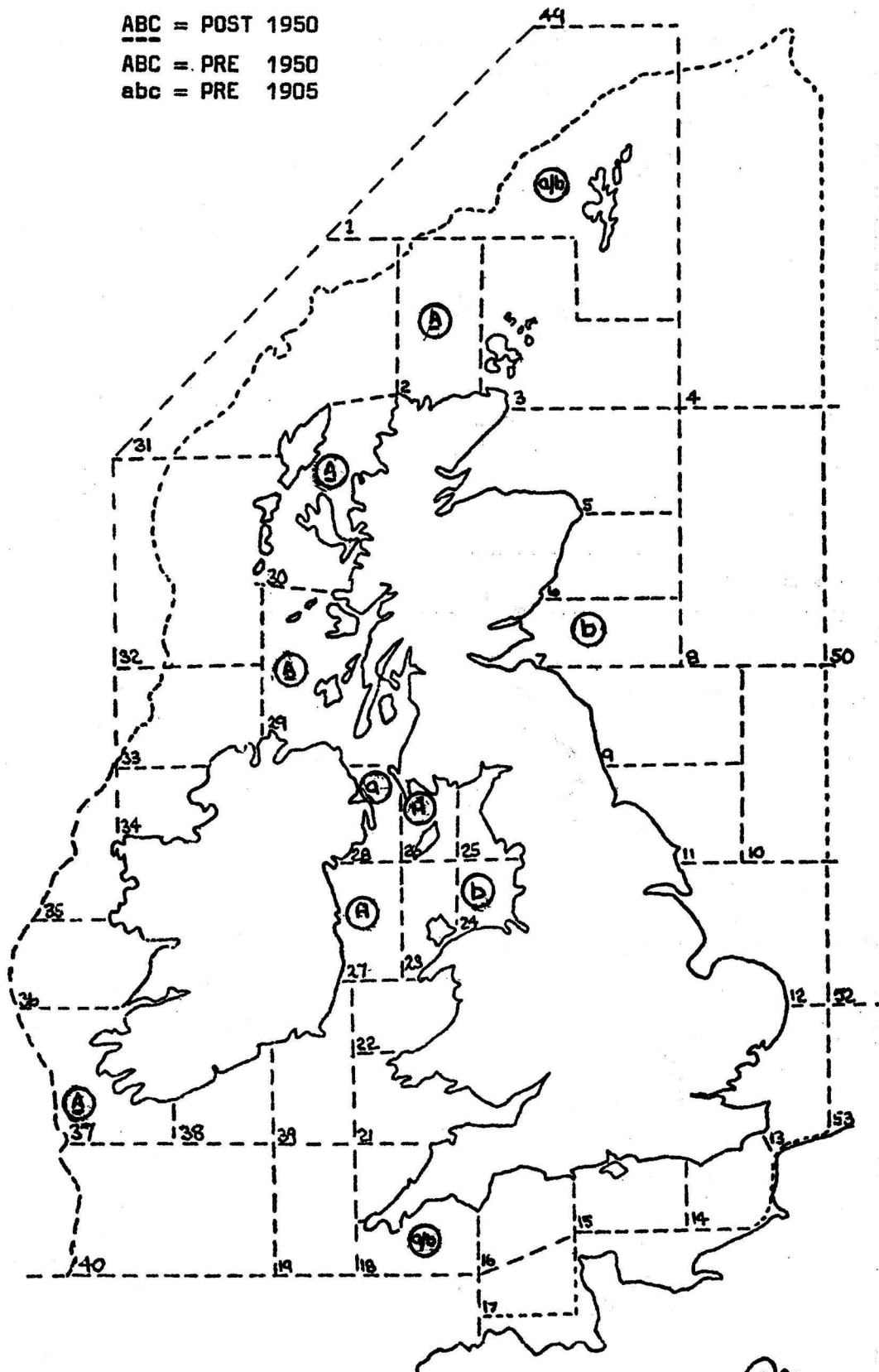
The graph reproduced here was prepared by Mr. Crowley for the Conchological Society Centenary exhibition held in Cardiff in summer 1976, but it is presented in the Newsletter as members may like to see in visual form, how the Society has grown

THE KNOWN SEA AREA DISTRIBUTION OF GLOSSUS HUMANUS
IN BRITISH AND IRISH WATERS AS OF MAY 1977

ABC = POST 1950

ABC = PRE 1950

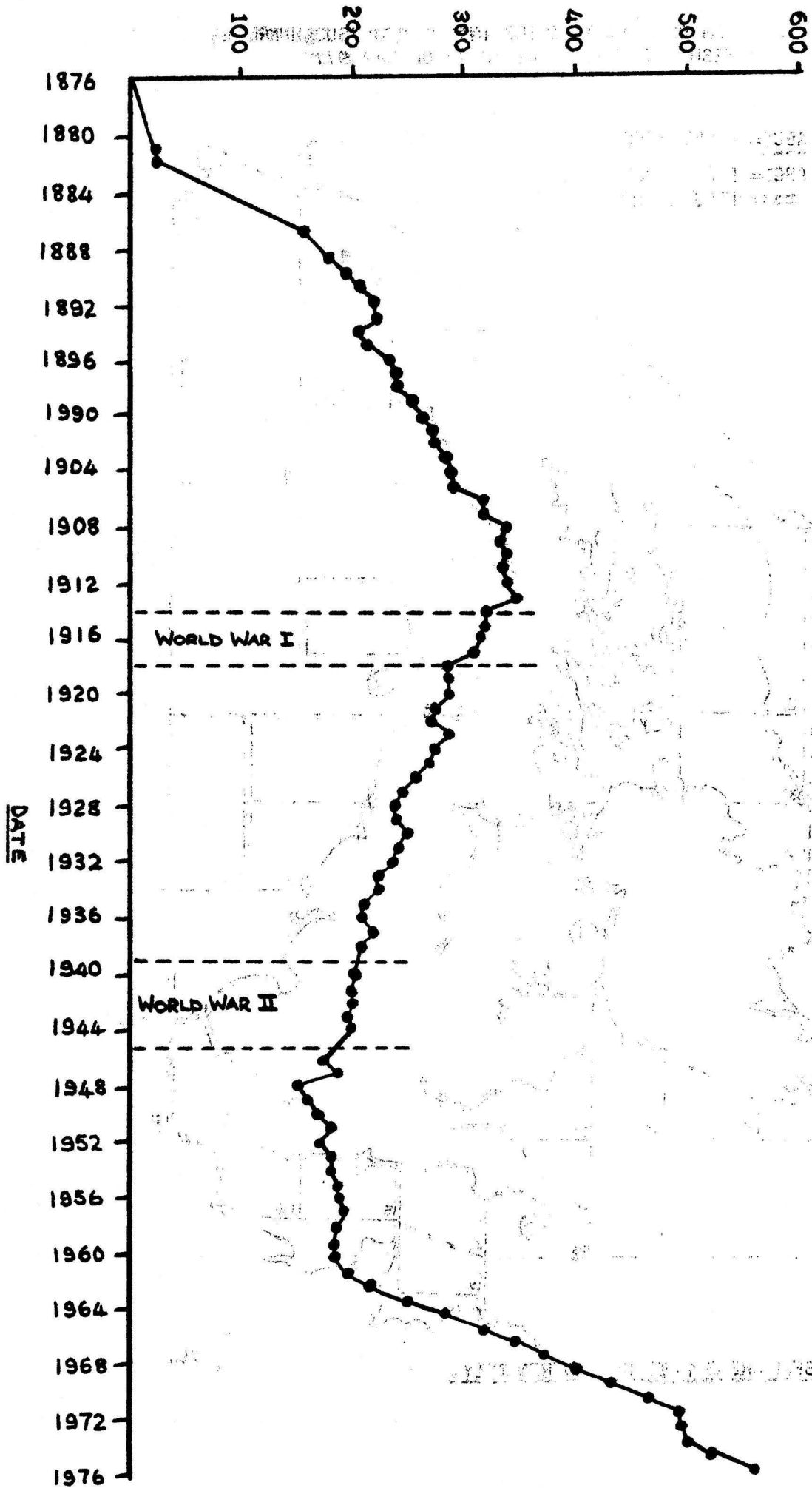
abc = PRE 1905



SEA AREAS 1-37 CONSIDERED ONLY.

Rep

MEMBERSHIP



since its beginning in 1876. It is also tempting to suggest factors which may have influenced the numbers of members. After a fairly slow start (1876-1882) membership steadily grew to reach 350 at the beginning of World War I. During the War, numbers declined to about 325 and this decline continued through the depression of the 1930's and World War II to a membership of only 150 in 1948. From 1948 until 1960 there was a slow improvement in membership but it did not return to over the 200 mark until 1962 and thence followed a dramatic increase in numbers and a membership close to the 600 mark by centenary year. The numbers from which this graph was constructed were published in the Journal in 1975 at the end of Mr. Crowley's article on the "History of the Society" and in this there are many clues for the interpretation of the graph.

June Chatfield

SOME CORNISH BEACHES

The town of Penzance lies on a sheltered curve of Mounts Bay, and commands distant views of the Lizard Point - the southernmost tip of England. In the official guide book little is mentioned of the beaches of this town, apart from a brief mention of the Battery Rocks.

The Battery Rocks are situated between the South Pier and the bathing pool. These rocks are geologically mainly Killas, a Cornish term for the altered, schistose, or hornfelsic rocks in contact with granite, which have often been considerably altered by the emanations from the granite.

These rocks are aptly described by Turk (1971). An exposed shore with a broad high zone of barnacles, the wracks growing only on the more sheltered parts of the middle and lower shore. Pools, gulleys, overhangs, oarweed-forests and a turf of various red seaweeds including Coralline Weed, provide a good range of habitats. On 8th. September 1976, I took a short cut over the cliff from the Chimney Rocks, to find a large number of holiday-makers turning over large and small boulders, and leaving them upside down, between middle shore and low water, spring tides.

So I only worked a small area of shore, from below the War Memorial to the South Pier. In silty crevices of the larger outcrops of rock there were various species of worms, and molluscs, Acanthochitona crinitus, Kellia suborbicularis, one Musculus costulatus, Venerupis saxatilis, rather flattened and deformed, Cingula cingillus were plentiful. Adult Ocenebra erinacea were observed resting on the larger rocks, these specimens were more than twice the size of those found in the Chimney Rocks. In a pool hereabouts under boulders were Lepidochitona cinereus, Gibbula cineraria, Gibbula umbilicalis, on a large outcrop of rock nearer to the South Pier, many of the species mentioned above were found in crevices, under overhangs Calliostoma zizyphinum, and on the surface a small form of Littorina saxatilis, Patella vulgata and Nucella lapillus.

The Wherry Rocks

To the right of the bathing pool there are the Chimney Rocks, on the more extensive beach, beyond these rocks, the shore is shingle turning to coarse sand, to the Tolcarne Beach on which are the Wherry Rocks. These rocks were visited on 2nd. September 1975. Living molluscs found were Lepidochitona cinereus, Patella vulgata, Gibbula cineraria, Gibbula umbilicalis, Monodonta lineata, Littorina littorea, Littorina saxatilis, Nassarius incrassatus, and one recently dead specimen of Venerupis pullastra was found in muddy gravel, at the base of the rocks. My time here was of short duration, owing to sewage deposits on these rocks!

The Chimney Rocks

I visited these rocks for the first time on 4th. September 1975. These rocks are semi-exposed, access to the shore is by way of a concrete ramp, the shore is beautifully

zoned with weeds, there are outcrops of rocks of various sizes, pools, some deep and extensive, these are connected by gulleys, strewn with boulders. This piece of shore is largely unspoilt.

On the upper shore among Pelvetia canaliculata, were fine specimens of Patella vulgata, and Monodonta lineata, hereabouts a few of the granite outcrops, being denuded of algae, are worn smooth and clean. Fucus spiralis follows the P. canaliculata, this in turn is followed by Fucus vesiculosus, below this F. serratus and Ascophyllum nodosum, and some smaller weeds. In this area from upper to middle shore, Lepidochitona cinereus occurs plentifully under boulders, and are variable in colouration from near white, green, grey, brown, red and almost purple, the colour matching the boulders on which they were found. Also in this area there were P. vulgata, M. lineata, Gibbula umbilicalis, Littorina littorea, L. saxatilis, and L. littoralis. One day, during our second stay, I arrived rather early at this shore. The tide was just on the turn, however I was able to wade by means of the gulleys, to the middle shore, here I observed in a pool, some small fishes swimming in large shoals near the surface of the water, young mackerel (Scomber scombrus), which at a guess measured from 30 to 50mm. in length, and below these, swimming among weeds, were larger fishes, the Spotted Goby (Gobius ruthensparri), 40 to 70mm. in length. Suddenly one of the Gobies seized one of the mackerel about 35mm. in length, head first, it was slowly swallowed, and from the time the head of this fish had entered the goby's mouth, 15 minutes was to elapse before the forked tail of the prey was level with the predator's lips.

From middle shore to extreme low-water mark there are some deep wide pools, connected by gulleys. There is a wealth of red, brown and green seaweeds, large and small, to mention a few of these, Chondrus crispus, Gigartina stellata, Ectocarpus, Chorda filum, Alaria esculenta, Laminaria digitata, L. saccharina, Padina pavonia, and the rather more isolated Saccorhiza polyschides. In this region of the shore there is a great diversity of animals and algae, from the overhangs on the smaller weeds, Chondrus, Gigartina and Lomentaria clavellosa, small molluscs can be found, Risso parva and var. interrupta are abundant, there are also Lacuna parva, L. vineta and Tricolia pullus.

Under boulders and among weeds there are crabs, the Edible crab (Cancer pagurus), Shore crab (Carcinus maenas), the fierce Fiddler crab (Portunus puber). Very noticeable are the tube-dwelling Bristle worms (Spirobis borealis) abundant on weeds, Pomatoceros triqueter, on rocks and stones, in rock pools calcareous algae Lithamnion and Lithophyllum, under boulders the Star Ascidian (Botryllus scholoseri), the Beadlet Anemone (Actinia equina). On rocks, stones and the fronds of Laminaria the Snakelocks Anemone (Anemonia sulcata) which prefers open situations. There are fishes, Montagu's Sea-Snail (Liparis montagui) and Blennies.

Of the molluscs, Gibbula cineraria, large specimens of Littorina littorea, Nucella lapillus, banded and unicolour. In the submerged zone on the fronds of Laminaria, Patina pellucida and Lacuna pallidula.

Under boulders with some silting there are the Squat Lobster (Galathea squamifera) the Cushion star (Asterina gibbosa), the blue-grey Spiny starfish (Marthasterias glacialis), and the Sea Urchin (Psammechinus miliaris), the crabs, apart from those already mentioned, are Porcellana platycheles and P. longicornis, and with the Brittle star (Acrocnida branchiata), the bivalve Mysella bidentata occurs, Monia squamula, and attached by byssus threads there are Kellia suborbicularis, Sphenia binghami, Hiatella arctica and juvenile Venerupis pullastra, Musculus discors was found among Corallina, other molluscs were Alvania crassa (two), Cingula semicostata and its var. arctica, were common, there is considerable variation in the shape of the shell in this species, some are bent, others rather twisted. Nassarius incrassatus is abundant, living under boulders and stones in the silt, here there are juvenile Nucella lapillus, and small Ocenebra erinacea, adult Ocenebra occur on rocks and boulders among holdfasts of Laminaria browsing on barnacles, Calliostoma zizyphinum rest under overhangs and weeds lying over crevices in the rocks.

Turk (1971) makes a brief reference to the piddocks, and states the rarity of really soft rocks, clays, rock-boring molluscs are unusual in Cornwall, and goes on to mention the White Piddock (Barnea candida) and the Little Piddock (Barnea parva), were reported in the early part of the century from a 'low ridge of rotten shale'. At Helford in 1962, large valves were found on the surface of the mud, suggesting they still live in the vicinity. In 1923, Sowerby wrote of finding shell fragments of the Common Piddock (Pholas dactylus), below Penzance railway station; presumably these came from the timber of the submerged forest, found to be perforated by this mollusc when examined by Dr. H. S. Boase, as he describes in the Trans.roy.geol.Soc.Cornwall, for 1827.

On 7th. September 1976, the tide had turned, and while working my way back up the shore, when on lifting a boulder to the side of a larger outcrop of rock, Killas, a little below middle shore, I saw water ejected to my left hand, on investigation, proved to be a colony of Pholas dactylus, there would be about a dozen of these molluscs in the rock. I took three live and two dead specimens. On the 9th. September I found a second colony of P. dactylus, to the right and a little below the first found colony, in a low outcrop of rock, covered with Cladophora rupestris, owing to the hardness of the rock the specimens are small, the largest measures 23mm. high and 60mm. long. Provisionally I have placed these specimens in the var. gracilis of Jeffreys. Venerupis saxatilis, and two fine specimens of Hiatella arctica were found in disused holes in these colonies of P. dactylus.

Whilst hammering the screwdriver into the Killas, of the first found colony of P. dactylus, a thin jet of water was ejected from the rock about 9 inches above its base, carefully I split off a piece of rock, and there saw a specimen of Zirfaea crispata, lying in its burrow in a horizontal position, the siphons extended about 2½ inches. A second specimen was found after I found the second colony of P. dactylus, this specimen was also in a horizontal position in a larger outcrop of rock lower down the shore.

The specimens are small, and fully mature, the valves somewhat thickened, both specimens are about the same size being 18mm. high and 33mm. long. I can find no varietal name for such specimens as these, and at some date in the future shall describe them more fully under a varietal name.

Jeffreys (1865) mentions that Da Costa gives Cornwall as a locality for this species, this is the only other record I can find for Z. crispata, for this county.

The Great Eastern Beach, Penzance

Extends from the Albert Pier, behind the railway station to St. Michaels Mount, the shore is composed mainly of sand, with a few outcrops of rock. On my visit to this shore on 7th. September 1975 I soon found it was rather polluted with sewage, which gushes out onto the shore from an oblong hole in the base of the wall of the Albert Pier, between the bus station and the harbour entrance.

The sand under the surface is blackened with hydrogen sulphide. My interest was in the rocks, between the railway station and the harbour entrance, there were narrow gulleys and pools between the rocks, needless to say there was little life in the deeper gulleys and pools nearer the wall. By jumping from one outcrop of rock to another, I was able to work my way to cleaner gulleys and pools, towards the Laminaria zone, under boulders I found Lepidochitona cinereus, Cingula semicostata, Nassarius reticulatus, N. incrassatus, under boulders and on the sides of rocks, among weeds, were Patella vulgata, Littorina littorea, L. saxatilis, L. littoralis, Gibbula cineraria, G. umbilicalis. Among Laminaria weeds, Patina pellucida, Calliostoma zizyphinum, Nucella lapillus, Ocenebra erinacea, and Hiatella arctica. Mytilus edulis occurred on flat-topped rocks, and Venerupis pullastra in muddy gravel, in the cleaner shallow pools, in one of these pools I took a small specimen of Clathrus clathrus, which owing to its small size at first I erroneously thought to be C. clathratulus.

After the long hot summer, I found conditions even worse on my second visit on 6th. September 1976. The gulleys more heavily polluted, the only N. reticulatus found were grouped in clusters under large boulders on the edge of the sand, from this point behind the railway station, for a distance of more than a mile, a strand line 3 to 4 feet wide of fresh human excrement on the sand.

Swanpool Point, Falmouth

This rocky beach I visited on 8th. September 1975, to find holiday-makers from the near-by caravan camp had turned over almost all the boulders and stones, thus destroying almost all the creatures that should have been found there. It made me feel sad to observe this thoughtless destruction of life. However, nearer to extreme low water, an elongated form of Acanthochitona crinitus was found on a rock ledge. Patella vulgata and Acmaea virginea on boulders and the sides of rocks, on the weed Lomentaria clavellosa, were Lacuna parva and Risso parva and the var. interrupta. Under boulders Lepidochitona cinereus, Littorina littorea, Gibbula cineraria, G. umbilicalis, and among Laminaria weed, Calliostoma zizyphinum, Patina pellucida and Lacuna pallidula on the fronds. Rissoa lilacina was found on Rhodymenia palmata, growing on the stalks of Laminaria. These rocks with the adjacent Gyllynvase Beach, would be a naturalist's paradise years ago when largely unspoilt by extensive human intrusion.

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G. W. Pitchford

WILLIAM HEWITT TEMPLE, 1889 - 1960

William Hewitt Temple was born in Leeds in 1889. He had little academic training and after serving in the First World War was employed as Senior Inspector by the Leeds City Tramways until his retirement owing to ill-health.

Working at week-ends he had little opportunity to attend organised Society meetings, so much of his collecting was done by exchange and correspondence. In addition to his membership of the Yorkshire Society he was also a member of the local Numismatic and Philatelic Societies, as were his contemporaries, Dr. Versey, the Anderson brothers and the late J. Digby Firth, B.Sc., whom he often visited on his days off. His favourite holiday hunting ground was the rocky coast around Scarborough. It was during one such holiday that he invited the Yorkshire Society to a field meeting on Castle Hill and afterwards to take tea with him at his hotel. All went well until, due to the carelessness of a member, the waiter appeared in great consternation to enquire about groups of live 'helixes' ascending the lounge walls! At home he had an upstairs study where he would spend his off-duty hours with his beloved specimens only to emerge at the end of the day with another batch of letters for post.

After his death in 1960 at the age of 71 his daughter made enquiries to see if his shells would be of any use to anyone. A visit to his den revealed the extent and breadth of his interests. His coin and stamp collections and his library passed to his grand-children. His shells were housed in an ingenious cabinet apparently of wood but which was really over fifty large 'Oxo' tins built into a wooden frame suitably painted and grained. It was difficult to assess the situation at the time so the collection was accepted as it stood and Mrs. Temple was assured that it would eventually be used in a museum or for educational purposes.

For sixteen years the shells remained in store in the Biology Dept. of the Pontefract Boys' School, but last year the opportunity arose to examine the collection.

In all, there are over a thousand species, bivalves and gastropods, marine and terrestrial and mostly named, housed in a miscellany of glass-topped boxes, tubes, pill boxes, old match and snuff boxes. From the large number of snuff boxes one might presume that Mr. Temple was a snuff addict but these were collected for him by the lady in the tobacco kiosk at the city tram terminus. The names and sites from which the shells came were mostly on snippets of paper pushed into the containers. Some of the labels were dated as far back as 1886, one from the late W. Dennison Roebuck and one on the back of a bill addressed to Mrs. Tomlin.

It being easier to mount stamps and coins it would appear that Mr. Temple had given preference to these, although he had mounted a considerable number of his shells and had made several of the display units himself. It was obvious that there was need of a further careful scrutiny of the rest of the collection, which is world-wide ranging from the Ohio River U.S.A. to New South Wales and the Pacific.

The collection was exhibited at the January 1977 meeting of the Yorkshire Society after which it was left in the care of Mr. A. Norris for further examination with a view to its being incorporated into the collections of the Leeds City Museums.

S. G. Appleyard

BOOK REVIEWS

SHELL COLLECTING IN AUSTRALIA by Neville Coleman, published by A.H. & A.W. Reed, 1976, at £13. Agents in Britain - Bailey Bros. & Swinfen Ltd. of Folkestone, Kent.

This interesting, lavishly illustrated book covers aspects of shell collecting ranging from simple beachcombing to the use of some of the more sophisticated collecting methods used by professional biologists. Although written with respect to Australia, many of the points and techniques described are true for any continent and therefore relevant even to the colder waters of the British Isles.

The book is divided into nine sections as follows: Littoral collecting, Sublittoral collecting, Benthic collecting, Terrestrial collecting, Fossil collecting, Hidden and not so hidden dangers, How to clean your shells, Uses of shells - past and present, and Aquariums and Terrariums. The first three sections and section five are of particular interest to British collectors as these are directly comparable to the problems of collecting in Britain. Section four is interesting and useful but not so easily transferable to our conditions and habitats. The occurrence of very aggressive ants is a problem not too often met with in English woodland. The same can be said about section six on the dangers of collecting; fortunately for us, sea-snakes do not occur on our coasts. However, some of the dangers mentioned are similar to those encountered around our shores.

One of the most useful points about the book is the addition at the end of each chapter of a list of equipment required for collecting within that particular habitat.

In general, a useful, interesting and above all very readable book.

Adrian Norris, Leeds

"Type specimens of Invertebrates (excluding Insects) held at the Royal Scottish Museum, Edinburgh" by G. Smaldon, D. Heppell and K. R. Watt. Royal Scottish Museum. Information series. Natural History 4. pp. 118. August 1976. Free from the Royal Scottish Museum to anyone interested.

This is one of a series of information books produced by the Royal Scottish Museum which make available information on the collections. The book covers type specimens from a range of invertebrate groups, but 22 pages are devoted to the Mollusca.

All the information throughout the book is arranged clearly in taxonomic order and there is both a list of contents and an index. Preceding the list of type specimens, there is a page of introduction which gives some background to the collections in the Royal Scottish Museum which contain type material, together with references on the publication of the results of expeditions involved. Much of the type material is the result of collections made by the Scottish Antarctic Expedition (1902-4) from the yacht 'Scotia' and this accounts for 51 of the molluscan types.

The section on the Mollusca begins with an introduction which also points out that further type specimens are expected to come to light in the future as work proceeds on the collections. Other collections involved include those of L. Dufresne, E. Forbes, R. K. Greville and W. Nicol. For the Mollusca the list does not extend to paratypes, in addition there are further specimens of possible type status in the A. E. Salisbury Collection which await detailed study.

Each entry in the catalogue is in taxonomic order and the information is given under standard headings. It includes the full name of the species, reference to the original publication, museum registered number, whether dry or spirit material, the status of the type (holotype, lectotype, etc.), locality and the name of the collection. For some species there are extensive notes which would give research workers a very useful lead and the molluscs are more fully annotated than the other phyla.

Seventy-two type specimens of molluscs are listed which come from five of the seven classes. The majority of the species are marine but there are a few non-marine ones often collected from islands during expeditions ('Scotia' and 'Rattlesnake').

The geographical range of the material is considerable and includes both northern and southern hemispheres. In some instances the station number, local name and reference (latitude and longitude) are given but without a broader regional name: it is a pity that this was not added throughout.

This is a welcome guide to the type material in the Royal Scottish Museum and will clearly serve to make the collections more accessible to taxonomists for future research.

J. E. Chatfield

The biology of crabs, by G. F. Warner. Paul Elek Ltd., London, 1977. 202pp., illustrated. £6.95.

Any member who has collected seashells on the shore will be familiar with crabs. Those whose interests are not confined to molluscs will find a lot of detailed information on crabs in this book. "The biology of crabs" covers anatomy, movement, sense organs, rhythms, life styles, food and feeding, social behaviour, life histories, hostile environments, evolution and systematics, and human usefulness in separate chapters. Many topics make fascinating reading. As a functional morphologist, I was delighted with the discussion on movement and how the problems of contracting muscles within a rigid enclosing skeleton are overcome. Similarly, the chapter on social behaviour of crabs in crowded colonies reminds one of the frictions on a modern housing estate! The book is a well written and well illustrated introduction to the subject, with over 300 references, mostly to very recent work, for the specialist who wishes to pursue a topic more thoroughly. Misprints are very rare, although the evenness of printing in the glossary and index of the review copy leave a little to be desired. I was interested to learn that fig. 14 (p. 30) shows "longitudinal" sections of leg elements and wonder how they differ from longitudinal sections. In general, however, the book is free of unnecessary jargon and technical terms are explained in the text and glossary. Altogether a very interesting book and, for the present time, not unreasonably priced.

C. R. C. Paul

A NEW BOOK. "THE NATURAL HISTORY OF THE GARDEN" by Michael Chinery, published in 1977 by William Collins Sons and Co. Ltd., Glasgow, at £4.50.

Members with a broad interest in natural history and an unkempt garden may be interested to know of this book. It covers a full range of wild plants (weeds) and wild creatures (both vertebrates and invertebrates) which are found living in gardens. Of particular interest is the chapter on slugs and snails which is accompanied by two excellent colour plates, one on snails and the other on slugs. The species of mollusc are all illustrated showing the animal as well as its shell. The text is written for the layman so scientific names have been kept to the minimum, but when in doubt over a vernacular name the animals can be readily identified from the colour illustrations.

J. E. Chatfield

Seashells, by R. Tucker Abbott. Transworld Publishers (Ridge Press), 1976. £1.45.

Bookloving conchologists will need only one guess. Yes, this is yet another excellently produced picturebook of colourful marine shells, chosen alike for their beauty and for the ingenuity of their imaginative popular names. It will delight the artist rather than the scientist and will help to prove the fact, evidently known to the Author, that bookloving conchologists are happy to buy any book he produces, particularly since they are all produced well. A fair degree of repetition is no disadvantage to the enthusiast.

What can one say in reviewing a picture-book where the captions can be taken as absolutely accurate? Better stick to facts. As usual in books of the kind, there is a short and simple explanation of the molluscs followed by a useful map of the Ocean Provinces of the World. Then we have about 150 colour photographs, each with its caption. The colour reproduction is in general first-class although it tends to be a little lurid in places, as where a harp-shell comes out bright scarlet. One or two shells (e.g. Thatcheria) are photographed in part only, and here the effect is less successful, but interest is certainly increased by the inclusion of pictures of live molluscs, an aspect often neglected in the past (but if live Prosobranchs, why not a few Nudibranchs as well?).

Again as usual, ninety percent of the pictures cover the Gastropods; there are a few pages of representative bivalves, a couple suffice for Cephalopods and one for an un-named chiton. The selection is made so as to minister to the taste of the average collector rather than to tempt him into some of the many neglected aspects of the subject. Some of the species dealt with do not admit of much non-technical discussion, and here the Author has resourcefully turned to some general remarks on the genus concerned. The facts recounted are of course, beyond question and the book can certainly be assumed free of mistakes: the worst that could be found in the text (not worth mentioning in any less perfect account), being 'binomial' for 'binominal' and 'Octopi' for 'Octopuses' (or possibly Octopodi or Octopods).

The book is provided with a hard, waterproof cover, useful if you wish to take it on a shelling expedition in tropical parts: but it is one of those books which, if opened with one hand, jump in the air and shut themselves with a snap. The title: far from original, admittedly. You try and think up an alternative.

T. E. Crowley

'THE CREEPING MENACE FROM THE MUD'

A FIELD TRIP TO SOUTHPORT, MERSEYSIDE, 25 JUNE 1977

A small party of members and friends gathered at Southport for what proved to be less than the expected hot and sunny summer day. In some respects the weather was an

advantage in that the beach was noticeably lacking that peculiar species - the holiday-maker.

A few of us investigated an outfall covered with loose bricks, just north of the pier. The shore crab (Carcinus maenas) obviously considered this a most suitable habitat as it was present in densities of about 50 per sq.m. (carapace widths varying from 2-30mm.). It also proved a suitable place for the collection of the more robust species of shell, e.g. Acanthocardia echinata, Chlamys opercularis, Natica alderi, N. catena, Nucella lapillus, Ocenebra erinacea, etc.. North of the outfall were the remains of what had originally been a thriving intertidal mud community. Mature Mya arenaria (L = 120 + mm.) and Scrobicularia plana (L = 35 + mm.) were exposed articulated and 'in situ'. Despite a search, no living individuals could be found although S. plana appears to have re-established itself in softer, deeper mud just south of the outfall. These specimens are all of the size (about L = 10 mm.) and appear to be the result of a successful spatfall perhaps the year before last and probably at the same time as that of Cardium edule which has only recently returned in any numbers to the Merseyside shore.

Another productive source of shells was the balls of bryozoa which had, on their travels, entrapped the smaller and more fragile species, e.g. Cingula semicostata, Abra alba and Gari fervensis.

A few braver souls ventured further north along the coast road to investigate the encroachment of spartina grass. It appears to have advanced to within only $1\frac{1}{2}$ miles of the pier and not the 100 yards reported in the Guardian (21 June) from which paper the title of this note is taken. Further species were recorded, e.g. Clathrus clathrus, Clathrus turtonis, Dosinia lupinus to make a total of 41 - a useful addition to the records for the area. (No. 1 of the Newsheet for Liverpool Bay, which was distributed at this meeting, indicates that there are, at the moment, only 9 completed post 1950 field cards for this 10 km. square.)

Peter Lingwood

GENERAL NOTES

THERE WILL BE A JOINT MEETING OF PORCUPINE, the society for the study of the fauna and flora of the N.E. Atlantic area, and the Littorinid Research Group on Friday and Saturday 24/25th. February 1978, in Manchester. The theme will be "The Species Problem: aspects relating to the European marine fauna and flora". Anyone wishing to receive further details please contact the Meeting Organiser, Charles Pettitt, Manchester Museum, The University, Manchester, M13 9PL.

SPECIAL PROGRAMME ANNOUNCEMENT. Will Members please note the following change in the advertised Programme for Saturday 21st. January 1978. Dr. A. J. Rundle has very kindly agreed to postpone his talk until further notice so that we may take advantage of the offer of a talk by Mr. John Orr, Chairman of the Hong Kong Shell Society.

Mr. Orr has been a member of the Conchological Society since 1966 and is also Assistant Trade Commissioner in the Diplomatic Service in Hong Kong. He is coming to England on "long leave" and has offered to give us "An illustrated talk on collecting Marine Molluscs in the Hong Kong Area". I feel sure that this will prove to be a most enjoyable Lecture.

E. B. Rands

ANNUAL SUBSCRIPTIONS, 1978

Dear Members,

Will you all please make a note to pay the Annual Subscription promptly. It is

due on 1st. January 1978, and should be sent to me, but cheques and postal orders should be made payable to the Society, and not to any individual officer. Receipts are not sent unless specially requested; please send a stamped addressed envelope with any such request.

I shall be pleased to send a form for payment by banker's order to any Member who requires it. If you are already paying in this way please check that the amount of the order is correct as some Members paid in 1977 at the old rate.

A number of Members pay under Seven Year Covenant, and this is of great benefit to the Society which is able to reclaim tax. Please consider this if you have not previously signed a covenant. There is still time to sign one to include the 1978 subscription, and I shall be happy to send you a form and explanatory letter.

Yours sincerely,

MARJORIE FOGAN (Hon. Treasurer)

[REDACTED],
Atherton, Manchester, [REDACTED]

Subscription Rates:

Ordinary Member:	£5.00 (U.S. \$15.00)	Junior Member:	£1.00 (U.S. \$3.00)
Family Members:	£6.00 (U.S. \$18.00)	Entrance Fee:	50p (U.S. \$1.50)

Ordinary Members and Family Members may deduct the sum of 50p (U.S. \$1.50) from Subscriptions paid before 31st. March 1978.

THE SOCIETY'S PUBLICATIONS

Back numbers of the Conchologists' Newsletter may be obtained from J. Collins, The Bookshop, 45 Westow Street, Upper Norwood, London, S.E.19 (Tel. 01-771 9719) at 25p each plus post, or from the Hon. Secretary, Mrs. E. B. Rands who can also supply copies of the Marine Concordance, 30p to members and 50p to non-members, The Atlas of Non-Marine Mollusca, £2.50 to members plus 85p post/packing and £3.00 to non-members plus 85p post/packing. Mrs. Rands can also take orders for back numbers of the Journal of Conchology.

Papers for Students can be obtained from Mr. A. Norris, Natural History Dept., City Museum, Municipal Buildings, Leeds, LS1 3AA

BACK NUMBERS OF NEWSLETTER WANTED. The City of Liverpool Libraries, William Brown Street, Liverpool, L3 8EW (Ref. BS/SER) are anxious to obtain the following issues of the Conchologists' Newsletter: 1 - 8, 11, 14 - 17, 21, 22, 24, 26 and 41. Please write as soon as possible with offers.

WAGNER AND ABBOTT'S 'STANDARD CATALOG OF SHELLS', Third Edition 1977 (with supplements) now available - \$30.00 incl. post. The 'Catalog' is now loose-leaf and extra binders are available. American Malacologists, P.O. Box 4208, Greenville DE 19807 U.S.A.

MAL DE MER ENTERPRISES, 946 Ralph Avenue, Brooklyn, New York 11236, U.S.A. have a new price list available now on request. Specimen tropical marine shells.

SHELL STAMPS FOR SALE. Send SAE for Extensive Lists of Shell and Marine Stamps. All new issues available. Also all nature subjects, e.g. Birds, Butterflies, Flowers. Write to: A. Grainger, [REDACTED], Horsforth, Nr. Leeds, [REDACTED]

SHELLS FOR SALE. A fine selection of shells for the collector is available at Eaton's Shell Shop, 16 Manette Street, off Charing Cross Road, London, W1V 5LB (telephone: 01-437 9391).

CHRISTMAS 1977

The Newsletter Editor sends the Season's Greetings and Best Wishes for a Happy New Year to every reader.

THE NEWSLETTER IN 1978

I hope that members will continue to send me a good selection of material, particularly long articles, during the coming year. As mentioned previously, it is essential to have a 'stock' of contributions in order to plan the issues as the year progresses. I shall also be pleased to receive line illustrations, diagrams, maps or drawings of shells, clear black line drawings please, avoiding too much fine or detailed work.

The message seems to be 'Your Newsletter needs you!'

F. E. Negus

CHANGE OF ADDRESS: I am now employed by the Welsh National Water Development Authority as Deputy Head Ranger at Canolfan Llyn Brenig, Cerrigydrudion, Nr. Corwen, Clwyd and will continue as Area representative for the Marine Recording of Liverpool Bay (S24). I hope that it will be possible to organise a few field meetings in the North Wales area especially to coastal localities, which are, in the main, poorly recorded.

Peter Lingwood

A. WALTON, [REDACTED], Tulse Hill, London, [REDACTED] would be very grateful for assistance with "A synopsis of the characters of the Carboniferous Limestone Fossils of Ireland" prepared by Frederick M'Coy for Sir Richard Griffith, Williams & Norgate, 1862. Would any member either lend me this work (postage and insurance paid by me) or let me have (at my expense) photostats of 1) Plate 29, 2) Introductory pages after p. viii if any. I should also be grateful for information as to the possible existence of signature A.

WANTED. [REDACTED], [REDACTED], St. Helier, Jersey, C.I. Second-hand copy of Eales N.B. 1961, The Littoral Fauna of the British Isles. A Handbook for Collectors. Cambridge. Offers in the first instance to Rev. G. Long at above address, stating condition and price.

INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE, c/o. British Museum (Natural History), Cromwell Road, London, SW7 5BD, United Kingdom. ITZN 59 The following Opinions (listed by number) have been published recently by the International Commission on Zoological Nomenclature (see Bulletin Zoological Nomenclature Volume 34, part 3, 9 November 1977).

Opinion No. 1095 (p.150) Venus pensylvanica Linnaeus, 1758: designation under plenary powers as type-species of Lucina Bruguière, 1797 (Mollusca, Bivalvia).

Opinion No. 1097 (p.158) Calyptraea striata Say, 1826 (Mollusca: Gastropoda): validation of.

The Commission cannot supply separates of Opinions.

The draft third edition of the International Code of Zoological Nomenclature is now available for comment by zoologists. Copies may be obtained (price £2.50 surface mail, £5.00 air mail) from the Publications Officer, International Trust for Zoological Nomenclature, c/o. British Museum (Natural History), Cromwell Road, London, SW7 5BD, U.K. Comments should be sent as soon as possible, and in any case before 30 November 1978, to the Secretary, International Commission on Zoological Nomenclature, at the above address. A paper explaining the major changes proposed by the Commission's Editorial Committee to the existing Code has been published in the Bulletin of Zoological Nomenclature, vol.34, part 3. Copies may be obtained (price 50p) from the same address as copies of the draft Code.

THE CONCHOLOGISTS' NEWSLETTER

No. 64

Newsletter Editor: P.E. Negus,

March 1978

Chelsea Bridge Road,
London, [REDACTED].

Produced by THE CONCHOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND

PATELLA (PATELLA) CAERULEA LINNEAUS, 1758, FROM ZANZIBAR

In his "Révision du genre *Patella*" (Mollusca, Gastropoda) Mr. Joseph Christiaens (1973) writes on p. 1323: "*Talmadge* (1971) dit avoir reçu des *P. caerulea* de Zanzibar. Bien que ces patelles aient été récoltées près du quai d'accostage de la malle, nous croyons que cette identification demande confirmation car cette espèce semble se tenir à des limites géographiques très strictes." Mr. R. R. Talmadge has provided us with a slide of the specimens mentioned: taken at Mail boat Quay, Zanzibar in 1957. The length of the biggest specimen is 22mm. They are now in the collection of the California Academy of Sciences (No. 192-192).

The specimens were collected by M. Collins and E. Jordan, who both worked for the British Government. Mr. J. Christiaens and myself confirmed that these patellas are indeed specimens of *Patella caerulea* L.

The normal geographical distribution of *P. caerulea* is restricted to the Mediterranean Sea and this species does not seem to be endemic at Zanzibar (no other records and an extensive geographical gap between this Island and the Mediterranean). So the infiltration of the species by unnatural transport means is the most acceptable cause of this rather odd excess of geographical distribution.

The data of the Zanzibar material was obtained prior to the present political situation in East Africa, when it was still part of the then British Empire (1957). Several regular boat-lines furnished both passenger and mail services between Southampton (G.B.) and Cape Town (S. Africa) with stops at Gibraltar, Malta, Port Said, Aden, Zanzibar, Dar-es-Salaam, Durban and Cape Town, a regular way Station trip. The one way trip took 14 days in total, and the time spent from Malta to Zanzibar was about seven or eight days, which is not excessively long for a veliger to remain in the marine growth on a boat hull. There are also areas below the water line that actually create eddies and other parts which have no current wash due to the movement of the hull through the water, so such veligers and/or trochoformes would not have been disturbed. This theory is confirmed by small, dead and bleached specimens found at Aden (another stop!) by Collins and Jordan and sent to Mr. Talmadge with a note that the species died before reaching maturity (pers. comm. R.R. Talmadge).

The higher temperatures at Aden appear to have had an effect as only dead material has come from there. The sea temperature at Zanzibar is less because of its open exposure to the larger body of the Indian Ocean, in addition to the currents along the shore of East Africa.

Many references also mention Port Said as a locality where *P. caerulea* was found during that period; e.g. Tillier, L. & Bavay (1905), Pallary, P. (1912), Moazzo, P.G. (1939) and Talmadge (pers. comm.): "off a rock and concrete 'light-dolphin' for a range light to the canal". But more recent publications, e.g. Tomlin, J.R. (1927), Barash et al. (1973) do not mention *P. caerulea* from the Suez Canal or Port Said. However, for the latter, the Suez Canal could have functioned as a transport way.

No reference is known to me of *P. caerulea* found at Dar-es-Salaam. It would be interesting to investigate if this species could maintain its position on Zanzibar Island.

Acknowledgement

I should like to express my thanks to Robert R. Talmadge for the necessary information he gave to complete this article.

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J. M. C. Hermans

ASCOGLOSSAN NOTES (5)

Name of the group

In 1875 Pagenstecher named the order Monostichoglossa, and a year later Ihering called it Sacoglossa and at the same time Bergh proposed the name Ascoglossa. Since then, the long-winded name Monostichoglossa has fallen into disuse, most authors preferring either Sacoglossa or Ascoglossa. Strictly speaking, by the principle of priority (the first published name to be accepted) Monostichoglossa is the correct name; but the International Code for zoological Nomenclature (1964) makes it plain that the principle of priority is not an inflexible law; it may be moderated to preserve a long-accepted name in its accustomed meaning. Sacoglossa and Ascoglossa have been commonly used for a hundred years so that these names would be acceptable.

Of course, the matter cannot rest there; we should make a choice between Sacoglossa and Ascoglossa. Here the Code (1964) helps us, for in Appendix D2,11 it states "In forming a compound name, a zoologist should not choose components of which one is Greek and the other Latin". The first part of Sacoglossa is Latin and the second part is Greek; whereas both parts of Ascoglossa are Greek. So the better of the two names is Ascoglossa. I have always used Sacoglossa, but from now on, I shall use Ascoglossa and this explains the alteration in the title of these notes.

Limapontia capitata rubra Smith

I remember a bleak day in June 1977, when PORCUPINE took us to Whitburn Steel, a flat, exposed part of the north-east coast of England, near Sunderland. The rocks on the top of the shore were mostly covered with *Enteromorpha* spp; and I did not find any ascoglossans. However, about a fortnight later, Shelagh Smith sent me a tube containing about 30 specimens (of length 2-3mm) collected from a population of several hundreds that were found on *Ceramium rubrum* at mid-tide level, during the same outing.

Dr. S. M. Smith had identified them as Limapontia capitata and would I please check the identification? Several specimens were dissected and this confirmed they were L. capitata and not L. depressa. Now L. capitata usually feeds on green Cladophora; yet here was a population, not just one or two stray individuals, feeding on Ceramium and they could be called a subspecies. A very interesting discovery; if any reader finds L. c. rubra in another locality, please inform Dr. S. M. Smith, Zoology Department, Royal Scottish Museum, Chambers Street, Edinburgh, EH1 1JF.

Spence Bate's paper of 1850

Spence Bate, J. G. Jeffreys (author of the well-known British Conchology) and Moggridge collected L. depressa from Loughor Marsh, near Swansea in 1849 - twelve years before its discovery by Hancock at Hylton Dene, near Sunderland. Unfortunately, the species was identified as Limapontia nigra Johnston by Bate who, although he published three drawings, did not give a written description. I tried in vain to obtain this rare paper from London Libraries, and I am grateful to Dr. June Chatfield who kindly sent me a photocopy from Swansea. If any member wishes to inspect it, I would willingly send him, or her, my copy.

Hermaea bifida

If ever you should chance to find Hermaea bifida, that feeds on the red seaweed Griffithsia corallinoides, please try and observe it feeding. Its head is so transparent that you can see the buccal mass rapidly pulsating as a thin red stream of cell sap is drawn through the buccal cavity into the oesophagus. Most fascinating!

I spent one or two hours watching H. bifida, collected by J. Dunne, resident biologist of the marine laboratory, Carna; and for observing the buccal mass in action I used a stereoscopic binocular microscope at a low magnification.

A rare ascoglossan

In my first notes (Newsletter 56, 1975) I suggested several rare species that might be found around the British Isles. Although the drawings were crude and some of the information misleading (for which I apologise) it resulted in two zoologists, J. B. Sigurdsson and C. D. Todd, sending me three specimens. Two were Calliopaea oophaga, a species new to the British fauna, and the remaining one was Calliopaea bellula, an elusive species of which there were only two previous British records.

Thus encouraged, I conclude Notes (5) with another rare ascoglossan - Stiliger vesiculosus (Deshayes, 1864). It is a Mediterranean species which might, by chance, be found in south-west regions of Britain and Ireland, either on the coast or a mile off shore. If found S. vesiculosus would be an addition to the British fauna. I have examined the external features of two beautifully preserved specimens courteously sent to me by HR Haefelfinger of Basle Museum, Switzerland; and R. Burn kindly gave me two more collected near Livorno, Italy, one of which I dissected. Figure 1 and the ensuing notes may help the reader to identify the species. (See page 62 for figure 1)

Identification Notes

Length, about 3mm. Colour, brown to black, with a pale area on dorsal surface and pale eye streaks. Tentacles, long, cylindrical. Eyes, visible at bases of tentacles. Cerata, 10-15 each side, bulbous with whitish tips. Tail, tapered and of moderate length. Teeth, sabot-shaped, up to 160 μ m long. Penial style, of length 40 μ m. Could be mistaken for Calliopaea bellula or C. oophaga, but these species have penial styles 400 μ m long and their teeth are awl-shaped and rarely exceed 100 μ m in length. S. vesiculosus feeds on the eggs of Favorinus branchialis and probably other opisthobranchs; see interesting paper by HR Haefelfinger (1962) in Revue Suisse Zool. 69.

Tom Gascoigne

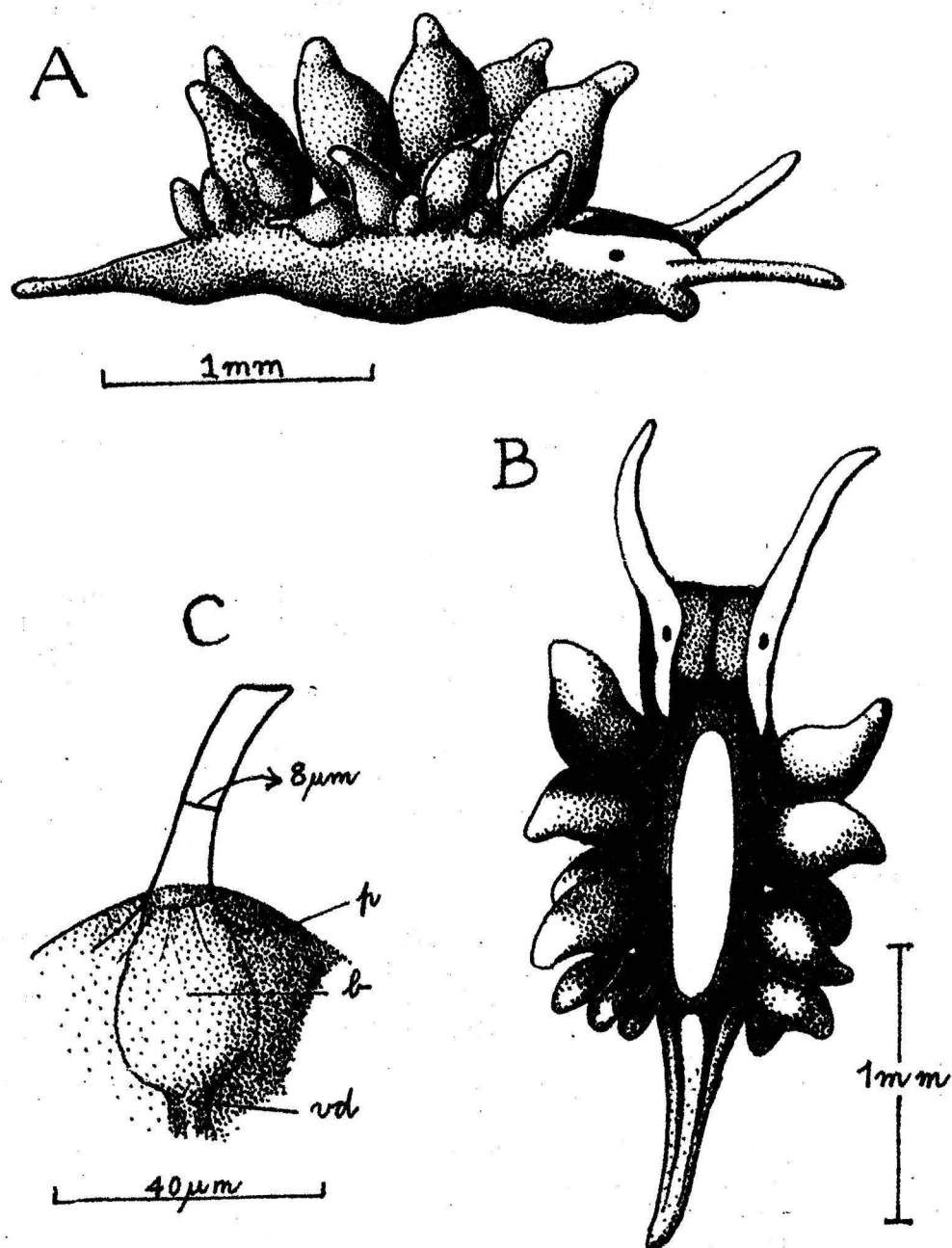


Figure 1. *Stiliger vesiculosus* (Deshayes), 1864

A and B, lateral and dorsal views (after Deshayes). C, penial style, drawn from a preparation in Berlese's fluid

b, basal cuticular swelling; p, penis; vd, vas deferens.

MOLLUSCA ON BURNT AREAS

A hitherto unexploited field of information on landsnails is a study of the Mollusca of burnt areas, whether grassland, heath or woodland. The phenomenally hot

and dry summers of 1975 and 1976 have meant a tinder-dry countryside and widespread fires. In my part of Cheshire (the Wirral peninsula) we had no very large fires but plenty of small ones. Examination of a number of such sites soon afterwards yielded surprisingly large numbers of snail-shells, though anything smaller than Trichia hispida usually perished without trace.

As an example, a "burn" of nettles under a mature oak standing in old grassland in the valley of the Dibbin, Bromborough, yielded a total of 21 shells of Arianta arbustorum and 42 of Cepaea nemoralis from an area measuring 18ft. by 13ft. 6in.

Another "burn", not far away but on slightly drier ground with brambles, bracken and a few young oak-trees (area 56ft. by 22ft.) held 42 C. nemoralis and 37 Arianta arbustorum.

Yet a third "burn", this time in a stand of Phragmites at the foot of the railway embankment near Spital Railway Station an area ca. 25ft. square produced the following: 110 Arianta, 35 C. nemoralis, 4 C. hortensis, 5 Discus rotundatus, 2 Clausilia bidentata and one each of Oxychilus cellarius, O. alliarius, Retinella pura and Zonitoides excavatus.

As Arianta has always been thought to be rare, or at least uncommon, in the Wirral the existence of the large population revealed by these fires is of interest.

At each "burn" I collected all the snails I could find. A record has also been kept of the various banding morphs represented in the C. nemoralis material, and whether the Arianta specimens were bandless or banded.

A seaside "burn" (in 1945) yielded 92 C. nemoralis shells from an area of 15ft. by 6ft. (McMillan 1947).

N. F. McMillan

Reference

- McMillan, N.F., 1947. The Cepaea nemoralis population of a Gorse-patch. J. Conch. 22: 246.

SIXTH EUROPEAN MALACOLOGICAL CONGRESS

The sixth European Malacological Congress was held at the Free University in Amsterdam from 15-20th. August 1977. The programme consisted of four days of lectures and one day in the field. The general assembly of the Unitas Malacologica Europaea was held at the end of the Congress.

The lectures in the morning sessions were of a longer nature and given by invited speakers including Professor J. Lever, Professor N. A. Verdonk, Sir C. Maurice Yonge, Mme M. L. Furnestin, Dr. J. Joose, Dr. A. de Zwaan, Dr. A. Solem, Dr. J. Knudsen, Dr. M. J. Wells, Professor A. S. M. Saleuddin and Professor E. A. Malek. These invited papers will be published as a book "Pathways in Malacology" in 1978 (available from Bohn, Scheltema and Hokema, P.O. Box 13079, Utrecht, Netherlands, around \$25). After lunch, there were shorter 15 minute papers given in three parallel sessions. The shorter contributions will be published as Proceedings of the Congress in a part of Malacologia. This pattern worked well. Additional to the lectures, evening discussion sessions were held to discuss common problems amongst museum curators and to discuss the progress of the mapping schemes in the various countries of Europe as part of the European Invertebrate Survey. The foyer of the university served as a good meeting place for the participants during the tea and coffee breaks and here some posters were exhibited, amplifying the lectures or providing information on the progress of mapping schemes or other research topics.

In the middle of the week, participants were able to choose between three field excursions. One of these visited some freshwater dykes and lakes near Ankeveense to the south-east of Amsterdam. Here we collected a range of freshwater molluscs. In the dykes there were: Bithynia tentaculata, Lymnaea stagnalis, Planorbis ~~corneus~~, Anisus vortex, Succinea putris (in the reeds) and Pisidium spp.

In the lakes the following molluscs were found: Theodoxus fluviatilis (attached to logs and bricks), Bithynia tentaculata and Dreissena polymorpha. On this excursion we were fortunate in being able to spend over two hours in the field, for rain set in after lunch and the other sites (the former marine Zuider Zee which is now the freshwater IJsselmeer) were seen only from the coach. Our leader, Tom Meijer showed some excellent forethought when he produced specimens of the species which we would have found in better weather. In the warm, dry surroundings of a small restaurant near Edam, we examined specimens of Pseudanodonta complanata, Viviparus viviparus and others over a welcome glass of jenever.

The other two excursions were at a greater distance from Amsterdam. One went to the Delta country in the south-west of the Netherlands to see progress in the Delta reclamation scheme and to the dunes at Domburg, and the other visited the Netherlands Institute for Sea Research on the island of Texel in the north. At Texel some films showing feeding in Macoma balthica were shown and there was a tour of the equipment laboratory. In the afternoon a boat trip was made (by this time the rain had really set in) and some trawling demonstrated.

There were three social functions during the Congress week which gave excellent opportunity for members of the meeting to circulate and to talk to each other. The first reception was held in the foyer in the Free University and a second in the Aquarium. Here we were all most impressed with the tropical marine tank of invertebrates which held a wide range of material and all looking very healthy. The malacologists were naturally attracted to the two live specimens of the Tiger Cowry, Cypraea tigris which were moving around in their aquarium. These showed the tentacles, the foot and the large mantle flaps which almost covered the dorsal surface of the shell. The final social event of the Congress was the congress dinner where the delicious menu and good company of fellow malacologists was a pleasant ending to the week in Amsterdam. At the General Assembly it was agreed that the union should be re-named the *Unitas Malacologica* (and thus become a fully international body), but the rules were modified to commit the union to a meeting every three years in Europe. The next congress will be held in Paris in 1980.

June Chatfield (with the help of Joyce Rigby and Joan Llewellyn Jones)

MORE HERBARIUM SNAILS

Dr. Verdcourt's interesting note on herbarium snails in *The Conchologists' Newsletter* No. 63, pp. 43-44, 1977, immediately brought to mind two instances where I was so fortunate as to obtain mollusc material from herbarium sheets. Early in the fifties Dr. R. D. Hoogland, then at the Rijksherbarium (Leiden), gave me a small land snail from Hainan, which I subsequently identified as Aphanoconia hainanensis (Von Moellendorff) subsp. (Helicinidae). The full data are: On Erycibe elliptilimba Merr. & Chun (Convolvulaceae), a liana in the jungle of Central Hainan, 18.X.1933, leg. C. Wang, no. 34725, Flora of Kwantung, 4th Hainan Expedition 1933/34, Sun Yatsen University Herbarium/New York Botanic Garden.

A few years later I was even more fortunate in obtaining a comparatively large marine gastropod (shell length 13.5 mm) from New Guinea, which subsequently proved to be an undescribed species. I named it Pyrene sorongensis (Nova Guinea, N.S., Vol. 7, Pt. 1, pp. 11-14, 1956) and it was taken on Cymodocea (Potamogetonaceae), about 200 m off shore on sandy bottom, ca. 1 m deep, West New Guinea, Vogelkop, Sorong, facing office of Forest Department, 4.IV.1954, leg. Dr. P. van Royen, no. 3320. The "type

herbarium sheet" is in the Rijksherbarium, Leiden.

Both specimens are now in the Rijksmuseum van Natuurlijke Historie, Leiden, Netherlands.

If not a botanist yourself, it obviously pays to have your friends working in a herbarium.

A. C. van Bruggen

BOOK REVIEW

"Nudibranchs" by T. E. Thompson. Published by T.F.H. Publications Inc., 211 West Sylvania Avenue, Neptune, New Jersey 07753, U.S.A. at \$4.95. Paperback 96p including 31 pages with full colour illustrations.

This is an attractive and well-illustrated introduction to the nudibranchs (shell-less seaslugs) which has concise chapters of text on the evolutionary history; collection, preservation and systematics; classification; locomotion; food and feeding; defence; larval biology and zoogeography. In these chapters Dr. Thompson draws on examples of nudibranchs from many parts of the world. This book is not an identification guide, but instead serves to give a general impression of the nudibranchs as a group, and particularly their way of life and adaptations to the environment. Nudibranchs are especially appropriate for the study of adaptive radiation since most of them are specialised feeders and the body is often elaborately adapted to the feeding habits, sometimes with special oral hoods for catching prey.

In many traditional zoology courses, students were often put off nudibranchs, as almost colourless preserved specimens in laboratory demonstrations are not very exciting, and worlds apart from the living animals. The great beauty of these animals in the living state is immediately evident from the good selection of colour photographs, all taken by the author. It would have been helpful to the beginner to have had some indication of the size of the seaslugs illustrated and also some indication of the geographical location of each. In addition to the colour pictures, there are 12 pages with black and white photographs showing the radulae of a range of nudibranchs as seen using a scanning electron microscope. These pictures give exceptional depth of field and clearly illustrate variety in the form of the radula teeth. The book also includes some line drawings illustrating anatomical features, evolutionary relationships, more whole animals and different types of spawn and larval stages.

"Nudibranchs" is worth having just for the pictures, but there is also some interesting reading in the main text. The book is well produced with a good clear type face and a pleasant design. It should appeal to zoology students, subaqua divers and anyone with a general interest in molluscs.

June E. Chatfield

Seashells of the World, by Gert Lindner (translation supervised by Dr. G. Vevers) 271pp. 64 coloured plates, text illustrated. Blandford Press, Poole, Dorset. 1977. Price £4.75.

From time to time books on exotic tropical marine shells pass through my hands for review. This one stopped because I found it more thoughtful and systematic than most and because the author has illustrated many morphological features of the gastropods and in some cases explained their function. We may all marvel at the beauty of tropical shells, but what fascinates me most is the function of these elegant shapes and colour patterns. To some extent Gert Lindner's book satisfies my curiosity, certainly to a greater extent than any other book I have seen recently. What is even more delightful to me is that Herr Lindner has dwelt at greater length on the gastropods than

on the bivalves.

The book falls into two sections. The first (pp. 11-122) introduces molluscan systematics, describing briefly each group down to subfamily level (but leaving out all non-marine groups). Gastropods command the lion's share of this section (some 80 odd pages), bivalves are next (about 25 pages), while other mollusc classes are treated briefly. The second part consists of 64 colour plates with brief descriptions of the species figured opposite each plate. Some cross reference between the two sections might have been included, but the index to families and genera enables one to trace the systematic positions of the figured specimens. There is also a useful subject index and a brief bibliographic section. References to Societies (including our own) and to Journals (not J. Conch. however) are also included.

Production and style are good. The inside covers have line drawings of the main morphological features of a gastropod and a bivalve shell. Mis-prints are rare and there is little to argue with in the text, although some of the technical terms (e.g. devolute, pp. 27-28) will be unfamiliar to most readers. There seem to be few errors and those which I spotted are the result of too broad a generalization rather than specific inaccuracies. For example on p. 17 the mollusc shell is stated to grow periodically. While this is true of many (perhaps most) gastropods, such bivalves as have been investigated produce daily growth increments. Altogether a very handy book with a good selection of shells well reproduced and reasonably priced.

C. R. C. Paul

Welsh Seashells, by Dr. J. E. Chatfield. Published by the National Museum of Wales, Cardiff. 44pp. Price £0.95.

This slim attractively produced booklet is about the right size to go in anorak map pockets, handbags and rucksacks without taking up too much room. It is essentially a picture book intended to enable amateur naturalists to identify Welsh seashells.

The shells are arranged by habitat, rocky, sandy and muddy shores, plus some sublittoral species which are frequently washed ashore. Each section is briefly introduced by an account of the ecological features of the shore. Groups of molluscs like the tops and winkles also get a general introduction. Some specific features are illustrated by generally quite good black and white or colour photographs taken by the author and Eric Broadbent. The poorer quality of some photographs is entirely due to the difficulty of getting the lighting right in field conditions. There are photographs of habitats, and of live and dead shells for identification. The captions include such details as the vernacular name, the latin name, size, habitat and features distinguishing it from similar species. Some shells, Natica alderi for example are figured twice and valuable space is wasted by making several of the same points in each caption. This booklet also suffers from the lack of a glossary, or shells showing named features, some terms such as 'pallial line' and 'pallial sinus' are never adequately explained, which may leave the beginner puzzled when these features are used to distinguish between species.

The introduction to the entire book is interestingly written and covers the ecology of the shore and the sort of physiological problems these conditions pose for littoral molluscs. This is followed by a simplified general description of the external features of the various classes of molluscs plus a little biology. Dr. Chatfield briefly reviews former important Welsh conchologists like Pennant, she concludes with a plea for conservation: don't collect any, or at least not many, specimens of rare species, and leave the shore as you would wish to find it.

A pleasant, informative book which is guaranteed to interest the casual enquirer or a beginner at a very reasonable price.

Available by post (include 18p post and packing for each book) from The National Museum of Wales, Cathays Park, Cardiff, CF1 3NP

Celia Pain

Malacology in the Netherlands. A. C. van Bruggen, Editor. Published by the Nederlandse Malacologische Vereniging, Leiden, August 1977. 53pp., 6 portraits.

This well-produced booklet was published by the Nederlandse Malacologische Vereniging on the occasion of the Sixth European Malacological Congress, held in Amsterdam in 1977. In its 53 pages it gives an excellent account of malacological work, past and present, in the Netherlands, together with many data on molluscan collections, both recent and fossil. Dr. van Bruggen deals fairly fully with the two main collections of Mollusca, those of the Rijksmuseum van Natuurlijke Historie, Leiden, and the Zoologisch Museum, Amsterdam, giving much useful information as to type-material held and of the various curators. The former museum holds Dr. Quick's material, non-marine and largely in alcohol, the latter is said to possess some 15,000 lots of molluscan material in alcohol, probably one of the largest collections of its kind.

Palaeontological material of Mollusca is well covered also, the most important holdings being those of the Rijksmuseum van Geologie en Mineralogie in Leiden.

The section by Prof. J. Lever on experimental malacology is of much interest, showing the wide field covered, from the embryology of Lymnaea stagnalis to studies on the ecosystem of the Wadden Sea.

The booklet concludes with a history of the Dutch Malacological Society by Dr. W. S. S. van Benthem Jutting.

Booklet price Hfl.10. To be ordered from Dr. H. E. Coomans, Zoologisch Museum, Plantage Middenlaan 53, Amsterdam - C, Holland.

Nora F. McMillan

Sea Shells from Cape Verde Islands, written and published privately by Dr. Luis Pisani Burnay and Dr. Antonio Antunes Monteiro, and available from Foyles Bookshop, Charing Cross Road, London, W1, at about £3.50 or direct from the authors at US \$ 5.50 including postage (R. Maestro Antonio Taborda, 41-1^o, Lisboa 3, Portugal). It contains 88 pages, 55 plates (black and white) and several maps and other illustrations.

Little literature on the marine molluscs of West Africa is readily available to the general collector, and still less exists in the English language, so this small book is a particularly valuable contribution to our knowledge.

The complex history of conchology and the continuing evolution of taxonomy ensures that no publication of this kind can achieve a universally acceptable nomenclature but the authors have obviously researched the taxa they employ as thoroughly as the literature available to them will permit and I would question only a small percentage of them.

The book is well organised. The areas in which specimens were collected and observations made are carefully defined and several pages are devoted to a brief description of the marine environment, collecting procedures employed, and a discussion of the 'concept of species' in malacology. The authors offer a most interesting theory which may influence the future development of taxonomy as it applies to the genus Conus. Each species covered is well referenced and the actual specimens found are described in detail and related to the reference material. Information on the animal, its operculum and periostracum are provided where available. Data on dimensions, collecting points, habits and habitats are all included. In some cases these are supported by the long term observation of the living animals in an aquarium. To the best of my knowledge, no other work on this area has attempted to cover all these aspects.

Although the authors have sought to compare their material with holotypes or original descriptions and plates wherever possible, there remain a very few instances where I question their use of certain nomenclature. I remain to be convinced that

Phyllonotus duplex Roding 1798 is appropriate to the shells illustrated in Fig. 28 and would still favour Hexaplex rosarium (Roding 1798). I still believe Phyllonotus to be confined to the Americas and no explanation was offered for the re-classification proposed by Radwin and D'Attilio. Furthermore there appear to be consistent differences between the two species, which make synonymy unlikely. I also feel that Leucozonia triserialis Lamarck 1822 is more appropriate than Turbinella hidalgoi Crosse 1865 and takes priority. To put these in their proper context I must point out that the authors have succeeded in identifying a number of species that had defied my own researches and I am hastening to revise one or two errors of my own that are drawn to my attention by this book!

I can only regret that this book was not available a year earlier when I was collecting in the areas dealt with as it would have been an invaluable field guide. It is a 'must' for field researchers. I hope to see it followed by further volumes to cover the species not yet included.

G. D. Saunders

REPORT OF THE FIELD MEETING HELD ON THE YORKSHIRE COAST, 15-16 OCTOBER 1977

A weekend collecting marine molluscs on the Yorkshire coast is perhaps one of the most unpredictable ways of passing the time. The Yorkshire coast is well known for its bad weather, and on this occasion it supplied us with thick fog as well as heavy seas. Visits were made, however, to the north side of Filey Brigg and to the rock pools of South Bay, Scarborough. A short dredging trip in Bridlington Bay proved fairly fruitless resulting in no additions to the known list for the area.

Filey Brigg produced 40 species of Mollusca, 34 of which were found alive. Eight of these proved to be new records for the 10 km square, post 1950. The most interesting species found were the four Nudibranchs, Onchidoris muricata (Muller), Goniodoris nodosa (Montagu), Facelina auriculata (Muller) and Archidoris pseudoargus (Rapp). A lot of interest was also shown in the small chiton Tonicella rubra (Linnaeus) which proved to be common on the rocks at low water mark. The list of species found at Scarborough proved to be rather disappointing as only 27 species were found. Of these 18 were found live, and 5 were new to the 10 km square, post 1950. The occurrence of the Horse Mussel, Modiolus modiolus (L.) in the rock pools near high water mark perhaps stimulated the most interest, as this species is normally associated with rocks below extreme low water mark.

All of those who attended the meeting will, I am certain, join me in thanking Mrs. M. Maddrell of Bridlington for organizing the meeting and for opening up her home for us and making us all so welcome.

A. Norris, Area Recorder

List of species found

<u>Lepidochitona cinereus</u> (L.)	F S	<u>Abra alba</u> (Wood)	B F
<u>Tonicella rubra</u> (L.)	F S	" <u>prismatica</u> (Mont.)	B
<u>Acmaea virginea</u> (Mull.)	F S	<u>Acanthocardia echinata</u> (L.)	B S
<u>Buccinum undatum</u> L.	F S	<u>Anomia ephippium</u> L.	B F S
<u>Cingula semicostata</u> (Mont.)	F	<u>Arctica islandica</u> (L.)	S
<u>Gibbula cineraria</u> (L.)	B F S	<u>Cardium edule</u> L.	B F S
<u>Hydrobia ulvae</u> (Penn.)	F	<u>Chlamys opercularis</u> (L.)	S
<u>Lacuna pallidula</u> (da Costa)	F	<u>Donax vittatus</u> (da Costa)	B F
" <u>vincta</u> (Mont.)	F S	<u>Dosinia exoleta</u> (L.)	B F S
<u>Littorina littoralis</u> (L.)	F	<u>Ensis ensis</u> (L.)	B F S
" <u>littorea</u> (L.)	F S	" <u>siliqua</u> (L.)	B
" <u>neritoides</u> (L.)	F S	<u>Hiatella arctica</u> (L.)	B F S

<u>Littorina saxatilis</u> (Olivi)	F S	<u>Lutraria lutraria</u> (L.)	F
<u>Margarites helicinus</u> (Fab.)	F	<u>Mactra corallina</u> (L.)	B F S
<u>Nassarius incrassatus</u> (Strom)	F	<u>Modiolus modiolus</u> (L.)	S
<u>Natica alderi</u> Forbes	B	<u>Mytilus edulis</u> L.	F S
" <u>catena</u> (da Costa)	F	<u>Spisula subtruncata</u> (da Costa)	B
<u>Nucella lapillus</u> (L.)	B F S	<u>Tellina fabula</u> Gmelin	B F
<u>Patella aspera</u> Roding	F	" <u>tenuis</u> da Costa	B F
" <u>vulgata</u> L.	B F S	<u>Venerupis pullastra</u> (Mont.)	S
<u>Patina pellucida</u> (L.)	F S	" <u>saxatilis</u> (F. deB.)	S
<u>Rissoa parva</u> (da Costa)	F S	<u>Venus striatula</u> (da Costa)	B F
<u>Skeneopsis planorbis</u> (Fab.)	F	<u>Zirfaea crispata</u> (L.)	S
<u>Trivia arctica</u> (Pult.)	B		
<u>Archidoris pseudoargus</u> (Rapp.)	F		
<u>Facelina auriculata</u> (Mull.)	F		
<u>Goniodoris nodosa</u> (Mont.)	F	B = Bridlington	
<u>Odostomia scalaris</u> Macg.	F	F = Filey Brigg	
<u>Onchidoris muricata</u> (Mull.)	F	S = South Bay, Scarborough	

JUNE CHATFIELD'S MOLLUSCAN COURSE

This was held at Orielton Field Centre, Pembroke, 27 July - 3 August 1977. Orielton Hall is a beautiful Georgian house; the rooms are spacious, the beds comfortable, the meals good and the staff friendly. I went just to get a breath of fresh air and enjoy the countryside, but I soon joined in the fun. For the first three days I followed Dr. W. E. Jones' course on seaweeds. I found his lectures on salt marshes and sand dunes most interesting. We visited three salt marshes and I added two new plants to my list: Bostrychia scorpiodes, a red algae growing on Halimione, and Fucus ceranoides, which I had often seen illustrated. On the shores, Dr. Jones pointed out the various forms of Ceramium rubrum, so that in future I shall be more certain of this alga. Porphyra was seasonally abundant and fresh. Our leader collected a bagful and prepared it as oatmeal cakes, fried in bacon fat - they tasted quite good for supper!

The rest of the week I spent with the molluscan group. Dr. J. Chatfield conducted the course with commendable energy and thoroughness; about 40 species of land molluscs were collected and over 120 marine species. There were lectures illustrated by films and transparencies; aquaria were set up and the living animal was studied as far as possible. It was all so well organised by June that her enthusiastic party had a grand time! She found Limapontia capitata and Alderia modesta, so I saw some saccoglossans. I spent some time collecting rissoids for Prof. A. Graham. I examined the seaweed brought back to the lab. by Dr. Jones' party, and Dr. Chatfield added some rissoids from her collection so that I finally obtained over fifty specimens, comprising, I think, about six species.

The day I liked best was the one when we went to Pendine Sands. The weather was warm and sunny. We collected many lovely bivalves and the barrel shell, Acteon tornatilis was common. We also visited Tenby and were courteously received by the staff of the privately-run museum. I returned to London refreshed with pleasant memories of Welsh bays and salt marshes, a diary of useful notes, and a resolve to return to Orielton Hall for a repeat course.

Tom Gascoigne

THE FRESHWATER PEARL MUSSEL - *Margaritifera margaritifera*

The British freshwater Pearl Mussel is verging on extinction; many once-famous rivers are now completely devoid of mussels. The reason for this, in my opinion, is not so much pollution as senseless slaughter over the past centuries by pearl fishing,

the history of which reaches back before the Roman occupation of Britain.

Many European countries, i.e. Norway, Sweden, Germany (Bavaria, in particular) have protected this mussel for a great many years, no fishing being allowed except for scientific purposes.

Pearl fishing can be carried out without the need to destroy the mussel, as I showed Dr. Young of the Department of Zoology at Aberdeen University. I took him on a pearl fishing trip to show him the amount of destruction that has been done on the River Spey. He has since had a meeting with various Fisheries Boards with regard to the preservation of the pearl mussel.

My two friends and I have been trying in a small way to restock a few of the rivers where the species is near extinction, but this would need to be stepped up. Lord Cranbrook is being instrumental in trying to have a Bill passed in the House of Lords for the preservation of Margaritifera margaritifera. Dr. Okland of the Department of Limnology, Oslo University, Norway, has done a lot of work on the pearl mussel. Also Dr. Hendelberg of the Institute of Freshwater Fisheries, Uppsala, Sweden, has done some extensive research and published a paper on the pearl mussel.

I see the need for some kind of legislation in Britain on the protection of the pearl mussel. There has been much publicity on TV and in newspaper articles about pearl fishing which, in Scotland at least, has sent thousands of amateur fishers to the rivers, bent on destruction. This destruction is caused by ignorance and can be avoided, as I have fished for many years as a professional fisher and my partners and I can earn a living without destroying the mussel. The slaughter is to be seen in many rivers, and it is unbelievable how many mussels a fisher can kill in a day. Fishing in the traditional manner does not exterminate the species in a river, but, when the divers using sub-aqua gear get into a river, they wipe out the populations from the deep pools, thus halting the yearly cycle of mussels from deep pool to stream caused by heavy spates in winter. Due to the longevity of the pearl mussel, a river can hardly ever attain its former state.

Neil D. McCormick

A NEW RECORDING CARD FOR NON-MARINE MOLLUSCA

Seventeen years ago, when the grid mapping scheme for non-marine Mollusca was launched, a "field card" was designed; all who have helped with the mapping project will be very familiar with it. The list it carries was based on the Census list of 1951 (J. Conchol. 23: 171). Inevitably, with changes in nomenclature and with the recognition of further British species it has become rather out-of-date. The publication of our Atlas, using a new nomenclature, therefore seemed a suitable moment to prepare a fresh recording card as a basis for future work. This is now available, free to members as before. The Society is indebted to the World Wildlife Fund for a grant to pay for the printing. An accompanying instruction leaflet has also been prepared.

The new card is the same size as the old (6" x 4"). This format has proved handy in the field - e.g., the cards can conveniently be carried in a notebook without being folded, or can be clipped inside the cover of an ordnance map. The species names (abbreviated as before to five letters for the genera and three letters for the species) are given in four columns, with corresponding blank columns left for special symbols, etc. Numbers have been omitted, as it was considered that a new (and necessarily different) serial numbering system would inevitably cause confusion. The nomenclature and taxonomic order of the species follows closely that published in the recent non-marine check lists in J. Conchol. 29 (1976): 21-28. Freshwater species are given first, followed by the land. A few species have been omitted, usually because they are not naturalized in the open (e.g., greenhouse aliens like Zonitoides arboreus)

A few pairs of aggregate ("agg") and segregate ("seg") species are included for convenience. These terms have puzzled some people: it should be explained that the segregate suffix is used when a once widely recognised species (the aggregate) is split into two or more species, one of which continues to bear the original name (e.g., Columella edentula agg. is now regarded as comprising C. edentula seg. and C. aspera). The correct names for two of the three species into which Arion hortensis has recently been split have not yet been established; for the present therefore they are merely listed on the card as 'A' and 'B' (see J. Conchol. 29 (1977): 173).

The new names are of course still relatively strange to many people, but it is hoped that with use they will quickly become as familiar as the old, as will the slightly different taxonomic order adopted. Changes from the 1951 Census list have been tabulated in a very convenient form by Dr. Chatfield in the Newsletter (No. 60, March 1977: 572). A yet more recent minor change is the replacement of the name Limax grossui by L. hibernicus sp. nov. (see a forthcoming paper by Dr. Chatfield in J. Conchol.)

[illegible]

The Conchological Society's marine census should now make its general aims and intentions explicit, and outline a plan for the realisation of those aims. Our intentions are to build a store of empirical data concerning the geographical distribution of marine molluscs within the British marine census area; and also to make this data freely available for special studies, particularly the production of distribution

atlases. Realisation of these intentions requires an overall plan together with a series of realistic interim goals marking our progress. But a flexible approach to both is required in order to be able to meet new situations and opportunities as they arise.

The store of empirical data which we will build must be available not only for our own immediate use but also for future generations of workers in marine biology. These data, as they accumulate, will show not only the static distribution of marine molluscs at any time but also the slow dynamic changes which take place over long periods and concerning which we have little knowledge. But the availability of data is at risk in areas open to confusion, and two such areas are immediately identifiable - geographical location and nomenclature. The existence of alternative systems in each of these fields can generate confusion and put data at risk. If future workers cannot locate a record we have made, or do not know what the name we have used denotes, then data is at risk. It is therefore one of our tasks to ensure that ambiguities concerning 'what' and 'where' are eliminated.

Geographical location

Of the three principle methods of recording geographical location (Latitude and Longitude, National Grid, and Decca Navigator) only one is likely to be in use, say, two hundred years from now. Latitude and longitude, having its foundations firmly fixed in Astronomy, is a natural method of fixing geographical location and is therefore likely to remain the principle one. The other two, being artificial constructions, are liable to be replaced with advances in technology. For this reason, and those given in Marine Census 2, our marine molluscan records must all be given in Latitude and Longitude, whether they are shore or off-shore.

Nevertheless we currently do use the National grid and BRC, being essentially grid orientated, require that National Grid references be additionally attached to purely shore records, as outlined in Marine Census 2. If this is done positional data should then be available to all conceivable requirements of research and cartography.

Nomenclature

It is clear that the marine census could not 'go to press' with the nomenclature of the current RA 21 record card; but, on the other hand, we dare not alter our recording nomenclature before the production of the marine atlas. It would therefore be wise to maintain, within the context of the census only, an artificially stable nomenclature until we are ready for atlas production. Then, and then only, should a new species list be produced to replace that of Winckworth and the Concordance. The names from such a list could then be applied to the atlas, and subsequently used for compiling a new species record card for the continuation of recording after publication of the first marine atlas.

In this matter we should already be anticipating the sort of nomenclature likely to be in use in the year 2178, for it will certainly then be realised that, in the strict sense, neither Cardium nor Cantharidus occur in Britain - although Acanthocardia, Cerastoderma, Parvicardium, and Jujubinus do. The non-marine census has already pointed the way we should go in the matter of nomenclature.

Interim goals

Those are the plans, and the goals we will aim for along the way are as follows.

- 1) Completion of Area Mastercards, held by me, for possible publication or at least for Xerox duplication. This is now well under way.
- 2) Hand production of one or two maps for publication, just to show that it can be done. This I will begin as soon as the first is completed.
- 3) Compiling a complete set of 10km shore only Master Cards, to be held by the Marine Recorder and updated from year to year, until the shore is adequately covered. This has already begun.

- 4) Production of interim atlas consisting of some 60-80 species as both a stimulus to further progress and also as an indication of progress made - ?1979.
- 5) Production of a new marine species list having a nomenclature consistent with that already used on the continent of Europe. A draft list is now ready for debate and correction.
- 6) Production, by BRC, of a marine atlas which, let me stress, will consist of both shore and offshore records - ?1980.
- 7) The post-Atlas phase should see the return of all record cards to the Conchological Society for storage, and the printing of a new species record card for the continuation of recording. It is important to remember that this is an 'on-going' scheme punctuated by atlas production. Our first atlas, though certainly an occasion for celebration, will nevertheless be only the beginning.

Your comments on this plan will be appreciated, it is by no means fixed. Finally I would ask all Area Reps. to send me the following information as soon as possible: for each 10km square I would like:-

1. Total number of records.
2. Total number of live records.
3. Total number of post-1950 live records.

With this information I can then construct a map, showing the progress being made in each area, similar to that published yearly by Dr. M. Kerney for the non-marine census.

Best wishes for the New Year.

C. P. Palmer, Marine Recorder

GENERAL NOTES

ANNUAL SUBSCRIPTIONS, 1978

Dear Members,

May I remind you that 1978 Annual Subscriptions were due on 1st. January? A large number are still unpaid, and I shall be very grateful if you will send these as soon as possible without further reminder; individual reminders waste money and time. Cheques and P.O.'s should be made payable to the Society and sent to me.

There is a special concession for Ordinary and Family Members, who may deduct 50p (U.S. \$1.50) from the amount of the subscription if paid before 31st. March.

Please remember also that your votes in the election of Officers and Council will be declared invalid if your current (1978) subscription is unpaid.

Marjorie Fogan
Hon. Treasurer

[REDACTED],
Atherton, Manchester, [REDACTED]

Ordinary Member	£5.00	(U.S. \$15.00)	per annum
Family Members	£6.00	(U.S. \$18.00)	per annum
Junior Member	£1.00	(U.S. \$ 3.00)	per annum

RUNNING AGAIN

A field week on molluscs on the Pembrokeshire Coast.

Seashells, Snails and Slugs. 19-26 July 1978 (timed to enable us to have the benefit of good low tides) at Orielton Field Centre. Tutor: Dr. June Chatfield.

A course for anyone interested in molluscs. The course will be designed to help beginners as well as those with some prior knowledge. Field excursions will be made to a rocky shore, sandy shore and muddy shores and about two days will be given to the

study of land and freshwater species.

Cost £52.00. All enquiries should be addressed to The Warden, Orielton Field Centre, Pembroke, Dyfed, SA71 5EZ

WHEREABOUTS OF THE B. VERDCOURT RADULA COLLECTION

During my studies of the Mollusca of East Africa and to a smaller extent other areas of Africa I have mounted many radulae. Some of these were extracted from holotype or paratype animals and although the majority of such slides were presented to the museum where the type shell had been deposited, in some cases they remained with the author. This collection of slides has now been sent to the Musee Royal de L'Afrique Centrale, Tervuren, Belgium save for the Urocyclidae which are at present with Dr. van Goethem and Dr. van Mol but these too will eventually be sent to Tervuren when their studies are completed. Radula slides prepared prior to my departure for East Africa in 1949 are in the collection of the Royal Microscopical Society. A certain number of slides prepared by A. J. Peile are present in these collections.

The author's main collection of shells is at the National Museum, Nairobi, with some types and duplicates at Frankfurt, Tervuren, Leiden and the British Museum (Natural History) to name the main places. His spirit collection was transferred to the British Museum in 1964.

B. Verdcourt

THE SNAIL

He crawls,
Lithe and long,
Over all pitfalls.

P. Topley

MOLLUSCS MEDICINAL

In a volume of old Jersey recipes aptly entitled "Bouon Appetit", the Jersey Island Federation of Women's Institutes includes two recipes for snails employed for medicinal purposes. No species name is given but it may be presumed to be Helix aspersa. The recipes are as follows:

Whooping Cough - Snail and Brown Sugar Syrup

Collect and crush twelve snails (shell and all), put them in a muslin bag, and let them drip overnight into a bowl in which you have put 3 tablespoons brown sugar (dark brown sugar). Mix well. Give patient one teaspoon every three hours.

Snail Syrup

Ingredients: 12 live snails, $\frac{1}{4}$ lb. brown moist sugar, 1 muslin bag

Method: Shell the snails, taking great care not to wound them too much, as they have to be alive to work themselves in the sugar. Put them with the sugar into the muslin bag, then hang the bag in a position so that the syrup drips into a basin. Very good for bronchitis, asthma, or any cold.

It should perhaps be added that the Federation's Foreword includes this note - "Please do not take the remedies too seriously! Cures cannot be guaranteed.....Nevertheless ...Eprouvez-y, don, bouonnes gens - et bouonne chance!"

Graham Long

SYRUP OF SNAILS

Recipe from Mrs. Bulwer's collection (she died in 1843)

"Take Garden Snails, wash them in several waters and wipe them dry. Then lay them on a sieve or in a jelly bag, laying a layer of snails and a layer of beaten sugar candy; of the water that drips from them, take two or three spoonfuls night and morning."

Roger Fresco-Corbu

TROPICAL SEEDS

In recent numbers of Conch. Newsletter, an endemic American mollusc Brachyodontes exustus (L.) was reported from beach drift collected at Ardivachar, Outer Hebrides (see A. M. Brockbank, No. 58 & 61) and at Dingle, Ireland (see C. O'Riordan, No. 62). The Irish specimens were attached to a metal buoy, while the Hebridean specimens were collected from an object identified as a "melon".

However, the externally life-like "melon" was found to be a buoy made of orange/brown foam plastic on examination at the National Botanic Gardens, Dublin. Thus both the Irish and Scottish Brachyodontes collection came from non-living substrates.

My interest in the Hebridean record was aroused as I am presently studying seeds and fruits of tropical American plants washed ashore on British coasts; a research paper is in preparation. I would be very pleased to hear from any conchologist who has observed or collected "drift seeds" from British, Irish or western European beaches and I am prepared to identify specimens.

I am grateful to Mrs. Brockbank for allowing me to examine a portion of the Ardivachar buoy which, having marine organisms attached, has been donated to the National Museum of Ireland, Kildare Street, Dublin.

Dr. E. Charles Nelson,
National Botanic Gardens, Glasnevin, Dublin 9

THE SOCIETY'S PUBLICATIONS

Back numbers of the Conchologists' Newsletter may be obtained from J. D. R. Fryer, Dept. of Geology, King's College, Strand, London, W.C.2., at 25p each plus post. The Hon. Secretary, Mrs. E. B. Rands, can supply copies of the Marine Concordance, 30p to members and 50p to non-members, the Atlas of Non-Marine Mollusca, £2.50 to members plus 85p post/packing and £3.00 to non-members plus 85p post/packing. Mrs. Rands can take orders for back numbers of the Journal of Conchology.

Papers for Students can be obtained from Mr. A. Norris, Natural History Dept., City Museum, Municipal Buildings, Leeds, LS1 3AA

BRITISH SHELL COLLECTORS CLUB

Our Shell Show will take place on April 30th. at the Napier Hall, Hyde Place, off Vincent Square, London, S.W.1. Entries by members of the Conchological Society are invited. The Show will be open to non-competitors from 14.00 to 17.30 hours.

Classes:-

- | | |
|------------------------------|-----------------------------|
| 1. One species | 2. One Family or Genus |
| 3. Land or Freshwater Shells | 4. British Marine |
| 5. Bivalves | 6. Educational exhibit |
| 7. Miniature Shells | 8. Fossils |
| 9. Visual Beauty of Shape | 10. Visual Beauty of Colour |

- 11. Shells from a single locality
- 13. Shell Collage
- 15. Other Shell Art

- 12. Specialist Exhibit (Monsters, etc.)
- 14. Shell Art in the form of a Painting or Drawing

Entries stating class, title and size of exhibit (the latter is important in view of limited space) should be submitted in writing to E. A. Sadler, [REDACTED], [REDACTED], Alresford, Hants. by 30th. March 1978. There is an entry fee of 35p per exhibit (3 for £1) which will be used to finance special prizes. Space will be allocated on a first come first served basis and in case of over subscription entry fees will be refunded.

PUBLICATIONS

Oceanic Micropalaeontology, edited by A. T. S. Ramsay (Department of Geology and Oceanography, University College of Swansea, Swansea, Wales).

Volume 1 - September/October 1977, 838pp. £42.50/\$87.00

Volume 2 - October/November 1977, 680pp. £36.00/\$70.25

Academic Press, 24-28 Oval Road, London, N.W.1., England. 111 Fifth Avenue, New York, NY 10003, U.S.A.

EXCHANGE WANTED

Franck Frydman, [REDACTED], 75004 Paris, France, is interested in cones generally and especially from the British West Indies. He can offer mainly cones, but also cowries, volutes and murex. Anyone interested please write.

THE APRIL MEETING - Conversazione (Conchological Society)

To ensure that this is an entertaining and successful meeting, members are asked to bring as many varied exhibits as they can and to be prepared to give a short talk - not more than 5 minutes - about their exhibit and their collecting or work related to it.

GENUS LYMNAEA

I am studying freshwater snails of the genus Lymnaea on a world-wide basis and would be pleased to hear from collectors, living outside Britain, who can supply a few specimens of their local Lymnaeid species with good data. (Mutually agreeable exchange to be arranged.) Dr. B. Coles, Dept. of Chemistry, University of York, Heslington, York, YO1 5DD, England.

SHELLS FOR SALE

A fine selection of shells for the collector is available at Eaton's Shell Shop, 16 Manette Street, off Charing Cross Road, London, W1V 5LB (telephone: 01-437 9391)

EXCHANGE

Some members may wish to exchange specimens of terrestrial and fresh water molluscs for those of Texas. If so, please contact Dr. Richard Fullington, Dallas Museum of Natural History, P.O. Box 26193, Dallas, Texas 75226, U.S.A.

THE CONCHOLOGISTS' NEWSLETTER

No. 65

Newsletter Editor: P.E. Negus,

June 1978

Chelsea Bridge Road,
London, [REDACTED].

Produced by THE CONCHOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND

FROM A NEW MEMBER

I used to look for birds a lot
And rush up hillsides at a trot -
But now I'm rooted to the spot.

I used to dash about the Vale,
But now I amble like a snail,
Searching every limestone dale.

Oh dear, what can the matter be?
The reason isn't hard to see -
Conchology has bitten me.

Anne Shaw

'MOLLUSKS AND MANKIND':

A NEW GALLERY IN THE AMERICAN MUSEUM OF NATURAL HISTORY, NEW YORK

An exciting new gallery entitled "Mollusks and Mankind" has recently opened (December 1975) in the American Museum of Natural History, New York City (off 79th. Street). The exhibition was prepared by a team of specialists representing the interests of malacology and anthropology in conjunction with the museum's Department of Exhibition and Graphics. The story of the development of this gallery was published in the Curator in 1976 (Cooper, M., 1976. Mollusks and Mankind - A New Hall and a New Approach. Curator 19 (2), 95-115).

The exhibition is set up in a series of three small interconnecting rooms. The first of these entitled the "Biology of Mollusks", introduces the biological aspects of the Mollusca and the variations in form and function of this colourful and diverse group of animals. The layered structure of the mollusc shell is explained by means of scanning electron microscope pictures and there is also a large model showing the edge of the mantle (the part of the animal which secretes new shell during growth). Other aspects of the shell itself include variation in periostracum, colour, pattern, ornamentation (ridges and spines), internal shells and shell-like accessories, operculi, spiral forms of the shells and pearls. Large labelled models of the bivalve Mercenaria mercenaria (Quahog), and the gastropod Littorina littorea (Edible Winkle) show the internal anatomy. The winkle model was specially constructed for the new gallery from sketches of the anatomy sent to New York by Dr. Fretter. In this section are panels illustrating the life cycle of these two molluscs, together with sections explaining the mantle, radula and torsion; all special features of the Mollusca.

The case "The World of Mollusks" introduces the distribution of molluscs and climatic factors influencing it. Here some selected examples are shown (both marine

and non-marine species) for the various zoogeographical regions. A central case in the introductory room shows the classes of molluscs and a more detailed classification of the gastropods - the most popular class with collectors. Movement is brought into the exhibit by means of a colour cine film showing the animals moving about and feeding. In this there is an intriguing sequence showing how the pointed end of the operculum of the Pink Conch Shell is used in defence against attack from the predatory Tulip Shell.

The second room, entitled "Mollusks and Human Society", is concerned with the use of shells by various human cultural groups, and a very good range of exhibits has been assembled for this.

Noises made from shells are used in various religious ceremonies which range from the sound of the shell trumpet (made from a Triton Shell, Charonia) to announce the start of worship (Buddhism in Japan) to tinkling sounds made from groups of shells suspended on cord, like a mobile. In Mexico these tinklers are used to call rain. (Perhaps we ought to have tried some of these in the U.K. during the drought in summer 1976!) Some small cowrie shells are used in a number of symbolic ways: there are funerary masks (from West Africa) with cowrie shells representing the closed eyes of the dead and also funerary sticks decorated with shells (from the Solomon Islands) which are kept outside the small houses where the skulls of the ancestors are kept.

A number of shell ornaments indicate the status of a person in the community. Pearl oysters (Pinctada margaritifera) with incised designs can only be worn by successful head-hunters. (Conchologists collecting in the Philippines beware!) From Taiwan are head-bands of clam shells worn during head-hunting raids.

The money cowrie (Cypraea moneta) is commonly known as a form of currency, but other examples shown in this exhibition include strings of decorated tusk shells which were used as money in Northern California by American Indians. Another form of wealth from shells from the North American Indian culture are highly decorative wampum belts made from shell beads. A piece of purple wampum belt is shown made from beads using the purple part of the inside of the Quahog shell.

Decorative, but more utilitarian are fish hooks, pearl buttons, pearly spoons (cut from Nautilus shell) and cloth dyed from purple exuded by Purpura patula pansa from Mexico. A selection of molluscan sea-foods is shown and these are much enjoyed in North America today. Anyone wishing to re-enforce this part of the exhibit should order one of the excellent clam chowders (bivalve soup) to be had in the eastern part of the U.S.A.

The final room, "Mollusks and Art Forms", is devoted to the shell and molluscan image in fine art and decoration. There are examples of pottery in the shapes of shells and a white teapot in the shape of a bivalve in salt-glazed English stoneware (Staffordshire) of about 1745. Other molluscan designs are in metal work and as examples of shell craft as shell flower arrangements under a glass dome (late nineteenth century, Italian) and a shell collage valentine (Caribbean Islands circa 1900).

For the connoisseur shell collector there is a finale of several very rare and much sought-after shells on display.

The final exhibit, in an alcove by the exit doorway is a series of colour transparencies depicting shells in art. These pictures include examples from art galleries and museums all over the world. The European member who may be unlikely to go to the American Museum of Natural History could well look out for some of the originals in European galleries. A list of these follows -

From collections at:-

British Museum, London: A goat and shrub of gold, lapis and shell from Ur (Iraq), circa 2,000 B.C.; various Greek vases with Octopus designs; a ceramic vase with a

paper nautilus, Minoan, 16th. century B.C.; Lions Paw Scallop inlaid with gold, Aztec culture, 15-16th. century.

National Gallery, London: An oil painting by Harmen van Steenwyck entitled "Still Life" depicting a Turban Shell, Dutch, 17th. century.

Tate Gallery, London: Collage based on a cross section of a Conch by Henri Matisse entitled "The Snail", French, 20th. century.

Bodleian Library, Oxford: Manuscript page "Hours of the Cross: Nones" in "Book of Hours for Engelbert of Nassau", Dutch, 15th. century - a particularly nice realistic land snail.

Ashmolean Museum, Oxford: Oil painting "John Tradescant and Zythepsa of Lambeth" by Emmanuel de Critz showing a shell collection, Dutch, 17th. century.

Rijksmuseum, Amsterdam: Etching of "Cone Shell" by Rembrandt van Rijn, Dutch, 17th. century.

The Louvre, Paris: "The birth of Aphrodite", terracotta figure showing a scallop. Greek, 3rd. century B.C.

Lazaro Goldiana Museum, Madrid: Chambered Nautilus in gold mounting, European, 16th. century.

Brera Picture Gallery, Milan: Oil painting "Madonna and child with Angels, Saints and Frederigo da Montefeltro", Italian, 15th. century.

Uffizi Gallery, Florence: Oil painting "The birth of Venus" showing a Scallop. Italian, 15th. century.

Athens National Museum: Ceramic vase with Octopus, Aegean.

J. E. Chatfield

AN EARLY SEVENTEENTH CENTURY PLASTER CEILING FROM GREENWICH PALACE,
CONTAINING MOLLUSCS

It was during the excavation of the palace in 1971-72 by Dr. P. W. Dixon, that a large area of collapsed mould-decorated ceiling was discovered. The ceiling, which belonged to one of the royal apartments and measured about 5 metres by 6 metres, was decorated with moulded ribs, flower-type ornamentation, Tudor roses, etc. On documentary evidence, style of the decoration and archaeological evidence, the ceiling has been dated to between 1600 and 1625. It was during the examination for drawing and publication that a large number of molluscs were noticed, incorporated within the plaster. A detailed examination was then carried out to note the numbers of each species.

The room to which the ceiling belonged was only 60 metres from the river Thames, and it is therefore likely that water for mixing the plaster came from the river. A second source of water supply came through constructed ducts, bringing water from Blackheath, a distance of about a mile. It was the practice in those days to burn the gypsum (calcium sulphate) and allow to slack, keeping it from twelve to eighteen months before use (Jourdain, 1926, p.21). It would then be transported to the site, and hair and other things added. Water for mixing would, of course, come from the nearest source. If collecting was done by the pail, all types of vegetable matter and molluscs would be gathered up, and added to the plaster.

<u>Species</u>	<u>Number</u>
<u>Theodoxus fluviatilis (L.)</u>	116
<u>Bithynia tentaculata (L.)</u>	107

<u>Lymnaea peregra</u> (Müller)	85.
<u>Lymnaea truncatula</u> (Müller)	2
<u>Lymnaea palustris</u> (Müller)	1
<u>Valvata piscinalis</u> (Müller)	6
<u>Ancylus fluviatilis</u> (Müller)	3
<u>Oxyloma</u> sp.	2
<u>Planorbis planorbis</u> (L.)	1
<u>Anisus leucostoma</u> (Millet)	1
c.f. <u>Gyraulus acronicus</u> (Férussac)	1
<u>Sphaerium corneum</u> (L.)	7
<u>Pisidium amnicum</u> (Müller)	5
<u>Pisidium</u> sp.	1
<u>Vitrea crystallina</u> (Müller)	2
<u>Trichia striolata</u> (C.Pfeiffer)	2
<u>Oxychilus alliarius</u> (Miller)	1
<u>Vallonia pulchella</u> (Müller)	1
<u>Gecilioides acicula</u> (Müller)	1

The Gecilioides could have come from a much later deposit than that of the ceiling.

Reference:

Jourdain, M., 1926 English Decorative Plasterwork of the Renaissance, p.21.

Acknowledgement:

The author wishes to thank Mr. N. J. Evans for help in some of the identifications.

Note: The ceiling material, pottery and other items, will be deposited in the London Museum.

R. C. Alvey, Department of Archaeology, University of Nottingham

SOME TENTATIVE SPECULATIONS ABOUT THE OLFACTORY SENSE OF 3 COMMON PEST SPECIES OF SLUGS, Agriolimax reticulatus (Müller), Milax budapestensis (Hazay) and Arion hortensis (Férussac), together with practical application of this knowledge in the study of behaviour and control of these animals.

These speculations have been triggered off by preliminary experiments on the attractiveness of germinating wheat to Agriolimax reticulatus, when the wheat was grown on blotting paper during warm weather in an unheated greenhouse. The nature of the substances given off by the germinating wheat is complex and is not entered into here. Small cubes of cut potato about 1 cm. square were also found to serve as a moderate attractant.

Experiments were carried out in a blacked-out room, where Agriolimax was allowed to glide easily over the surface of a rectangular metal tray. The tray had been very lightly sprinkled with kaolin powder, and then this was sprayed with water, so as to form a slight film. As the slug moved, a trace of its path was left. A little heap of germinating wheat about 1 cm. round and high was placed on the tray, and the slug was set down at 5, 10 or 15 cm. distance away. The slug was left for 5 minutes and the track taken was recorded. Sufficient tests were made and representative results are shown below. It was impossible to ensure that all the slugs used were equally hungry, but previous work has shown that they will feed fairly frequently if not necessarily daily. The olfactory stimulation is likely to override partial satisfaction of the stomach. The results of the experiments are shown overleaf.

	Number of 5 minute tests				
	No movement	Moved at an angle	Moved towards	Moved past	Reached wheat
Germinating wheat on blotting paper 5cm.	19	50	-	9	42
Cut potato 10cm.	22	65	8	5	19
Dry wheat 5cm.	19	53	9	29	10
Dry wheat 10cm.	25	80	5	5	5

This germinating wheat, having a much stronger smell than cut potato, can also be detected at 10 cm., and probably at 15 cm. Dry wheat is not attractive, and in the field must only be attacked when foraging slugs come to the surface, chiefly after rainfall. Wheat germinating and sprouting under field conditions too, however, would have an imperceptible odour, which would be diminished by natural drainage after rain. This wheat is probably also only attacked as a result of the slugs inherent rhythm of diurnal negative geotropism. Further, the latter is subject to disturbance after heavy rain, the slugs then tending to remain at the surface of the ground, and presumably continuing to feed.

At a more advanced stage of growth wheat also must provide some attraction to all 3 species of slugs and may harbour feeding Agriolimax above ground during damp periods in summer, especially on heavy land. I suspect that Milax and Arion normally hide away more below ground during the day time. However, all 3 species must have the ability to aestivate in drier regions and on lighter soils, and on such land the attractiveness of the growing wheat is overcome by the climatic factor.

Milax budapestensis may have a slightly better-developed sense of smell than Agriolimax since it can search out uncut potatoes below ground. It bores into these, having this habit more developed than has Agriolimax. Potatoes are invariably earthed up, and Milax is more tolerant of these slightly drier conditions than Agriolimax. This also points to a slightly better sense of smell, since dry vegetation gives off less smell than moist vegetable material.

Plants of the cabbage family are distinctly attractive, and after haphazard circuitous searching movements, Agriolimax will climb the stems of these plants, probably attracted by shadow on moonlight nights, as well as at dawn. The smell of the plants would also serve to induce the slugs to spend daylight hours above ground, hidden amongst the foliage. Further, as the plants grow and the shadow cast increases, there is stronger inducement to leave the underground shelter, and during wet spells the smell of the plants would increase.

Young lettuce plants cannot have much smell and must be found by random searching and shadow. The slugs may remain near the site and later find food and shelter provided by the growing lettuce plants, the latter by then having some smell and being an easier proposition to hide amongst than the cabbage plants as the stem of the plant does not have to be located. Here a residue of Agriolimax in the soil would be encouraged by artificial irrigation. This leads on to a consideration of the movements to and from established cabbage and lettuce plants by mature slugs for the purpose of reproduction, and for shelter during hot dry spells. Presumably more uniform and moist shelter, coupled with greater darkness is needed for the laying of eggs below ground, and the factor of thigmotaxis must also be kept in mind.

Under normal conditions of cultivation the cabbage are probably cut before the slug reaches full size, but after the slug becomes mature. If the cabbage were left uncut, or left for seed, the slugs would presumably return to the soil as the plants

elongated, but whether they normally do return to the soil periodically is unknown and would be difficult, although not impossible to find out. They may instinctively make full use of the food supply, and this may temporarily postpone the reproductive urge. Lettuce, of course, grow more quickly and provide an equally moist or even moister environment which would induce slugs to remain on the plant, but if not cut the lettuce run to seed more quickly than cabbage. On the whole, on account of the lettuce's quicker growth, amongst a lettuce crop running to seed, less mature animals would tend to return to the soil in greater quantity and increase the nuisance value. Hence the advisability of clearing a residual crop, especially on heavier types of land.

Slug bait containing metaldehyde is also capable of being smelt. The quantity used and time of application of this bait, bearing in mind the tendency of the pellets to disintegrate under only moderately wet conditions, needs some consideration on the part of the farmer and gardener before the bait is spread. Presumably before rain is the best time and probably more than one application of a carefully controlled amount of bait is most advantageous if the condition of the soil and labour costs permit. Slugs can cover quite considerable distances under moist conditions. Such repeated application of bait is certainly the best way in a garden, bearing in mind the fact that all slugs do not rise to the surface each day.

The relative importance of possible chemosensory cells situated on the outside of the body wall is unknown, and could be investigated using the same technique as is recorded above. Small plastic or glass containers, such as lids of tubes could be used to hold the germinating wheat or cut potato. It would be necessary to cut off the tentacles of the slugs used. There is obviously need for further experimentation, but as I live in an area where slugs are very scarce - even more so after the last two dry seasons - I must leave this to anyone who should be sufficiently interested to undertake what is undoubtedly tedious research, but research which should give interesting results.

Reference:

Kittel, R., 1956. Untersuchungen über den Geruchs- und Geschmackssinn bei den Fattungen Arion und Limax (Mollusca=Pulmonata). Zool. Anz., 57, 185-95.

D. M. Duval

TWO MARINE HABITATS

During May 1976, spellbound by the variety and luxuriance of seaweeds in Kimmeridge Bay, I pulled a patch of small weed, Laurencia sp., from a limestone ledge near LWMS. Searching among the branches of the stipe (part above the holdfast) for rissoids and other small molluscs, I was surprised to find them, not in that familiar position, but lower down within the interstitial spaces between the intertwining branches of the holdfast. The holdfast habitat in Laminarians is well known, but I had not heard of it in the smaller seaweeds; and marine experts, once they were convinced that I had not mistaken a Laminarian for a six inch high Laurencia, seemed equally surprised. In all I found seven species comprising: Turboella parva, Onoba semicostata, Cingula cingillus, Skeniopsis planorbis, Barleeia rubra, Musculus discors, and Lasaea rubra, all alive among sand and dead shells.

Later during the same month, similarly impressed by a beach in Co. Donegal, I was able to confirm the findings made in Kimmeridge Bay by a similar assemblage within the tangle of holdfasts of Laurencia, Polysiphonia, and Corallina. There I found Turboella parva, Onoba semicostata; and juvenile Bittium reticulatum, Nucella lapillus and Hiattella arctica, all alive among dead shells and other invertebrates.

Polysiphonia nigrescens has numerous thin, branching, hair-like strands forming the stipe. But the Irish plants had many hard knotty lumps, about 1cm across,

scattered throughout the stipe. Examination with a lens showed that the lumps were formed by branches of the stipe held together with byssus threads and, pulling one apart, I found within it a Musculus discors. In fact each knotty lump produced a Musculus discors resting in a 'nest' of its own making.

Enquiries among marine workers showed that this nest-building habit was also not well known, though it must be fairly common as will be shown. Subsequently I mentioned this to David Heppell who; first, established that the 'nests' were not for rearing young Musculus discors but simply artificial burrows made for individual use; then, he went to my bookshelf, took down my copy of Step's "Shell Life" and, after a few minutes began to read "The animal spins together branches of the common coralline and other small sea weeds that it may dwell in safety within the nest" (p.73). He added, without a trace of triumph, "You should read Step, he is very good". I did, and I also checked Forbes and Hanley, and Jeffreys, who both quote from Alder's "Catalogue of the Mollusca of Northumberland and Durham" (p.81) - "(it) forms for itself a kind of nest or case by stitching together the small seaweeds or corallines with its byssal threads".

C. P. Palmer

NAMES USED FOR THE NEW IRISH SLUG

In 1968 a greenish slug was discovered in Ireland. This slug was similar to Limax flavus but differing in the anatomy of the reproductive system, some aspects of its external appearance and in its ecology. In 1976 a new list of names for the British terrestrial Mollusca was published bringing the nomenclature used in Britain in line with that used on the Continent (Waldén 1976). At that time a very quick decision was needed on the new Irish slug, and as it closely matched the published description for Limax grossui Lupu, the name L. grossui was used (J. Conch. 29, 1-4). Subsequently preserved specimens and colour transparencies of this slug from Ireland were sent to Dr. Lupu who did not think that it was the same as her species found in Eastern Europe.

As a new field card on the British Mollusca was about to go to press in January this year, a new unambiguous name was needed for this Irish slug. Consequently a short paper was submitted to the Journal of Conchology proposing the name Limax hibernicus sp. nov. and this paper was read at a meeting of the Society on 21st. January 1978. Subsequent to the submission of the paper, and prior to the publication of the spring issue of the Journal, Dr. N. J. Evans of the British Museum (Natural History) published a short note in the Irish Naturalists' Journal doing exactly the same thing, that is proposing a new name for this slug. As the paper by Evans 1978 (Ir. Nat. 19, 173) appeared before the publication date of the spring issue of the Journal of Conchology, his name for the slug, Limax pseudoflavus Evans has priority. My paper submitted to the Journal was withdrawn at the page-proof stage.

However, the new field cards were printed before the publication of Evans's paper and thus they use the name L. hibernicus, abbreviated to "L. hib.". As there is a large stock of these cards which will be in use for non-marine mapping for some time, members should note that Limax hibernicus on the field card is the same slug as L. pseudoflavus Evans 1978.

J. E. Chatfield

POLAR MOLLUSCS

WALRUS

A vast toll of shellfish is taken by hundreds of thousands of walruses from

traditional banks, and the fertility that can replenish such colossal losses is astounding. Since the walrus is known to have exploited banks in the same localities for several hundred, and very possibly several thousand years, it must be presumed that the regenerative powers of shellfish are equal to all demands by predators. Possibly those that survive are surprisingly long-lived, for it has been suggested that some giant clams and freshwater mussels live for a hundred years.

Walruses feed mainly on such bivalves as mussels, cockles, and clams; but also on whelks and other gastropods. The bulk of their food comprises two species of clams, both of which are normally deeply buried among stones or in holes. One, the small though thick *Saxicava artica* with a finger-like foot and long syphon, affixes itself by its byssal cord to the root anchors of large seaweeds. The other, *Mya truncata*, with tongue-like foot and soft chalky shell as large as the palm of a man's hand, buries itself from three to twelve inches deep in gravelly mudflats, where it is also sought by birds and foxes. Both live predominantly at depths of between 130 and 265 feet.

Pacific walruses, who appear to feed mainly in shallower seas, prey extensively on a third clam, *Clinocardium nuttalli*, and also take large quantities of *Neptunea* and *Sipho* at depths of twenty to a hundred feet. When the winter ice is broken up, and they can move inshore, *Cardium greenlandica*, and *Cardium ciliata* are preferred to clams and mussels.

All observers agree that molluscs are eaten before the walrus surfaces, and only their soft parts are found in their stomachs, which may contain 50 to 100 pounds of feet and siphons, representing between 1000 and 3000 clams. These shelled clams have always been a delicacy to Eskimos, who open up the stomach as soon as they have killed a walrus, and after rinsing the clams in seawater, eat them raw.

BEARDED SEALS

These are mainly bottom feeders. They feed on large *Buccinum*, and their stomachs contain hundreds of their round chitinous operculums, which are not dissolved by the gastric juices.

From "Polar Worlds" by Richard Perry, David & Charles, 1973 (now out of print).
(With grateful acknowledgement to the author and publishers)

"The Longshoremen" by Roy Clark. David & Charles, 1974 (Now out of print)

MUSSELS FOR MANURE

Farmers carried them off by the waggon load to use as manure. Thousands of tons were taken every year. Three halfpence was paid a peck (2 gallons dry measure) to the locals for gathering them. This went on all round the coast wherever they were plentiful, and where the beds dried out at low water. About 1850 there were several acres of Mussel beds near Roanhead, on the east side of the Duddon Estuary, but by the 1870s they had disappeared, most of them having gone for manure.

PINPATCHES AND STIFFKEY BLUES

Winkles gathered in Suffolk were called Pinpatches by the locals, and many were gathered at Blythburgh Water, near Southwold. Norfolk has exceptionally good cockling grounds especially on the north coast where Stiffkey "blues", coloured by the mud are famous for their size and flavour.

In 1878 in the Morecambe Bay area there were more than a hundred carts out every day with 6 or 7 people to each one gathering cockles, which were sold at 5 or 6 shillings a box of 70 quarts (about 30 to a quart). About this time tons of cockles were carried by rail worth about £5 a ton.

COACHES FULL OF OYSTERS

Early last century the long distance coaches from the coast were crammed with oyster barrels, to the exclusion of passengers, in the last days before Christmas, and despite two extra horses, took much longer to reach their destination. (Oysters were enjoyed by all classes then, because they were plentiful and cheap.) (With grateful acknowledgment to the author and publishers)

"Bellamy's Europe" B.B.C. Publication

CHIOGGIA FISH MARKET

"Mountains of glutinous squid, a surfeit of scallop shells - enough to decorate every gallon of petrol ever sold through the pumps of the world! The polished shells of Venus, and millions upon millions of mussels. No, the mussels don't come from the canals, but from the modern mussel farms that punctuate the cleaner parts of the lagoon with ordered rows of piles, from which are hung the open mesh socks of polypropylene in which the mussels grow with surprising rapidity. The method is known as suspension culture, and in this way, the farmers can make complete use of the whole of the water column, and all those suspension feeders, themselves suspended in the flow of the tides, could not be better fed.

The mussel farms are well worth a day in any tourist's itinerary. This is the Venice that few visitors ever see, a world of productive muddy water, where the nadir of every view is a shimmering haze of sea and sky." (With grateful acknowledgment to the author and publishers)

The above extracts were submitted by Mrs. Betty M. Smith.

THE SEVERN ESTUARY

A new 37 page booklet entitled "The Severn Estuary: a heritage of wildlife" has just been published by the Severn Estuary Conservation Group. Every page is illustrated (mostly with colour photographs) and the text gives a good deal of information on the estuary as a habitat for wild life. There is also a discussion on the impact of the proposed Severn barrage for the generation of electricity. The common molluscs of muddy shores Hydrobia ulvae and Macoma balthica, are illustrated.

Available at 35p plus 15p postage and packing from The Bookshop, National Museum of Wales, Cardiff.

SHELLS ON POSTAGE STAMPS

This is the title of a book by Karl Emmerick with an introduction by Dr. William J. Clench. The book has 120 pages, 20 of which are in colour. Available from Topical Philatelic Publishers, Box 65(H), Fullerton, California 92632, U.S.A.

US \$19.95 plus \$1.50 postage and packing outside U.S.A.
(From Hawaiian Shell News Oct. 1977)

THE CONCHOLOGICAL SOCIETY OF GREAT BRITAIN & IRELAND, PAPERS FOR STUDENTS

Prices: (Members) 25p for nos. 2-10; 30p for no. 11 onwards
(Non-members) 30p for nos. 2-10; 35p for no. 11 onwards

1. Replaced by Junior Membership leaflet
2. Collecting Non-Marine Mollusca, by L. W. Stratton
3. Key to Land Shells of Great Britain, by A. E. Ellis

4. A Short Glossary of Molluscan Terms, by T. Pain
5. Preparation of the Radula, by D. Claugher
6. Post-Pliocene Fossil Mollusca, by P. Cambridge
7. Literature on British Molluscs, by S. M. Turk
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14. British Littoral Mollusca (1), by J. Llewellyn Jones
15. Hand Lenses and Microscopes for Conchologists, by J. E. Chatfield

Distributed by: Mr. A. Norris, City Museum, Municipal Buildings, Leeds, LS1 3AA
Cash with order appreciated. Postage free.

In Preparation:

Equipment for Collecting Non-Marine Mollusca, by A. J. Rundle
British Sea Slugs: A Guide to their Collection, Identification and Recording, by
I. F. Smith
Photographing British Mollusca, by I. F. Smith
A Key to the British Rissoiidae, by C. P. Palmer
A Key to the British Cockles, by S. M. Turk

ASCOGLOSSAN NOTES (6)

Hints on fine dissection

After thoroughly relaxing an ascoglossan so that the foot is flat and the tail and tentacles are extended, the next important thing is the choice of a preservative. A good plan is to use several preservatives, placing two or three specimens in each. Often when dissection is difficult in one preservative, it becomes easier in another. Try the following. Clarke's mixture. Easy to prepare: 3 parts of absolute alcohol (99% industrial methylated spirits will do); and 1 part acetic acid. Absolute alcohol dehydrates the specimen and prevents the large mucous oviduct from swelling. Acetic acid counteracts the shrinking and hardening effect of the alcohol and increases the transparency of the tissues. Essential when studying the large oviduct, and very good for examining the nervous system.

Carriker's Fluid. Formula: 40% formalin 5ml; sugar, 50gr; borax, 0.5gr; sea water (filtered if possible) 500ml. The formalin acts as a preservative, the sugar renders the fluid hypertonic, thus preventing swelling; borax is added to prevent bacterial and algal growth. The fluid preserves the colour of the animal and makes dissection somewhat easier and more pleasant. However, the animal must be dissected within a week or two, because its condition deteriorates due to the small amount of formalin and large amount of sugar.

Bouin's Fluid. Formula: acetic acid (glacial), 5ml; 40% formalin, 25ml; picric acid (saturated aqueous solution) 75ml. If possible, always put 2-3 specimens in Bouin's which is most suitable for serial sections that are often necessary to check and supplement the results of dissection. As a dissection preservative it renders ducts and nerves rather soft, so that they break easily, if one is not careful.

70% alcohol is a poor dissection preservative. The alcohol hardens the skin, muscles, and connective tissue, whilst the water swells the large oviduct. Almost any preservative will do when making radula and style preparations. When dissecting the reproductive system start within a day or two after preserving, otherwise the prostate becomes sticky and the large oviduct may swell, harden, or crumble.

Acetocarmine is a good dissection stain and is consistent with the above

recommended preservatives. Open up the animal and place in stain for 15 minutes. Wash off excess stain with 70% alcohol; water can be used to differentiate. Always dissect a specimen in its preservative as long as possible. If you have to leave a dissection overnight (or longer) place it in 25% glycerol; the water will gradually evaporate but not the glycerol. Wash off the glycerol before recommencing, because its refractive index is 1.47 and this will reduce the resolution of the optical system of a binocular microscope.

Half a loaf is better than no bread

In February 1978, Elizabeth Platts sent me a tube containing the posterior half of an ascoglossan together with some of its cerata. The specimen was collected from a location in Ireland. It was easily identified as Placida viridis (Trinchese, 1873). Fortunately I had just finished dissecting 4 specimens of P. viridis kindly sent by M. Sordi from Livorno, Italy, so my eye was in for that particular species. Placida viridis is a rare Mediterranean species not previously recorded for the British Isles. The following identification notes are written in the hope that they may assist some of our first-class collectors to put P. viridis firmly on the British List by recording it for two or three additional localities.

The rare Placida viridis feeds on Bryopsis and Codium, sometimes alongside the uncommon species Placida dendritica (= Hermaea dendritica). The two species look so much alike that the presence of P. viridis might be overlooked. Both species are about 5-10mm long. They have up to 50 fusiform cerata along each side of the body and each contains a green axial branch of the gut. Most striking are the numerous, subcutaneous branches of the gut that extend over the dorsal surface, tentacles, and sides of the body. The tentacles have a basal fold facing outwards (auriculate). There is a large median pericardial swelling on the anterior dorsal surface. Anterior to this, and on the median line, is the rectal spout that ends in the anus. The penis, often external, is on the right side, level with the eyes. Not far from this is a large copulatory pad, white in colour (Fig. 1A).

So much for features common to both species. They can easily be distinguished because P. viridis has two bands of violet pigment along the sole of the foot, whereas P. dendritica has not. Also the axial branch of the gut in each ceras of P. dendritica has many small radial branches; these are absent in P. viridis. Moreover, in P. viridis only, small groups of violet pigment cells are scattered over the back and sides of the cerata, and sometimes each ceras is tipped with a large violet spot. The first two differences are shown in Fig. 1, B-E.

Figure 1 (overleaf, p. 88) Placida dendritica (Alder and Hancock, 1843) and Placida viridis (Trinchese, 1873)

- A, features common to both species (only a few cerata are shown)
B, P. dendritica, ventral view. C, P. viridis, ventral view
D, Ceras of P. dendritica. E, Ceras of P. viridis

a, anus; ag, albumen gland; as, violet apical spot; c, ceras;
cp, copulatory pad; e, eye; f, tentacular fold; gc, branch of gut;
m, mouth; n, notch; oo, oviducal opening; p, penis; ps, pericardial swelling; rl, radial branch of gut; rs, rectal spout; sb, green surface branch of gut; ta, tail; te, tentacle; vb, violet band.

Placida viridis. Key Field Identification Features

Size 5-10mm - 1 pair of tentacles only - numerous cerata -
back strongly marked with green branches - foot with two violet
stripes - on Codium or Bryopsis.

Tom Gascoigne

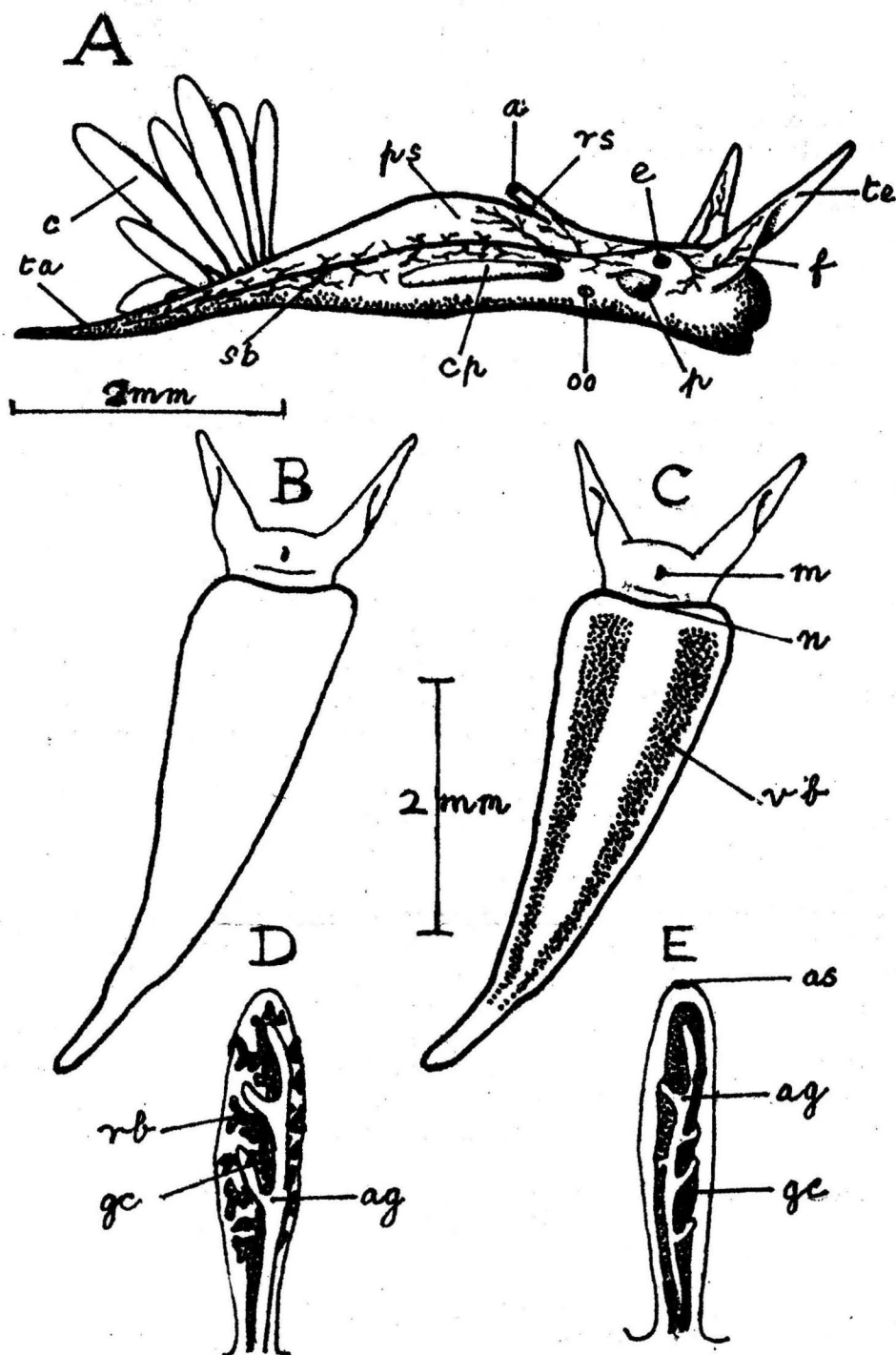


FIGURE 1

GENERAL NOTES

THE STATUS OF THE FRESHWATER PEARL MUSSEL (MARGARITIFERA MARGARITIFERA L.) IN BRITAIN.
A REQUEST FOR HELP.

Recently there has been concern over an apparent decline in the freshwater pearl mussel in Britain and we are currently engaged in trying to assess this decline. Obviously we must trace as many records of the species as possible and would be most

grateful if anyone knowing anything of its occurrence past or present in Britain would contact us. Confidentiality will be respected and any help will be gratefully acknowledged. M. R. Young and J. Williams, Department of Zoology, University of Aberdeen, Tillydrone Avenue, Aberdeen, AB9 2TN

GIANT SQUID STRANDED AT NORTH BERWICK

On Saturday 19th. November 1977 the Royal Scottish Museum received a report from North Berwick police that a large squid had stranded on the foreshore. Arthur Clarke and David Heppell of the Department of Natural History rushed to the scene and found the squid was a 21 foot specimen of Architeuthis dux Steenstrup in excellent condition. The squid was photographed and measured, then taken to the museum for further study. It was decided to make a dissection of the animal as very little is known of the internal organs of these cephalopods. The dissection was carried out by Graham Oliver with the collaboration of David Heppell and Andrew Packard of Edinburgh University. Photographs were taken at each stage and the animal has been preserved. This specimen, an immature female, will be reported in detail elsewhere; the chief dimensions were as follows:- mantle length 161cm., head 43cm., arms 230cm., tentacles 440cm., caudal fin 67 x 55 cm. These large squids are so seldom encountered that any specimen should be immediately reported, no matter what time of the day or night, to the Royal Scottish Museum, Edinburgh, or British Museum (Natural History), London.

Reprinted from 'Porcupine Newsletter', Vol. 1, No. 4, Dec. 1977.

David Heppell

LOCATION OF TYPE-SPECIMENS OF NEPTUNEA IN GREAT BRITAIN

The type-specimens of the large buccinacean gastropods Neptunea lyrata (Gmelin, 1791) and N. ventricosa (Gmelin, 1791) were collected off Unalaska Island in the eastern Aleutians in 1778 during Captain James Cook's third voyage. Mrs. (Dr. George) Fordyce and Dr. (John or William?) Hunter purchased these shells from members of the expedition. The type-specimens appear to have been lost subsequent to their original illustration by Thomas Martyn in The Universal Conchologist (1784, 2, fig. 43, 47).

The Hunterian Collections in the Zoology Department of the University of Glasgow, the Hunterian Museum of the Royal College of Surgeons of England (London), and the Department of Zoology of the British Museum (Natural History) did not hold either of the two holotypes as of 1973. If these shells are extant in the United Kingdom, perhaps this note will aid in determining their present location. The taxonomic identity and stability of these species, following recent systematic revisions of the Neptunea by Golikov (1963) and Nelson (1974), require the selection of neotypes if the holotypes cannot be located. Will persons with information concerning the location of the type-specimens please contact Clifford M. Nelson, U.S. Geological Survey, 950 National Center, Reston, Virginia 22092. Assistance will be acknowledged gratefully in the systematic revision of the genus being prepared for publication by the writer.

INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE - ANNOUNCEMENT - A.N.(S.) 105

The required six months' notice is given of the possible use of plenary powers by the International Commission on Zoological Nomenclature in connection with the following name listed by case number: (see Bull. Zool. Nom. 34, part 4, 28 February 1978).

1780 TETHYIDAE in Gastropods, Sponges and Ascidians: proposals to remove the homonymy.

Comments should be sent in duplicate (if possible within six months of the date of publication of this notice in Bull. Zool. Nom. 34, part 4), citing case number to: R. V. Melville, The Secretary, International Commission on Zoological Nomenclature, c/o. British Museum (Natural History), Cromwell Road, London, SW7 5BD, England. Those received early enough will be published in the Bulletin of Zoological Nomenclature.

JEFFREYS' BRITISH CONCHOLOGY - INDEX TO PLATES & TEXT

The plates in Vol. 5 of Jeffreys' British Conchology carry no reference to the corresponding pp. in the text, and this is often found to be an inconvenience.

Mr. E. C. Badcock has an index to plates and text for this work, prepared by a previous owner of his copy, and of an appropriate size to fit neatly into the volume. He is willing to provide photocopies of the index at a cost of 25p, proceeds for the benefit of the Conchological Society.

Any member wishing to take advantage of the opportunity to obtain this useful item should write to Mr. E. C. Badcock, [REDACTED], Flackwell Heath, High Wycombe, Bucks., enclosing 25p plus a stamped addressed envelope, which must measure at least 7½in. x 5in.

ANNOUNCEMENT

The 'Museo de Zoologia' at Barcelona is offering copies of the review journal 'Miscelanea Zoologica' in exchange for the Journal of Conchology. The Society no longer maintains a library and is not therefore able to enter into such exchange schemes. Any individual member who might like to take out a subscription to our journal in exchange for Miscelanea Zoologica is asked to write directly to: Señor R. Lleonart, Museum Librarian, Museo de Zoologia, Apartado de Correos 593, Barcelona 3, Spain.

A NEW FIELD STUDY CENTRE IN CO. CORK

A new field study centre has opened on Sherkin Island, Co. Cork, under the wardenship of Mr. Matt Murphy. The centre is open for use by visiting parties and it is also concerned with biological recording. There is a laboratory and simple library facilities and weekly charge (including VAT) is £35.00 per person. The fauna is rich and the field centre has already been visited by various University parties studying marine biology. Enquiries to: The Warden, Mr. M. Murphy, Sherkin Island Outdoor Pursuits Centre, Sherkin Island, Co. Cork, Eire.

ELECTIONS AT THE A.G.M. OF THE CONCHOLOGICAL SOCIETY

At the A.G.M. on 18th. March, Dr. Richard Preece was elected Officer in Charge of Juniors in place of Dr. Adrian Rundle, who retired from that Office. Richard Preece's address is - [REDACTED], Kensington, London, [REDACTED]. (telephone, evenings, [REDACTED]). All other Officers continue as before. The following were elected to the Council - Miss Eleanor Fogan, Drs. T. Gascoigne and A. Rundle, Messrs. P. Oliver, G. Osborn and F. Woodward. Dr. Joyce Rigby withdrew her nomination after ballot papers had been distributed.

NEW MEMBERSHIP LIST

Will Members please send in any changes of address immediately as the 'copy' for the new List has to go to the printer at the end of June in order to be ready for issue in September.

THE SOCIETY'S PUBLICATIONS

Back numbers of the Conchologists' Newsletter may be obtained from J.D.R. Fryer, Dept. of Geology, King's College, Strand, London, W.C.2, at 25p each plus post. The Hon. Secretary, Mrs. E.B. Rands, can supply copies of the Marine Concordance, 30p to members and 50p to non-members, the Atlas of Non-Marine Mollusca, £2.50 to members plus 85p post/packing and £3.00 to non-members plus 85p post/packing. Mrs. Rands can take orders for back numbers of the Journal of Conchology.

Papers for Students can be obtained from Mr. A. Norris, Natural History Dept., City Museum, Municipal Buildings, Leeds, LS1 3AA

SHELLS FOR SALE. A fine selection of shells for the collector is available at Eaton's Shell Shop, 16 Manette Street, off Charing Cross Road, London, W1V 5LB (tel.01-437 9391)

SHELL INSURANCE. Contact us for expert advice without obligation. Jaykel Insurance Services and Finance Ltd., 135 Mitcham Road, London, SW17 9PE. Tel. 01-767 2430

THE CONCHOLOGISTS' NEWSLETTER

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Newsletter Editor: P.E. Negus,

September 1978

Chelsea Bridge Road,
London, [REDACTED]

Produced by THE CONCHOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND

OVERLAYS FOR THE ATLAS OF NON-MARINE MOLLUSCA

A set of transparent overlays for use with the Atlas of the non-marine Mollusca of the British Isles has now been published by the Institute of Terrestrial Ecology. They have been prepared by the Biological Records Centre at Monks Wood, and are designed to be used with all British distribution atlases produced by BRC. The overlays can be purchased (price £2 per set) from Mr. M. J. Woodman, Publications Officer, Institute of Terrestrial Ecology, 68 Hills Road, Cambridge, CB2 1LA. Please do not address your orders to the Society.

The set comprises twelve maps, loosely enclosed in a stiff printed folder. They show such factors as temperature, rainfall, relief, rivers, vegetation type and presence of calcareous rock, and there is also a vice-county map, and one showing the present-day administrative areas.

M. P. Kerney

NON-MARINE MOLLUSCA IN EAST FINMARK

East Finmark is the furthest NE part of Norway and includes the great Varangerfjord which opens upon Barents Sea, far within the Arctic circle. It is famous for the wonderful series of old sea-beaches, studied by very many geologists, and I did not expect to find anything new when, by the generosity of Miss M. Garnett (who was unfortunately prevented by illness from accompanying me) I spent a couple of weeks at Vadsø, on the northern shore of the fjord, in June 1972. However, I was fortunate enough to discover a most interesting Quaternary deposit containing a rich marine fauna (an account of which is in preparation).

En route to Vadsø a lovely birchwood at Kirchenes yielded Discus rudneratus (Studer) and also showed me Siberian jays.

The hot dry weather (not a drop of rain during my stay) was not propitious for non-marine Mollusca and search about Vadsø itself yielded very little. A small stream behind the town held Pisidium casertanum (Poli) det. J. G. J. Kuiper, and Planorbis gredleri borealis Lovén. Here I may remark that there is no language barrier between small boys and a naturalist! Within minutes of my fishing hopefully in the stream I had three devoted helpers wading in to turn over stones, haul out weed, etc., and of course I was also treated to a display of "See how far I can jump!".

A day at Ekkeroy, further east along the fjord, was more rewarding. Here there is a great rocky headland with fine bird-cliffs and a stretch of short turf at the cliff-foot. This turf was so near HWM that in wild weather it must surely be drenched with spray. Nevertheless by turning over fair-sized stones lying on the turf I obtained half a dozen species of Mollusca. Discus rudneratus was the

most frequent species, and *Euconulus fulvus* (Müller), *Retinella petronella* (L.Pfr.), and *Vitrina pellucida* (Müller) were also present. The soft parts of the *Vitrina* were unusually dark so live examples were submitted to Dr. L. Lloyd-Evans who determined them as *V. pellucida*. Slugs were represented only by *Arion circumscriptus* Johnston s.s. and *Lehmannia marginata* (Müll.). Specimens of the latter measured up to 60mm. long when extended, and were identified by Mr. A. E. Ellis. Unfortunately the *Arion* succumbed on the journey home and therefore this interesting record cannot be accepted until more material is obtained.

A tiny stream on the mainland opposite Ekkeroy contained a few *Lymnaea truncatula* (Müller) and nothing else.

None of these species is uncommon but the list is of interest as showing the species which live so far north and under such stringent conditions.

Records for East Finmark are given by Esmark (1882 & 1886) but Norman (1902, pp. 475-6) considers some of her records doubtful.

REFERENCES

- Esmark, B. 1882. Tromsø Museums Aarshefter, Vol. 5, p.93. (Not seen: quoted ex Norman, 1902 (q.v.)).
- Esmark, B. 1886. On the Land and Freshwater Mollusca of Norway. J. Conch. 5, pp. 90-131.
- Norman, A.M. 1902. Notes on the Natural History of East Finmark. Ann. Mag. nat. Hist., series 7, Vol. 10, pp. 475-6.

N. F. McMillan

GOSSE ON TENBY, SOUTH WALES

Biographical Notes:

Philip Henry Gosse, 1810-1888. Zoologist and author. Childhood spent in Poole, Dorset, where he developed an early interest in sea-anemones. 1827-1839: travel and work abroad in Newfoundland, Canada and the United States. Several books were developed from these foreign travels. 1839: returned to Britain and wrote "Canadian Naturalist" on the voyage home. A further foreign visit (and his last) took place in 1844-1846 to collect specimens for the British Museum. 1848 married Emily Bowes, 1849 a son Edmund Gosse was born. From then on a continuous series of books was published on many aspects of zoology, marine life, antiquities and religion until 1865, when he gave up writing for 20 years and took up the cultivation of orchids. The mid and late 1850's was a difficult period in Gosse's life: in 1854, at the time of his visit to Tenby, his wife and companion Emily was suffering from a painful and terminal illness. She died in 1857. About this time Darwin's "Origin of Species" caused great concern to scientists like Gosse who were strongly religious and who accepted the Bible verbatim. He tried to bridge the gap in publishing "Life" and "Omphalos" in 1857 but these books were not at all well received. Gosse was not a philosophical writer, his forte lay in careful descriptive zoology and once he abandoned the science-religion controversy, many years of successful writing and publishing followed. 1860 - married his second wife Eliza Brightwen. Some of the background of Gosse's life can be followed in the biography "Father and Son" written by his son Edmund Gosse.

"Tenby: a seaside holiday"

The Victorian era was one of travel both in the British Isles as well as

overseas and the Victorian traveller was full of the excitement of new horizons. It was also an era of scientific discovery and detailed descriptive work on the plants and animals. The Victorian naturalist Philip Henry Gosse was the author of a number of books and many of them had an emphasis on marine biology. One of these, entitled "Tenby - a seaside holiday", was published in 1856.

Although Gosse's main interest was marine zoology, he was also a good general naturalist and chapters in his book on Tenby include land habitats as well as the seashore. His excursion to Giltar lead to mention of the Striped Snail Ceriuella virgata.

"A great mass of broken rock stands isolated in the plain just behind the sand-hills, some fifty feet high, with a perpendicular face inland, but seaward a slope of turf carpeted with the tiny Burnet Rose, not in flower, Eyebright and Thyme, and studded with hundreds of the little Navel Snail (Helix virgata)."

Scattered throughout the book are references to named species of marine molluscs and these give full details of habitat, locality and date which are usually lacking on the labels of Victorian shell collections. For most of the time Gosse concentrated on the living animals of the rocky shore and this is evident from the list of molluscs.

These included: Patina pellucida, Gibbula umbilicalis, Littorina saxatilis agg., Nucella lapillus, Aplysia punctata, Aeolidia papillosa, Polycera quadrilineata, Mytilus edulis, Macra corallina, Ensis siliqua, Hiatella arctica and Barnea candida. These records have been entered on to cards for the Society's marine mapping scheme.

The description of the Rock Borer (or as Gosse called them "Red-noses") Hiatella arctica is a typical piece of Victorian writing.

"From thousands of little holes in the stone project small crimson knobs, which the fishermen felicitously call 'Red-noses'. You touch one, and instantly it retreats into its hole, shooting at you a little squirt of clear water as it retires; a sort of Parthian warfare - firing as it flies. But what manner of creature is it after all? Here is one with his crimson nose lolling out a good way: it is a white fleshy proboscis, with only the very tip rosy, where we discern two round orifices; and, looking closer, we see that the proboscis is composed of two parallel fleshy tubes soldered together, as it were, and that they open at the common extremity, side by side. We nip it with our fingers, hoping to drag out the troglodyte to open day. Vain hope! he has slipped through our grasp, and has vanished into his fortress, like his fellows. We must batter down his castle; there is nothing else for it.

Whack! whack! Rap! rap! Bang! bang! goes the hammer with its ringing strokes on the well-beaten head of the steel chisel.....

Well, here they are! little, stumpy thick-set bivalve shell-fish, with shells of a dirty whitish hue; or what is known in homely tongue as 'whity-brown', rough of surface, and uncouth of form. They are the Saxicava rugosa."

Gosse then goes on to discuss how these bivalves are able to bore into and honeycomb the limestone in which they occur.

It would be interesting to revisit some of these collecting sites, following Gosse's precise directions, and to see what change might have occurred in the 120 years which have elapsed since the publication of the book. Any members planning a conchological holiday in Tenby would find this book fascinating reading.

J. E. Chatfield

SHELL INSURANCE

The object of this article is to attempt to explain, in the first place, why insurers are not keen to insure shell collections and, in the second place, some

of the reasons, right or wrong, why collectors do not insure their collections and why they should.

Nowadays people in general are more aware of the benefits of insurance and it is possible to insure against such risks as losing one's driving licence or a singer his voice, not to mention divorce insurance. Holiday-makers going to far-away places would not dream of doing so without first taking out a travel insurance policy. Even pet-owners willingly pay a premium of £10 or more a year to insure a dog or a cat. And yet it would appear that the majority of shell collectors do not insure their "most valued possessions", nor are insurers interested in insuring shells.

Unlike, say, a jewellery shop, which insurers consider one of the least attractive risks to insure because of its hazardous nature, a shell collector is not an undesirable risk, it is just that being the cautious people they are, insurers tend to keep away from things of which they have no experience.

The "conchologist in the street" may well ask why insurers cannot take a risk, charge a hefty premium and hope for the best. Unfortunately insurance is not a gamble and therefore it is not as simple as that. If an insurance company insures a shell collection, sooner or later a claim will arise and will have to be met. This is what insurance is all about.

Whilst the insurers may like to enhance their reputation for fairness and settle the claim on the generous side, which is far better than having to repudiate or dispute it and probably getting some bad publicity in the process, they cannot do that for various reasons. The main one being: insurers are the custodians of a fund into which other policyholders have also paid and if they abuse their privilege for the sake of creating a good impression, then the sanctity of the contract embodied in the policy would be prejudiced, to the detriment of the insurers and the insuring public alike - they also have to make a profit!

If an insurer wishes to insure a car, for instance, he can easily and readily find out its value and base his premium calculation thereon, but when it comes to shells, the problem of valuation is more complex. It should be pointed out at this juncture that the object of insurance is to indemnify, that is, to place an insured as nearly as possible in the same financial position after a loss as that occupied immediately before it, no more and no less. No less because otherwise he would not receive indemnity and no more as it is against public policy to allow a policyholder to make a profit out of a loss, otherwise most of them would be tempted to bring about the event insured against just to get the money.

So how does the insurer find out the value of a shell in order to give indemnity? There is as yet no acceptable guide and it is precisely because of this difficulty in valuing a collection that many insurers fight shy.

Unlike the car, the value of shells depends largely on opinions and is bound to fluctuate widely. It is therefore not difficult to imagine the problem this will create when it comes to settling a claim, which is quite a different matter from collecting the premium!

Whilst an insurer will not doubt the "bona fides" of a collector, unless he has strong evidence to think otherwise, the moral hazard is ever present when insuring any kind of valuable collection. It is so easy for a dishonest policyholder to claim that he had a Conus gloriamaris and that it has been "stolen" and was worth £300. Again, unlike the example of the car, where a replacement can be bought or its market value paid should it be stolen, this is not possible with shells. Even if one assumes it is possible to buy another C. gloriamaris straightaway, which of course is easier said than done, it is unlikely to be in the same condition as the lost one - and nobody can prove in what condition that one was!

Before settling a large claim the insurers will ask the insured to provide documentary proof of value. Now whereas most people can produce an invoice in respect of a television set and this will be quite satisfactory, how can the shell collector do the same regarding a Lambis violacea which he bought some years ago from a toothless old fisherman sitting under a banyan tree in a small village in Mauritius? Even if a valuation given by a reputable shell dealer is acceptable by the insurance company, this is good only if it is a recent one, as members of the Society know only too well, a Conus bengalensis fetched over £1200 at Sotheby's a few years ago, earning itself a mention in the Guinness Book of Records, but today it is possible to pick one up for under £100. Conversely, a Cypraea aurantium is today worth a great deal more than it was a couple of years ago.

For the majority of shell collections, however, and they will not be graced by the likes of C. bengalensis or C. aurantium, the shells are either self-collected, exchanged or given: no proof of value whatsoever. Once the subject-matter has disappeared, only the owner knows it ever existed and its intrinsic value, and he will be slightly biased!

The above are just some of the reasons why insurers do not go out of their way to insure shell collections. Now we come to the second part of the article: why shell collectors do not have insurance - those who have will already be aware of the terms and restrictions imposed.

A good guess is probably ignorance. Many collectors genuinely believe that as they have a "comprehensive" household policy, it covers everything in the house, provided the sum insured is adequate. Sadly this is not the case. Collections of any kind are specifically excluded in the contents policy, although some insurance companies may give cover up to £50 - one single Harpa costata in your collection and that leaves the rest uninsured!

So why should shell collectors pay premium to insure their collections which, after all, may have cost them very little? The answer is simple: can the conchologist face life without his collection?

Although insurance cannot replace sentimental values, it will do the next best thing: provide the cash to go and buy replacements to replenish a collection as far as this is possible. Some very rare shells may not be replaceable, but their places can be taken by others just as rare and coveted and which will give the collectors perhaps even more pleasure.

If we delve into this a little further, why does a person collect anything if not with the secret hope that one day he might profit from them commercially? Of course nothing can surpass the direct pleasure of collecting these beautiful, elaborately sculptured molluscs. But any collector, whether it be of antiques or lavatory chains, measures the worth of his collection by its value. A good collection should appreciate in value and if it is damaged or lost, the collector is more likely to say he has lost £X's and not: one Strombus listeri, two Murex alabasters, half a dozen Cypraea testudinarias and so on. With a collection such as shells, whether self-collected or otherwise, its value is bound to increase since they are becoming scarcer all the time and they cannot be manufactured. It is therefore not wrong to say that it is money that a collector loses if his shells are stolen, whether or not he paid actual cash for them. If you put your money in a bank to safeguard it, then the same protection should be given to your Cypraea monetas, which coincidentally was the earliest form of currency.

If you think no harm can come to your shells, just remember that a small fire at home or a visit by a burglar (thieves like beautiful things too!) can seriously deplete a collection. Stranger things than molluscs have been left on trains and shells at an exhibition do get damaged or stolen. They are so brittle that they will easily break if dropped and even in transit, if the car conveying them is involved in an accident, the "shell" of the vehicle is unlikely to

protect them completely.

If by now you are beginning to think that you had better rush out and insure your collection and are wondering where or to whom you should run to and what type of cover you should get, read on, the article is nearly finished.

In the first place you would be wasting your time to contact the nearest insurance company as more than likely it would not want to know. Your best bet is an insurance broker who specialises in collections insurance, as he will know the insurers that are interested in accepting this kind of risk. You should insist on "all risks" cover as this will cover the collection throughout the U.K., including whilst shells are being exhibited and in transit. The policy should cover loss, damage or destruction from virtually any cause with a few exceptions.

You might be pleasantly surprised to find that the premium is cheaper than the cost of adding another shell to your collection. You may never have a claim, but then you should consider yourself lucky your collection is still intact!

Jacques K. Lee

TWO NEW TESTACELLA RECORDS FOR 1977

During 1977 I was involved with many geotechnical investigations into the causes of subsidence in houses, usually associated with the effects on shrinkable clays of the exceptionally hot summer the previous year. Although the work was rather laborious, not to mention monotonous, it did enable me to enter private land in a variety of locations around Kent and Sussex, and not infrequently did natural history specimens appear which would hitherto have remained undiscovered.

Whilst engaged in manually breaking out a substantial concrete step on a house at Hoo, Kent, I noticed a rather anaemic-looking earthworm, partially projecting from a tuft of grass which was growing through a crack in the concrete.

Without paying much attention to a not unusual sight, I continued pounding, when, to my subsequent annoyance, a rather unhealthy Testacella was revealed, whose juicy lunch was now rather abruptly ended by the disastrous effects of a fourteen pound sledge hammer!

Removal of the amazingly intact shell from the somewhat incomplete, to say the least, remains of the unfortunate slug enabled the specimen to be identified and subsequently verified as Testacella haliotideia Draparnaud, hitherto unrecorded from TQ 77, although a recent (post 1950) record exists from adjacent TQ 76 and old records (pre-1950) from several nearby squares (Kerney, 1976).

Engaged on similar work at Shoreham on Sea (TQ 20) in September of the same year, I overturned a dumped corrugated metal sheet on some rough ground near a recreational area to find another, this time naturally, sick-looking Testacella. On arrival home the animal was dead, but the pickled specimen has been verified as T. scutulum Sowerby, which bears the smallest shell of our three carnivorous shelled slugs.

One recent record of T. scutulum exists in an adjacent square (TQ 11) prior to the publication of the Atlas of Non-Marine Mollusca in 1976. Distribution maps in the Atlas reveal that no species of Testacella can be described as common, though no doubt their usual subterranean habits do not facilitate a true evaluation of their distribution, and they may well be more abundant than is apparently obvious.

Ref. Kerney, M.P., Atlas of the Non-Marine Mollusca of the British Isles.

AN INTERESTING LETTER FROM E. A. SMITH

Whilst looking through a pile of material put on one side by the librarian of the East African Natural History Society for disposal about 15 years ago, I found a most interesting letter. Having just re-found this after having mislaid it for some time it seemed worthy of a note giving, as it does, some indication of the amazing efficiency of folk at the beginning of this century. The letter is one from E. A. Smith to R. L. Harger in Blantyre, British Central Africa (now Malawi) commenting on molluscs the latter had collected; the letter written on the 18th. October 1907 is accompanied by a list of 20 determinations and 21 quite skilful and accurate pencil drawings. There were several new species involved and these were described by Smith (Proc. malac. Soc. 8: 12-15 (1908) namely Giraudia minima, Vivipara kalingwisiensis, Cleopatra hargerii, Unio mweruensis and Mutela hargerii. The interesting thing, however, is the timetable of events. The specimens were collected in Lakes Tanganyika and Mweru early in 1907 and sent to the British Museum. Smith's letter left London on October 19th. 1907, arrived in Chinde, Malawi on November 23rd., and Blantyre on December 1st. being finally stamped by Customs on 20th. December. Smith's paper was read on 13th. December and appeared in March 1908 only about a year after the material was first collected. I have given the letter to the British Museum (Natural History) since it is a good example of Smith's own drawing capabilities.

B. Verdcourt

REVIEWS

'Seashells of East Africa: Spider and Wing Shells', by Fred Pinn (Rex Collings, London, 1977, £1.25).

This little book is the first of a number to be issued on the shells of the Eastern African coast; a series which promises to be of considerable help to the thoroughgoing conchologist as well as to the tourist with more general interests. The present issue starts by introducing seashells in general to the beginner, describing briefly the classes into which the Mollusca are divided, the basis upon which they are named, and the various parts of the animal and its shell; incidentally, 'pelecypod' may be interpreted 'hatchet-footed', it does not mean stomach-footed.

A general description of the genera Lambis and Strombus in East Africa follows, and this brings us to the most interesting part of the book - the illustrations. These are the combined result of first-rate work in photography and colour printing, and are of a quality not often seen; one presumes that this fact is responsible for the rather high price asked for a 40 page booklet.

The author offers pictures of thirteen out of the fifteen species known from the Eastern Coasts, but since the first page of photographs shows typical coastal scenes, unlabelled but presumably African, which are not a great deal of use to the enquirer, it might have been better in the cause of completeness, to substitute pictures of the missing two species.

Each shell illustrated is dealt with in a delightfully complete fashion. Upper and under sides are shown, aged and immature examples, and some fascinating studies of the animals themselves in their natural surroundings - molluscan faces, some of them, which seem to take on characters of their own. Not even the

complete beginner could fail to identify his shells correctly from such illustrations.

The book is the approximate shape of a tourist leaflet, 8" x 3 $\frac{1}{2}$ ", and although many holiday sales may be hoped for, this seems to the reviewer a pity. The book is evidently designed to slip into the pocket, but the conventional 'Penguin' shape will do this even better and is able with greater harmony to take its place on the bookshelf. The 'Seashells of East Africa' are not hardbacks as mentioned by the publisher but are covered with a soft but highly glazed and quite hard-wearing back for use in the field if required. However, it is possibly not out of place to remark that one should take a book on sea shore expeditions only if one has a second copy.

This little series promises to be of the greatest use to collectors as well as a pleasure to look at for everybody, and we shall expect further issues with the greatest interest.

T. E. Crowley

'Patterns of Progress: Marine Pollution', by P. G. Moore. Meadowfield Press, 1977, £2.80.

The Patterns of Progress booklets have been appearing at an unbelievable rate, and this one in particular must concern all thinking conservationists. It may be regarded as a technical review of the marine pollution problem, and the main lesson to be learned from reading it seems to be the extreme complexity of the influences at work, which leave no chance for the activities of the uninformed ecological protestant.

Pollution means different things to different people. It can cover harm to living resources, hazards to human health, hindrance to marine activities such as fishing, impairment of the quality of seawater for use, and the reduction of amenities. It may even be largely in the mind, as in the case of the gentleman dining at Crewe who discovered a mouse in his stew. A growing international conscience on the matter cannot prevent a continuing increase in volume and variety of waste materials, which must continue with no foreseeable end; and it must be remembered that all soluble substances dumped on land eventually find their way down to the sea. Likewise, open dumping is on the increase. Figures relating to the sewage discharged into tidal waters on the south and east coasts of England indicate that as little as 1% is fully treated; the majority - 66% - is discharged after partial treatment, while one third is discharged raw. It seems no longer reasonable that a borough should be able to economise on sewage treatment merely because it is situated near the sea.

Only recently has it been fully appreciated that pollutants discharged into the restless ocean do not necessarily disseminate rapidly to a harmless dilution. A patch of poisoned seawater is capable of eddying to and fro in a tidal estuary almost unchanged until there is a radical change of weather; in other cases, where horizontal diffusion is progressive, vertical diffusion may be extremely slow, producing a persistent layer of poison in mid-ocean. The waters of the Baltic Sea change only once in thirty years and much the same is true of the Mediterranean: the water in the fiords is almost stagnant, and in all these and many other examples, measurable pollution has been rising at an increasing rate all this century, now approaching unacceptable limits.

The author devotes considerable space to the known effects of the worst forms of pollution, in particular, metal salts and organochlorines, the results of possible interactions between them, and the natural means by which many of them, in small quantities, become rendered harmless. Pollution may include the discharge of pure, warm water from power stations, which has the effect of killing off much of the local sea life, perhaps replacing it with a more exotic assemblage; and not many sewage works remove plant nutrients from water, which in

some parts of the world are known to induce algal blooms. Concentrations of dinoflagellates ('red tide') appear, resulting in mass mortality of fishes and other life.

Many practical suggestions for lessening the effects of pollution are put forward. The dumping of nuclear wastes in deep ocean trenches for instance, can be done in areas of the seafloor undergoing crustal movement; here the beds of the trenches become liquified or thixotropic, and densely packaged materials sink progressively to a depth where leakage becomes of no importance. Providing the area is chosen correctly, any amount of material, it is thought, can be swallowed into the planet's interior. Indiscriminate deep sea dumping is quite useless as a safeguard, since bottom-water upwells and joins the great ocean currents.

A great deal of work has recently been done on the biological effects of wastes discharged into the sea, and it has been established that the toxicity of a mixture of chemicals may greatly exceed that of the sum of the individual poisons present. The results on different kinds of life are naturally extremely variable, and even if certain animals or plants survive, they may become part of a food chain which will result in the death or sterility of a group of predators. Molluscs in general terms, have means of self-protection denied to most marine life in that their shells enable them to withdraw from unfavourable conditions, at least for a time. Poison concentrations may be excreted - often with loss of viability - stored in the hepatopancreas in the case of many bivalves - or often built into the shell material as with oysters. All such cases present a hazard to predators.

Like many diseases, pollution may be acute ('Torrey Canon') or chronic, but although we can monitor many of its effects, there is no known method of measuring pollution itself: too many substances and influences are at work, ranging from harmless to lethal, and many of these are as yet unknown.

What of the future? The author has little to say and one must conclude that there is unlikely to be a radical improvement. It may be technically possible to render inoffensive nearly all of the present waste products before discharge, but the cost of so doing would be beyond the resources of industry or even of government, and there will be little inclination to tackle the problem on a large scale, while so little is understood about what is harmful and what is not. Setting aside any dangers to public health, very little money is likely to be spent merely in defence of marine life.

T. E. Crowley

'A Directory of Dealers in Secondhand and Antiquarian Books in the British Isles 1978-80'. 9th. Edition, xxxviii + 324pp. Sheppard Press, London, £6.00

If you have ever been unable to find a secondhand bookshop in an unfamiliar town or on a long journey have been frustrated by the thought that you are passing such shops without knowing of their existence, then this book can rectify the situation. It details over 1500 secondhand and antiquarian dealers (including shops) in London and in over 500 other places in the British Isles.

Each entry includes the name, address, telephone number and type of business premises, i.e. shop or private, and the date established. The stock is described according to five size categories, from very small (less than 2,000 volumes) to very large (more than 20,000 volumes) and content, i.e. predominantly secondhand or antiquarian and specialisation if any. The entries are ordered alphabetically within 57 geographical areas, which vary considerably in size, because of the density of dealers. Wales has 30 dealers and is represented by one area, whereas London (Postal District) has over 300 in eight areas. The accompanying comprehensive indexes enable the tracing of a dealer by his name, speciality (divided into 30 categories) or address, and the map of the geographical areas, together

with the list of towns with dealers at the beginning of each section, enables a rapid check to be made of all local dealers.

The book also contains useful information on trade associations and periodicals, abbreviations in common use, book sizes and addresses of book related services and suppliers. The list of 700 'permanent wants' makes interesting reading although it contains very few natural history titles.

This is the 9th. edition of a book which has been published since 1951 and there have been considerable content changes since the 8th. edition of those specialising in Natural History. Only 25 entries are common to both editions; 39 from the previous edition (many having ceased specialising but still in business) have been replaced by 42 new entries.

The strength of a directory depends on its reliability and ease of use. Since the information for this one is gathered by circulating individual dealers, it is not always uniform or accurate. A short personal survey revealed a considerable variation in the quality of the stock that could be expected and many, though not all, the errors may be attributed to post compilation changes. In use, the indexing to geographical areas and not to pages is awkward and requires a subsequent tiresome search through the appropriate section, which is often augmented by advertisements. Since most of my use has been by region, a method of readily finding the index map would be useful, perhaps by printing it on different coloured paper as had been attempted with the alphabetical index of dealers. Also annoying, although it occupies only $5\frac{1}{2}$ pages, is the inclusion of dealers not covered by other Sheppard publications, i.e. from Australia, Africa and S.E. Asia, in a book devoted to the British Isles!

Despite all these criticisms, this is an essential book for the bibliophile and should be consulted at the start of any journey into unfamiliar territory.

Peter F. Lingwood

REPORT OF THE FIELD MEETING HELD AT RHOSILLI, GOWER, 6 - 7 MAY, 1978

Ten members and friends gathered on Saturday and Sunday in the Rhosilli car park. We were pleased to welcome the warden of the local National Trust and the warden of the Rhosilli Outdoor Pursuits Centre.

Saturday was rather cold and windy but the meeting spent the day on the sandy beach of Rhosilli Bay. Items of special interest which were found were live Acteon tornatilis (L.), a double operculate Buccinum undatum L., Scrobicularia plana (da Costa) and a Clathrus clathratulus (Kamacher). On Sunday the rocky shore of Worms Head and Tears Point was examined. Quite a few live species were found, among them: Alvania punctura (Montagu), Cerithiopsis tubercularis (Montagu), Nassarius incrassatus (Ström), Ocenebra erinacea (Lamarck), Aeolidia papillosa (L.), Hiatella arctica (L.), Kellia suborbicularis (Montagu). A full list of the species found can be obtained from me on receipt of a S.A.E.

Celia Pain

ASCOGLOSSAN NOTES (7)

This year the cold, rainy weather of Winter continued well into Spring and there were not many days suitable for shore or salt marsh collecting. Consequently at our meetings there have been few living marine or brackish-water exhibits. John L. Jones gave an interesting display of salt marsh species

including some L. depressa; we look forward to his paper on brackish water molluscs in the near future. Chris Paul recorded L. depressa on a salt marsh of the Dee estuary, near Barton. Since he had not seen this species before, this was first-class collecting. During a recent visit to Livorno, Italy, I examined living Placida viridis, which had been described in Notes (6). I must make it clear that the violet dots on P. viridis are dark violet with a reddish, or brown, tinge - definitely not the colour of Spring violets! Please, therefore, correct my description in Notes (6) by inserting 'dark' before 'violet'.

Hints on fine dissection

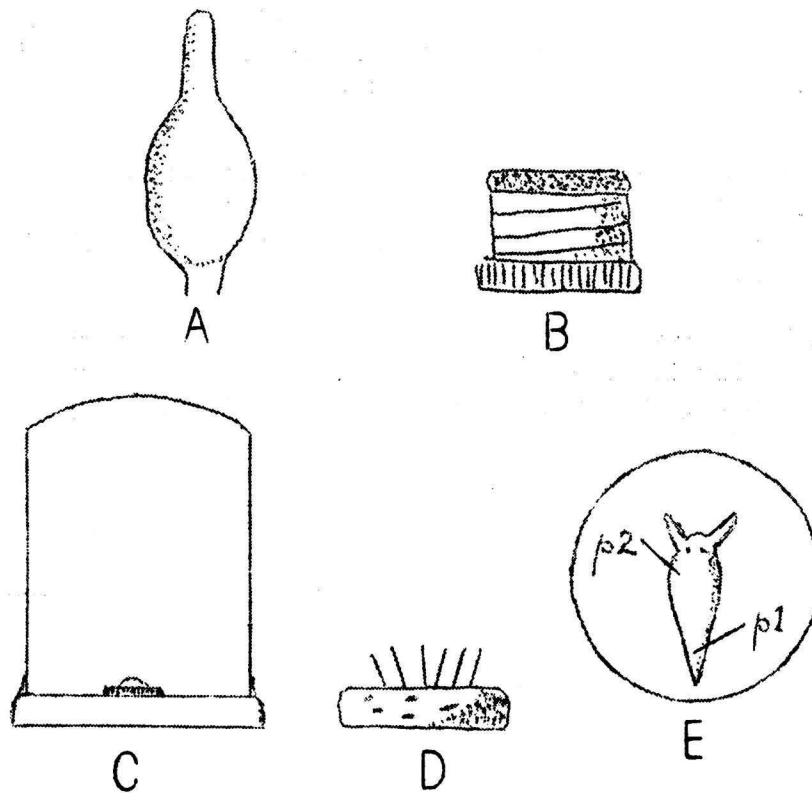


Fig. 1. A, spout-shaped spoon; B, plastic stopper filled with wax;
C, dissection dish with cover; D, cork pin-cushion;
E, position of first two pins in a dorsal dissection.

(a) To make a dissection dish for a sea slug of length 5mm, or less.

Persuade a friendly dentist to give you a sheet of pink dental wax; this does not split or crystallise like some paraffin waxes. A grape-fruit spoon that is drawn out in a spout (Fig. A) is useful for heating and pouring out the molten wax, which otherwise could be a messy and wasteful affair. Fill the spoon with bits of wax and melt them over a low flame. Pour the wax into a plastic stopper of diameter about 1.5cm until it is full. As it cools it will form a dimple on the surface. Fill the dimple with wax so that the surface is flat and slightly above the rim of the stopper (Fig. B). From a local chemist purchase a plastic container about 4cm in diameter and height 5cm - the sort that is commonly used for tablets or capsules. By means of a strong adhesive, such as Bostik, fix the stopper on the inside of the lid. Use the container as a cover to protect the dissection during intervals when not dissecting (Fig. C).

(b) To pin a 5mm sea-slug, dorsal side uppermost.

Use the finest stainless steel entomological pins, size .0056x10mm, obtainable from Watkins and Doncaster Ltd., Four Throws, Hawkhurst, Kent; a hundred can be bought quite cheaply. Pin half-a-dozen on a cork cushion (Fig. D) so that they are readily available. With your thumbnail scrape a small depression on the surface of the wax and in it place the sea slug. The depression should not be too deep for this would prevent oblique light reaching the animal. Cover the slug with two or three drops of preserving fluid.

One pin is insufficient to keep the animal stable during dissection. Three pins at the corners of a triangle would be mathematically correct. However, two pins will suffice when opening up the animal and more can be used as dissection proceeds. With fine Swiss forceps push the first pin (P1) through the animal's body just above the tail. Place the second pin through the animal's left shoulder (Fig. E). In these positions the pins will do least damage to the internal anatomy.

You are now ready to open the animal along the mid-dorsal line with a fine dissecting needle. This could be made from a tooth-pick, or cocktail stick, with a pin firmly fixed to one end by epoxy adhesive; or the pin could be fixed in the tapered end of a small glass pipette.

It is advisable to make a separate dish for slugs of length 10-20mm. A box used for long coverslips is of convenient size. If the specimen is 2mm or less it can be kept reasonably steady in a drop of Berlese's or Faure's fluid; both are viscous and sticky.

Tom Gascoigne

GENERAL NOTES

INTERNATIONAL CONFERENCE ON THE HISTORY OF MUSEUMS AND COLLECTIONS IN NATURAL HISTORY (APRIL 1979)

The Society for the Bibliography of Natural History, together with the specialist professional Biology Curators Group and the Geological Curators Group, are sponsoring this Conference, to be held at the British Museum (Natural History), London, on the 4th.-6th. April 1979.

The increasing importance and interest in Museums and their holdings in the Natural Sciences and the present growth of studies into their history, indicated that the subject required an International forum. The aim of this Conference is to bring together specialists in the various disciplines throughout the world, historians of science, curators, librarians and bibliographers.

To achieve this papers are invited upon a very wide range of subjects, which will be presented in the four sessions of the meeting. The range of topics includes: the history of individual public and private museums; studies of museums within a particular geographical area, time-span, or scientific discipline; the lives and activities of collectors of fossils, minerals, plants, or animals; studies of natural history libraries and book-collectors; the history of zoos and botanical gardens; the sale and dispersal of notable libraries and natural history collections; the documentation of museums and private collections; the relationship of bibliography to collecting; and the growth of museums and studies on collections resulting from expeditions and exploration. All papers submitted, whether read or not, will be considered for publication in a special volume.

In addition to the sessions of papers, exhibitions of natural history collections, books and manuscripts will be prepared in London museums and libraries. It is also intended to visit other institutions in the Home Counties on the 6th. April.

For further information, please contact:

Mrs. J. A. Diment (Organising Secretary), Palaeontology Library,
British Museum (Natural History), Cromwell Road, London, SW7 5BD,
United Kingdom.

ANNUAL GENERAL MEETING MARCH 1979

Members are reminded that they can nominate candidates for election to the Council.

Rule No. 11, Candidates for nomination to the Council shall be paid-up members of The Society and shall be nominated by two members. Nominations, other than those made by the Council itself, shall be sent in writing to the Hon. Secretary at least six weeks before the A.G.M., and shall be accompanied by a signed declaration of the candidate's willingness to serve.

NOTE: Nominations must be received by the Hon. Secretary NOT LATER THAN
31st. December 1978.

COPY DATES FOR NEWSLETTER CONTRIBUTIONS

Copy for the March	issue should reach me before	6th. January
" " " June	" " " "	6th. April
" " " September	" " " "	6th. July
" " " December	" " " "	6th. October

Newsletter Editor

BRITISH FRESHWATER BIVALVE MOLLUSCA, BY A. E. ELLIS

Synopses of the British Fauna, new series, No. 11. Linnean Society of London and Academic Press, 1978. A revised edition of Synopsis No. 13, first series, 1962. An introductory section on structure and general biology has been added. Price £2.80.

WELSH SEASHELLS - ORDERS FROM COUNTRIES OUTSIDE THE U.K.

The Bookshop, National Museum of Wales, Cardiff, has asked for orders to be paid in £ sterling if possible (£1.13 to include postage and packing). Should payment be in any other currency, then an extra 50p (total £1.63) is required to cover bank levy charges, otherwise the museum makes a loss on foreign sales.

THE SOCIETY'S PUBLICATIONS

Back numbers of the Conchologists' Newsletter may be obtained from J. D. R. Fryer, Dept. of Geology, King's College, Strand, London, W.C.2, at 25p each plus post. The Hon. Secretary, Mrs. E. B. Rands, can supply copies of the Marine Concordance, 30p to members and 50p to non-members, the Atlas of Non-Marine Mollusca, £2.50 to members plus 85p post/packing and £3.00 to non-members plus 85p post/packing. Mrs. Rands can take orders for back numbers of the Journal of Conchology.

Papers for Students can be obtained from Mr. A. Norris, Natural History Dept., City Museum, Municipal Buildings, Leeds, LS1 3AA.

SHELLS FOR SALE

A fine selection of shells for the collector is available at Eaton's Shell Shop, 16 Manette Street, off Charing Cross Road, London, W1V 5LB (telephone 01-437 9391)

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MR. FRANK ABBOTTSMITH

The well-known Australian conchologist, F. Abbottsmith died on 18th. June 1978. In particular he was the world's authority on Australian volutes and published privately a monograph entitled "Multiform Australian Volutes". In the past four years he made extensive tours of Australasia, U.S.A. and Europe and gave hundreds of lectures (including three in Bristol) illustrated by slides of his unrivalled collection of Australian volutes as well as slides of the land fauna and flora of Australia. Recently he disposed of roughly one third of his shell collection by a postal auction. The remainder of his collection is being sold by Mr. Trevor Sutcliffe, Western Australian Shells, GPO Box T 1738, Perth, W.A.6061, Australia.
(From John F. W. McOmie)

EXTRACT FROM: LAND TENURE, by Rev. Samuel Rundle, M.A.

Glancing back at the middle ages we are struck by certain peculiarities in the holding of land by tenants.....Mocking, or insulting conditions were sometimes exacted from the tenant. One of this kind of tenure still survives at Godolphin Hall, where before sunrise on Candlemas-day (February 2nd.) the reeve of the manor of Lamburn comes to demand from the tenant the customary high lordship. He is supposed to knock in an insulting manner at the outer door of the hall, and cry loudly thrice, "Oh, yes (knock); oh, yes (knock) oh, yes (knock)! Here comes I, the reeve of the manor of Lamburn, to demand my lord's dues; eight groats, and a penny in money, a loaf, a cheese, a collar of brawn, and a jack of the best ale in the house. God save the Queen, and the lord of the manor." This recitation is performed also at the inner door of the quadrangle, and by the side of the table in the kitchen. Formerly the reeve finished the ceremony by leaping on the table, as a final mark of degradation. The origin of the custom is veiled in obscurity. The following is the local tradition, with one or two conjectural additions:

Mr. St. Aubyn and Mr. Godolphin (whose family had an hereditary tendency to gambling) made a bet of their respective properties upon the result of a race between two snails. The course was fixed, the goal set, and the two fiery mustangs set off on their task. After a time Mr. Godolphin found that his snail was losing ground, whereon, to quicken its speed, he pricked it with a pin. The snail instantly drew in its horns, and refused to move another inch. The other snail moved slowly on, reached the goal at length, and won the race for Mr. St. Aubyn, who, instead of insisting on the forfeiture of Godolphin by its owner, agreed to its retention on condition that if the foregoing ceremony, then instituted, was not accurately carried out every year, it should revert to his family.
(Report and Transactions of the Penzance Natural History & Antiquarian Society, N.S. Vol. 2, 1884-85:21, 23).

(from Elizabeth Jackson)

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SHAKESPEARE AND SEA SHELLS

"References to creatures of the deep and to various fish are of a general kind. It is only of the crab, dolphin, oyster and whale that some fuller knowledge is shown, and even that is not of an unfamiliar sort. Cod, dogfish, eel, herring, loach, minnow, mackerel, mussel, pilchard, salmon, shrimp, sprat and tench come in, but sometimes only as terms of opprobrium." A.F. Falconer, "Shakespeare and the Sea" (Constable, 1964).

The following are the mentions of marine molluscs which occur in Shakespeare. The quotations are taken from the First Folio.

OYSTER

Falstaff I will not lend thee a penny.
Pistol Why, then the world's mine Oyster,
Which I, with sword will open.

The Merry Wives of Windsor, act 2, scene 2.

"Pistol replies that if Falstaff will lend him nothing he will have to use his sword to extract money from an unwilling--and rotten--world; he is adapting the proverbial 'open an oyster with a dagger', where the dagger implies keeping one's distance because of the smell." The Merry Wives of Windsor, edited by H.J. Oliver, p.50 (The Arden Shakespeare, Methuen, 1971).

Benedick May I be so converted, & see with these eyes?
I cannot tell, I thinke not: I will not bee sworne, but loue may
transforme me to an oyster, but Ile take my oath on it, till he
have made an oyster of me, he shall never make me such a foole.
Much Ado about Nothing, act 2, scene 3.

Touchstone Rich honestie dwels like a miser sir, in a poore house, as your
Pearle in your foule oyster.
As You Like It, act 5, scene 4.

Alexas Say the firme Roman to great Egypt sends
This treasure of an Oyster; at whose foote
To mend the petty present, I will peece
Her opulent Throne, with Kingdomes. All the East,
(Say thou) shall call her Mistris.
Antony and Cleopatra, act 1, scene 5.

Tranio He is my father, sir, and sooth to say,
In count'nance somewhat doth resemble you.

Bianca As much as an apple doth an oyster, & all one.
The Taming of the Shrew, act 4, scene 2.

MUSSEL

Falstaff There was (mine Host) an old-fat-woman even now with me, but she's
gone.

Simple Pray you Sir, was't not the Wise-woman of Brainford?
Falstaff I marry was it (Mussel-shell) what would you with her?

The Merry Wives of Windsor, act 4, scene 5.

"Johnson explained, reasonably enough, that Simple is so christened because he is standing with his mouth open; Hart, objecting--in a rather literal way--that this image would apply only to the whole mussel, with two shells, preferred to think that the reference was to 'an empty worthless object'. New Cambridge's suggestion of a further possible pun on 'muzzle' piles one hypothesis on another." (Oliver, 1971, p.123). References: Samuel Johnson, "The Plays of William Shakespeare" (1765); H.C. Hart, The Merry Wives of Windsor (The Arden Shakespeare, 1904); Sir Arthur Quiller-Couch & John Dover Wilson, The Merry Wives of Windsor (The New Shakespeare, Cambridge, 1921).

COCKLE

Ophelia How should I your true love know from another one?

By his Cockle hat and staffe and his Sandal Shoone.

Hamlet, Prince of Denmark, act 4, scene 5.

The reference is really to the scallop shell, emblem of St. James of Compostella, worn by pilgrims to his shrine on their hat.

A. E. Ellis

SOME NOTES ON THE ZOOLOGICAL INSTITUTE ACADEMY OF SCIENCES, U.S.S.R.

For most Malacologists working on the Molluscan Fauna of the eastern north Pacific basin, the names of Johan von Eschscholtz and Alexander Theodore von Middendorff have special meaning. To a lesser degree Georg Wilhelm Steller is known, but chiefly as a vertebrate zoologist, with one exception: his name being utilized for the largest of the chitons, Cryptochiton stelleri (Middendorff, 1846). It is common knowledge that these men worked with, described and named a great number of our north Pacific marine fauna, when this region was Russian-American, under the jurisdiction of Alexander Baranov, Factor of the Russian-American Company. It may come as a shock to some to learn that Alaska south to northern California (Fort Ross in Sonoma County) was considered to be Russian-American. Hinds, 1846, in the Zoology of the Voyage of the Sulphur, referred to "Russian Bodegas" for the locality of his Tellina bodegensis. However, the region of Russian-America had shrunk to only Alaska when the area was purchased in 1867. Humboldt Bay, on the extreme northern California coast, was visited between 1802 and 1811 by ships of the Russian-American Company and the present Humboldt Bay was called the Bay of Indians, with the Entrance of Rezanov, for the outer reaches. There is some strong indication that Eschscholtz was on at least one of these voyages. So, for a number of years as I sought our "Type" specimens from the north Pacific basin to examine and photograph, I had dreamed of working with the original material of Steller, Pallas, Eschscholtz, Middendorff, Rathke and Wroblewski. In 1977 this dream came true.

One morning, late in May 1977, I stood in front of a large double door on the east end of an imposing stone building on the north embankment of the Neva River at Leningrad, U.S.S.R. This was the Zoological Institute, Academy of Sciences, and the Intourista Agency at the Astoria Hotel, my home away from home and a story in itself, has contacted the Institute with word that I would be there on this morning. I entered and identified myself to the lady at the entrance window, and within a few minutes a dark haired, relatively young man in a laboratory coat greeted me. This was my first meeting with Dr. Alexander N. Golikov, a specialist on the genus Neptunea, and whom I had heard of for several years.

The Academy of Sciences was established in 1725 by Tzar Peter Romonov I (Peter the Great). The original staff was, for the most part, German (this was

prior to Bismark's unification of Germany under Prussia), with one notable exception, Michael Lomonosov. The separating ridge, dividing the Arctic basin into two parts is named for this man, the Lomonosov Ridge. I am not familiar with the early records, but Steller and Peter Simon Pallas were on the staff of the Academy. The present edifice which houses the collections was begun in 1823, and by 1896 the present display and research building was completed.

There are several major halls or a continuation of a super hall with major displays of mounted birds, mammals and fishes. There was a special Hall of Insects under construction at the time of my visit and it appeared that the display of Cetaceans was also in the process of either reconstruction or construction. There was an entire section for invertebrates, divided into separate showings based upon Phyla. I was both interested and impressed by the Mollusca, Coelenterata, Echinodermata and Porifera, as locally I have studied all of these from the deep water fisheries. There was a habitat group of the species found in the Arctic Seas as well as one from a coral reef.

In the late 19th. Century the frozen remains of a Hairy Mammoth, Mammuthus primigenius, was discovered in the permafrost of Siberia. The frozen body was dug up, thawed, skinned and the skin and skeleton brought to then Petrograd, where it was mounted and placed on display at the Zoological Institute. The specimen is still there, and mounted in the "sitting" position, in which it was found. Evidently, the elephant had either been hurled or fallen into a pit or crevice in the permafrost sometime between 42 and 45 thousands of years ago. Nearby there are some additional Pleistocene mammals or their parts. A "Freeze dried" Wild Ass was noted in one case, and two heads, the hind leg and one fore-foot of the Hairy Rhinoceros were on display in another case. Two Snow or Siberian Tigers are mounted for close-up inspection as are two Snow Leopards from north of the Pamirs. The collection features the fauna of the Euro-Asian land mass, but there is a small unit of African Mammals, plus a nice Penguin series taken by Soviet scientists in the Antarctic during the Geophysical Year of research.

I was soon set up with my camera equipment and notebooks on a table in the office shared by Dr. A.N. Golikov and Dr. I.M. Likharev. Dr. Likharev is a specialist on land and freshwater Mollusca of Russia, but spoke only Russian and French. I had left my French behind me when I left that country in 1945, and had no Russian, so communications were a bit difficult. However, I did learn that evidentially our land snail fauna, Pulmonates, never were much in contact between the extreme Pacific coasts. Only a very few genera and no species were common to the two sides of the Pacific.

Dr. Orest A. Scarlato, Director of the Zoological Institute, is a malacologist and is perhaps the authority on the Pelecypoda of the Far Eastern Seas as well as the Arctic Seas of the Soviet Union. I learned that we have many genera in common and quite a few species may be found on either side of the Pacific Basin, with or without separate taxa applied. This is pretty good evidence of a common ancestry, the same as with the Gastropoda. Dr. Scarlato presented me with a copy of the Flora and Fauna of Peter the Great Bay, which is well illustrated and I had learned to pick out place names in the Cyrillic, which added with the Latin of the taxa, made this an interesting publication for my library.

Dr. Alexander N. Golikov, Head of the Marine Research Laboratory, is well known for his publications. His monograph of the Neptunea of the U.S.S.R. (1963) is the latest such monographic work on that genus. This publication is well known in Alaska, Canada, Japan, Iceland, Denmark and England, as well as here in the southern 48 states. Unfortunately, this work has never been translated into either a German or English edition. He is also well known for his studies on the isothermic distribution and possible speciation of marine Mollusca. We had several chats on this subject as I too had noted factors covering temperatures and distribution plus shell variations in several parts of the world. One

feature that we discussed are the sills, elevations creating an underwater dike, which impounds extremely cold waters with a separable fauna from that of the open sea nearby. Usually these are found in channels or fjords, but Dr. Golikov had found two in the northern and western part of the Okhotsk Sea.

All these conversations took place as the staff continued to bring in and take out "Type" specimens as they were photographed. Lunch was at the cafeteria of the Zoological Institute and each time we visited this place, we utilized a different route to see and visit other departments and people.

The chitons were under the curatorship of Dr. Boris I. Sirenko and we also had several interesting chats. In 1971 he was with a party who visited the Monneron Islands off the south-west coast of Sakhalin. While there they discovered a small population of Haliotis discus hannai Ino. These islands, at the extreme head of the Sea of Japan, or at the southern end of the Tatar Straits, are considered to be in the cold Amur Current from the north. However, it is now thought that a current from the Okhotsk via the La Perouse Straits, forces the remnants of the warm Tsushima Current from the Sea of Japan away from the shore and it ends up in the Monneron Islands, warming the water sufficiently to allow a small breeding population of Haliotis to survive. To my delight, I was presented with one of the specimens taken in 1971. We also "isolated" one specimen of a lot of six, preserved in a jar with alcohol. These were the originals of Middendorff's Amicula pallasii, 1846, called Chiton pallasii. The "isolating" of a Lectotype was easy, as most of the specimens during the past 131 years had deteriorated, and we segregated the only whole specimen to photograph. Middendorff's Chiton stelleri, Cryptochiton stelleri (1846) is about 10cm in length (4"), and is badly distorted. The specimen was taken on Kamchatka.

I met Dr. A.I. Kafanov, a specialist in Cardium, and felt that I had met him previously. During 1976 in København, while working with the Types in the Zoologische Museum, I had seen a set of two specimens of Clinocardium ciliatum (Fabricius), which Dr. Kafanov had worked on, designating the larger specimen as the Lectotype. A few days prior to my visit to København, I had been working with series of this Clinocardium at Reykjavik taken in Fossvouger Fjord. Hence my interest in that Type lot.

So hour by hour, line by line, species by species, I had whittled down my list of Types to examine and photograph. There were some that I failed to see, as such could not be located. One of these was the small Tritonium luridum Middendorff, Ocenebra lurida (Middendorff). Locally, I find it in association and feeding upon the flesh of the Great Chiton, Cryptochiton stelleri (Middendorff). The data states that the specimens came from Sicha, Sitcha, Sitka (various spellings on original data). I looked in vain for the older, original, or official name Novaya Arkhangel'sk, but could find no specimens with this locality.

Finally, it was time to say a final "Thank You" and "Good Bye", and on a wet, chilly, late afternoon I found myself awaiting the Intourist Car to take me to my hotel. A final handshake and I was away to Moscow, London and on home. The visit was well worth the energy and time, and I would like to repeat it some day.

Robert R. Talmadge, Field Associate, Department of Invertebrate Zoology, California Academy of Sciences, San Francisco, California 94118.
Curator of Natural History, College of the Redwoods, Eureka, California 95501.

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HERM ISLAND REVISITED

Two years ago I spent a week in Guernsey and made four day-trips to Herm

Island where I took a representative sample of shells present between high and low-water mark. In mid-May of this year (1976) I had the good fortune to spend a week on the Island in similar weather and tidal conditions and noted certain significant changes in the balance of the molluscan population. I have discounted all data which could be distorted by increased experience over the last two years and the population variations noted below are real though the degree of fluctuation is estimated and may not be accurate.

1. Calliostoma zizyphinum (Linné). This species has all but disappeared from its original haunts. Only one live specimen was found.
2. Gibbula magus (Linné). This is the only gastropod which has achieved a steady population surge over several breeding seasons. The increase in live examples found between high and low-water mark I estimate at about X 8. Strangely, there were few dead shells found.
3. Gibbula umbilicalis (da Costa) and Gibbula pennanti (Philippi) have suffered some decline in numbers but only a reduction by about $\frac{1}{3}$ but Gibbula cinerarea (Linné) has just about maintained its numbers.
4. Littorina littoralis (Linné). This species has suffered a really serious population decline. Weed clumps which would have harboured several hundred Littorina two years ago now have only one or two individuals. The population decline is not so serious on Guernsey as on Herm but the trend is still there. Few juveniles were seen and few fresh dead shells were present on the shoreline.
5. Glycymeris glycymeris (Linné). A population surge by a factor of X 10 appears to result from two good breeding seasons - the first rather better than the second. 70% of shells found were live.
6. Venus verrucosa (Linné) has suffered a population decline of at least 50% among adults but juveniles were totally absent. This suggests at least two disastrous breeding seasons.
7. Venus casina (Linné). A steady increase in population appears to have been sustained through three breeding seasons. I estimate the increase at X 3.
8. Venus (Timoclea) ovata (Pennant). A definite population surge but difficult to assess accurately due to the existence of huge quantities of dead shells of indeterminate age. An estimate based on live shells only gives an increase factor of X 4.
9. Venus (Clausinella) fasciata (da Costa). The population has surged by a factor of X 15. This appears to be the result of one good breeding year. Numbers of other generations are unchanged. Dark colour forms now predominate. 95% of shells found were live.
10. Tellina (Moerella) donacina (Linné) appears to have increased by a factor of about X 5 but in one breeding season only. This shell could be classed as rare two years ago but now one can expect to find at least 2 freshly dead pairs in the course of close examination of 100 metres of shore line. Only two live examples were found.
11. Gari depressa (Pennant) appears to have suffered a 50% decline in numbers but other Gari species appear to be holding their own.

These observations may be of interest to those who follow changes in the distribution of our native species. I hope they will prove useful for comparison with trends elsewhere.

One ideal breeding season can turn a scarce species into an abundant one. Conversely a series of unfavourable years can eliminate an established thriving colony.

We have all, at some time, puzzled over annotations of "common round all our coasts" against species that one has never encountered in years of collecting. A long-term study of population variations would, I am sure, go a long way to explaining such anomalies. I suspect that sustained fluctuations in climatic conditions could herald dramatic extensions and contractions of range for species which are near the limits of their environmental tolerance.

G. D. Saunders

Recently in Holland an observant Conservation Officer, although not a Malacologist, reported to his provincial officer the fact that the Kaaskenswater near Zierikzee, a brackish water lake, was threatened by town expansion, because he felt that it was of scientific importance. The provincial officer, not being aware of type localities and their scientific importance requested further information. The problem was therefore brought to the attention of the Research Institute for Nature Management, Leersum and was passed to me. I had visited a number of brackish water sites in the Netherlands in the past few years in an attempt to evaluate the importance of natural sites in this country. On most of the excursions I was accompanied by Mr. R.A. Bank, a diligent young malacologist deeply interested in the problems of variation in Potamopyrgus "jenkinsi" occurring in brackish and fresh waters, which in some localities resembles the much disputed Hydrobia stagnorum (Gmelin 1791) and which can also be present.

I was able to point out that this particular brackish water lake was the type locality of Hydrobia stagnorum, and stressed the scientific importance of type localities in general, and in particular of the Kaaskenswater as the type material of H. stagnorum could not be allocated in the Linnean collection where the types should have been found. Mr. Bank found two species among the Dutch snails known in our country as Hydrobia stagnorum and could separate them on conchological grounds. The type locality harbours the two species. Mr. Bank contacted Dr. Gittenberger of the Leyden Museum as it became evident that a lectotype Hydrobia ventrosa should now be designated from the Montagu syntypes in the British Museum (Natural History). This was done when Dr. Gittenberger recently visited this museum. Most Netherlands records of Hydrobia stagnorum can now be assigned to Hydrobia ventrosa Montagu. A publication by Bank and Gittenberger containing the creation of a Neotype from the type locality for Hydrobia stagnorum is on its way. Further anatomical research can assign both species to their proper genera.

At present, the Nature Conservation authorities in The Netherlands, the Dutch Malacological Society, its individual members and other organizations are trying through official procedures to save this locality and to maintain the status of the area.

Through this example the importance of type localities becomes evident and the necessity of conservation of these sites, not only in The Netherlands, is clear.

Dr. O.E. Paget (Nat.Hist.Mus.Vienna) shares my opinion that this problem should be brought forward as a topic on the next Congress of the Unitas Malacologica in Paris 1980 as it deserves the attention of the Congress.

It is also clear now that taxonomists are usually not represented on conservation bodies and that the first line authorities as a rule do not know about the existence and importance of type localities, neither do they know about the existence and importance of type localities in their regions. Nature conservation officers cannot be blamed for ignorance as regards type localities which is a purely systematic topic. It is the scientific responsibility of museum directors to inform conservation bodies about the location of type localities in the country. Their staffs can know in particular about those localities where the urgency of conservation surpasses the general importance of type localities. This is the case when types have been lost, or when only syntypes of allopatric origin are present. In the latter case the designation of a lectotype and consequently the designation of a type locality deserve particular attention of taxonomists and conservationists with regard to the possibility of conservation of a particular site.

I am very much obliged to Mr. and Mrs. J.E. Llewellyn-Jones who summarized the internationally important essentials from my paper in Dutch (Corresp. Bl. Ned. Malac. Ver. 181 (1978):754-758) which has been worked up with these new discoveries.

L. J. M. Butot, Research Institute for Nature Management, Leersum, The Netherlands

RADULA DRAWINGS OF LT. COL. A. J. PEILE

After the death of A.J. Peile a few items passed into my hands including a collection of dried mollusc bodies preserved with a view to radula extraction (now in the British Museum (Natural History)), some equipment such as very strange sized cover-slips, a bottle of original Grubler Dahlia stain and many other substances used by microscopists, in a wooden cabinet, a set of Fabre's works and three little packets of notes, letters and drawings. These packets are of some interest and I have passed them on to the archives of the Royal Scottish Museum; they include drawings of radulae, notes on radulae and a few letters from famous students of the Mollusca. Some of the drawings have been published, many in the well-known series of papers which appeared in the Proc. malac. Soc., but some have not. Often the genus is abbreviated to an initial letter and I have done my best to guess at these. I have thought it valuable to list all the material so that students will know what is available but have not attempted to alter the nomenclature. He shared with Hugh Watson (and to a certain extent myself) the habit of extreme economy with paper, using fragments of old Malacological Society meeting announcements, rubber estate financial results, Wimbledon Theatre tickets and such other pieces as were available.

Letters and notes, - single letters from A. Blok, E.M. Bowell, F. Laidlaw, C. Oldham, G.C. Spence and R.E. Vaughan; two letters from A.H. Cooke (written from Mapledurham Vicarage, Feb. 1922); part of a letter from E. Madge with a description of his method of mounting radulae; note from F.A. Schilder; three letters from H.C. Burnup; a letter from Peile to myself dated 10th. July 1948 (one of his last letters before his death on 30th. July); notes on mounting radulae from Gwatkin; many notes and drawings abstracted from literature; notes on abnormal central teeth in Amalthea acuta, Achatina, Zebrina detrita, Cypraea caput-serpentis, Maizania wahlbergi, Theodoxus jordani, Lymnaea stagnalis, etc.; notes on Natalina spp., Chondrocyclus putealis, American Pilidae, Abyssochrysos, Spirotropis carinata, Cominella cincta, Buccinum undatum, Turridae, Leptodontarion, Atopos kempii.

Drawings, - Agnewia tritoniformis, Allodiscus dimorphus, Alycaeus distortus, Amphibola crenata, Amphidromus atricallosus, Ancilla spp., Aplysia spp., Argobuccinum argus, Aspella anceps, Assimineia spp., Atopos (drawing and photograph), Burnupena limbosa, Burnupia capensis, Bursa venustula, Cathaica fedschenkoi and allied genera, Ceratodes, Cereobullia ceroplasta, Chilina tehuelcha, Charopa spp., Chondrocyclus spp., Clausilia cravenensis (notes), C. dubia (notes), Clea nigricans, Cochlostoma spp., Conus spp., Crepidula rugulosa, Cyclophorus floridus, Cyclostrema bushi, Cymatium vespaceum, Damayantia, Engina marmorata and spp., Eorhachis sulphurea, Eremina desertorum (jaws), Eugyrina gemmifera, E. pustulata, E. sp. nov., Everettia, Gibbula pennanti, G. umbilicalis, Gibbus lyonettianus (with notes), Gudeella columellaris, G. sp., Gulella planti, Gymnarion sp., ? Haminoea tenella, Harpa amouretta, Helicarion palmarum, H. pitmani, Helix aspersa, Hemiplecta malaonyi (in a copy of a letter to Laidlaw mentioning many other radulae), Howeinsulaea, Kaliella doliolum, Laciniaria biplicata, Leptachatina labiata, Lymnaea glabra, L. stagnalis, ? Macrochkenawikworthi, Macrochlamys glauca, Macroptychia, Maculotriton bracteatus, M. puncticulatus, Maizania wahlbergi, 11 spp. of Marginellidae, Tomlin's deep sea 'Melania', Melatoma sinuata, Micana zenospira, Monomphalus heckelianus and sp., Murex spp., Nassa spp., Natalina quekettiana,

N. viridescens, Nautilus pompilius, Octopus vulgaris, Olivancillaria auricularia, Olivella spp., Opisthoporus, Peristernia leucothea, Pila polita, Philine spp., Pleurodonte sloaneana rendryesi, Potertia cingulata, Rhachis electrinus, R. histrio, R. punctatus, R. zonulata, Rh(iostoma) samuriense, Rhysota, Salinator fragilis, Sepia officinalis, Sheldonia hewitti, S. maseruensis, Stephanoda quadrata, Subulina octona, Succinea bermudensis, S. gabrieli, S. sp., Tortulosa hartleyi, Trivia europaea; also 'B. berniciensis', 'H. grandis', 'H. spatiosa', and 'S. kryerii'.

Bernard Verdcourt

NOTE - from David Heppell, Royal Scottish Museum - the following are details of Peile material in the Museum:

- 1948.81 A worldwide collection of shells of Streptaxidae (622 lots).
- 1948.82 A collection of slide-mounted radulae (3765 lots) including slides formerly in the collections of B.B. Woodward, J.E. Cooper, E.W. Bowell and H.M. Gwatkin.

We also have Peile's MS alphabetical index of streptaxid species and a catalogue of his radulae (1946) listing just under 2100 species.

LOVE AND THE SHELL

She is my dream.
And dream I would
Of unfound beaches under southern skies
Where I could,
If lucky, find her in the sand.

A calm hot sea.
By hotel and palm
I would seek her out barefoot at dawn
In morning calm,
Or early night on a lonely strand.

I might now dive,
Or swim to the reef
And in the strange light see her mantle shine,
Hiding her grief
About her capture half unplanned.

Yet love I know.
I would not lie
That living beauty fades on final conquest,
And she would die
Ere she could begin to understand.

She is my dream.
Her shell adorns
My bookshelf as a pearl white memory
That she scorns:
Her ghost has flown to a foreign land.

Peter Topley

A MIRACLE OF NATURE

First witnessed many years ago by a clergyman of enquiring mind, and only now revealed by his direct descendant, a female person seeking admission to your learned society.

There was a snail, as I've heard tell,
Dissatisfied with his fine shell,
Who thought he'd decorate it, so
Off to the rubbish tip did go.
And there he painted it with glue
Then added a nice stone or two,
And rolled about amongst the moss
And gave a few dead leaves a toss;
A cobweb made a dainty veil
Dotted with bits of curly kale,
And then he chose a juicy sloe,
Some holly and some mistletoe,
Two walnuts and some lemon rind
(The things those humans leave behind!) -
Until he had a stately home,
A veritable Brighton Dome
With turrets rearing to the sky
And flags a-waving up on high.
So proud was he, he thought he'd take
A little stroll, just for the sake
Of showing off to one and all -
But WE know what precedes a fall.....
Topheavy, he fell down a drain;
But soon was washed out once again
Into a stream.

And by and by
He turned into a caddis fly.

Anne Shaw

SNAIL RACING

"The news in my daily paper that in certain parts of Wales the latest craze is snail-racing has turned my attention to these gasteropods after months and months during which I don't suppose I have given more than a passing thought to them.

As a writer I have always rather kept off snails, feeling that they lacked sustained dramatic interest. With a snail nothing much ever happens, and, of course, there is no sex angle. An informant on whom I can rely says they are 'sexless or at least ambivalent'. This means, broadly speaking, that there are no boy snails and no girl snails, so that if you want to write a novel with a strong snail interest, you are dished from the start. Obviously the snail-meets-snail, snail-loses-snail, snail-gets-snail formula will not help you, and this discourages writers from the outset. Almost all we know of snails from English literature is Shakespeare's brief statement that they creep unwillingly to school.

But this snail-racing should mean a change for the better and give authors more of a chance. The way it works, I understand, is that each entrant pays a small fee and the owner of the first snail to pass the judges' box takes the lot. The runners have their owner's colours painted on their shells and 'are attracted to the winning-post by a pile of wet ivy leaves', with a delirious crowd, no

doubt, shouting 'Come on, Steve' or words to that effect."

P. G. Wodehouse, "Over Seventy" (Herbert Jenkins), (From A. E. Ellis)

REDISCOVERY OF TROCHOIDEA ELEGANS (GMELIN) NEAR DOVER

This distinctive Mediterranean snail was discovered in Britain in 1890. The habitat was a 'chalky bank by the roadside in a retired locality some miles from Dover' (J.Conch. 6 (1891): 377). The exact position of the colony seems never to have been published, but by piecing together information given in a number of later accounts it is clear that the site was at Lydden, about 4 miles NW of Dover, close to the main railway line from Canterbury (TR 2745). Early this century a coal mine was sunk here and according to A.S. Kennard (J.Conch. 18 (1929): 280) 'the original locality is now buried beneath the tip'. This statement was accepted by Davis (J.Conch. 24 (1954): 19).

On 3 September 1978 a joint Conchological Society/Kent Field Club excursion visited Lydden. Trochoidea elegans was refound at several places close to the site of the now dismantled colliery, at approximately TR 270457. It lives, rather sparsely, in chalk grassland, always on steep slopes showing much broken rock - for example in the talus of a shallow chalk pit, and also immediately below an old concrete reservoir set in the hillside. The specimens are mostly small, rarely exceeding 7mm in breadth. The typical form with a peripheral brown band is greatly outnumbered by the uniformly coloured variant (var. grisea). The associated species were Cernuella virgata and Pupilla muscorum (both very common), with smaller numbers of Vertigo pygmaea, Vallonia costata, V. excentrica, Deroceras reticulatum, Candidula intersecta, Monacha cartusiana and Trichia hispida.

In the 1920's the late H.C. Huggins found T. elegans at another site 'over a mile away' (J.Conch. 18: 280). Specimens collected by him and labelled 'near Kearsney' (approx. TR 2844) are in the British Museum (Natural History). We failed to relocate the species hereabouts. There are also examples in the BMNH labelled 'Sibertswold' (= Shepherdswell, about 2 miles N of Lydden) in the handwriting of R. Winckworth (1884-1950), but without other data. According to Davis (J. Conch. 23 (1951): 167) further specimens from Shepherdswell are in the Kennard collection in the BMNH. Davis also quotes an unconfirmed record from St. Margaret's Bay, about 4 miles NE of Dover.

It seems likely that careful fieldwork in East Kent may well succeed in locating further colonies of this attractive introduction, apart from the one well-known site at Walmer (TR 374498) discovered in 1952 and believed to be still flourishing.

M. P. Kerney

LETTER TO THE EDITOR

[REDACTED],
Westcliff on Sea, Essex.

September 26th. 1978

Dear Mr. Negus,

I refer to the 'Shell Insurance' article on page 93, et. seq., of the September issue.

Whilst admitting that the information therein was both timely and useful, I

would like to take issue with Mr. Lee on a point which will be echoed by the vast majority of shell-collectors.

No conchologist of my acquaintance collects (p. 95) "with the secret hope that one day he might profit by his collection commercially". On the contrary. How many members of the Society have travelled miles, at considerable expense, and often in dreadful weather, to acquire some minute land-snail, inspired only by enthusiasm for his subject? I do not know a collector who, having lost a Strombus listeri, or a Vertigo pygmaea, come to that, would thereupon measure his bereavement in pounds. For me, at least, the loss of a favourite specimen would be more like having a page torn from a personal diary, or a rung ripped from a ladder.

Shell-collectors are, in my experience, single-minded and wholly dedicated people, (whether rigidly scientific on the one hand, or entirely aesthetically motivated on the other), and I think it right to emphasise that the classical image of the conchologist as one for whom "the pursuit is all" is still valid even in these days of monetary madness.

Sincerely,

Dennis Boxley

A SUCCESSFUL SHELL SHOW

On Saturday 29 April 1978 the British Shell Collectors' Club staged its second competitive shell show at the Napier Hall, Victoria, London. As I was one of the judges at this show and at the one held in the same place a year previously I should like to offer a personal view of the show, its apparent progress and possible future.

In 1977, not surprisingly, the show had a few teething troubles. A shell show is not easy to organise and presents a variety of problems which may only be foreshadowed and solved after much trial and error. That show, in spite of the difficulties and lack of finesse, gave great satisfaction to exhibitors and public alike because it was at least unusual and was the first of its kind ever to be arranged in Britain.

So how did the 1978 show compare with that first attempt? Did the organisers get it right this time? Did the exhibitors raise their standards? And did the public maintain or increase its support? The answer to each of these questions is an unqualified - Yes!

Firstly, the organisers had allowed themselves much more time to set things up and this ensured a smooth-running operation. The overall standard of the exhibits was high and some individual exhibits were outstanding. And the number of visitors to the Napier Hall was marginally higher than in 1977 although it would certainly have been much higher had the show not been staged during the Easter holiday.

If organising a successful shell show is difficult, then judging one is impossible! In Florida, where shell shows are highly organised and fiercely competitive, all the exhibits are eye-catching and often breath-taking and so the incorrect spelling of a name or the absence of a required capital letter on a label may turn a potential prize winner into an also-ran. So far, such critical attention to minutiae has not been required very often to sort out winners at the London shows but some decisions using such criteria have been made. In several categories correct labelling is of paramount importance but is frequently presented carelessly. Tom Pain showed how it should be done with his immaculate

display of the African land-snail genus Burtoa which comfortably secured first prize in the 'Land & Freshwater' category.

Fine and rare shells were present in quantity and the coveted 'Shell of the Show' award could have been presented to any one of a dozen shells, but Walter Karo's magnificent Conus kinfokii Habe & Kosuge, known to science only since 1977, had the unanimous vote of all three judges and will not be soon forgotten by all those privileged to see it. Of course such shells cost a lot of money and sometimes give rise to the complaint that those who can afford to buy such things are automatically going to win the top prizes, particularly in the 'Shell of the Show' category. The complaint is easily answered. The top prize in any category is not always won by somebody with a well-filled purse; and if visitors are to be attracted to a shell show then they will hope to see just those shells which are outstanding for their beauty and rarity and necessarily involve high expenditure.

Ken Wye repeated his success of the previous year by winning the 'Outstanding Exhibit' award with his astonishing series of Spondylus. The only other exhibit in serious contention for this supreme award was an imaginative and colourful series of shells arranged in a circle according to the colours of the spectrum - another of Ken Wye's exhibits. Ken has the rare ability to produce stunning effects with a minimum of materials and his exhibits are an inspiration to all who see them, though less gifted exhibitors should not be led by his disdain for labels into thinking they may achieve his success merely by sharing his disdain!

One notable feature of the show was the high success rate of junior exhibitors who frequently outdistanced more senior competitors. Most of the juniors' exhibits were of so high a standard that it seemed almost pointless to have any categories specifically for them.

Some exhibitors did not do their homework - it happens in even the best shell shows - some exhibits being entered in the wrong categories or being merely the laid-out contents of drawers from shell cabinets without any attempt at original presentation. Once it is realised by every exhibitor that success in such a show is best achieved by marrying imagination and originality with well-chosen material then the B.S.C.C. shell show will have come of age. At the present rate of progress that happy event could well be only a couple of years away.

Peter Dance

INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE: ANNOUNCEMENT A.N.(S.) 106

The required six months' notice is given of the possible use of plenary powers by the International Commission on Zoological Nomenclature in connection with the following names listed by case number: (see Bull. Zool. Nom. 35, part 1, 31 July 1978).

- 2110 Proposed addition of Pulteney's Dorset Catalogues, 1799, to the Official List of Available Works, with a request for clarification of the status of Preprints.

Comments should be sent in duplicate (if possible within six months of the date of publication of this notice in Bull. Zool. Nom. 35, part 1), citing case number to:

R.V. Melville, The Secretary, International Commission on Zoological Nomenclature, c/o. British Museum (Natural History), Cromwell Road, LONDON, SW7 5BD, England.

Those received early enough will be published in the Bulletin of Zoological Nomenclature.

COLLECTING ON THE CLWYD COAST, NORTH WALES

The North Wales coast is particularly poorly recorded and in an attempt to rectify the situation, Dr. Peter Lingwood (the Area Rep. for Area 24, Liverpool Bay) led two field trips during the summer of 1978.

On 17th. June, a number of members and friends sauntered along from Prestatyn station to the extensive sandy beach. At first glance it looked most unpromising, but a careful search yielded 43 species (2, A; 8, B; 33, C) - an increase of 29 on the previous record card total. This included Littorina saxatilis living on the short wooden groynes and Spisula subtruncata which had burrowed just beneath the sand as high up the shore as M.W.-H.W. level. Despite the mud in between the beach ridges, there were no living Hydrobia ulvae, Scrobicularia plana or Mya sp., although a few empty valves were collected. Other less common finds included Dosinea exoleta, Zirphaea crispata, and Thracia phaseolina and the shell of the predatory gastropod Ocenebra erinacea.

A second trip on 15th. July to Pensarn looked even less rewarding. The sandy foreshore is backed by a large storm beach of cobbles, which on the only previously recorded visit yielded only 16 species of the larger robust species. This visit achieved 31 (6, A; 7, B; 18, C) from the whole beach, including living Abra alba, Spisula subtruncata and Tellina tenuis, although, despite considerable sieving, no T. fabula or Macoma balthica appeared, as might have been expected. Littorina littorea and saxatilis, and Mytilus edulis were found living on the pipe going out to sea.

At one time, Dr. Peter Lingwood thought he had discovered a small population of Mya arenaria living in the muddy sand between the cobbles at H.W.M. The opening on the surface of the mud, and the jet of water emitted when disturbed, so typical of Mya, were in fact produced by the grey-green longitudinally ribbed coelenterate Sargatia sp. It too reduces its size (from about 5-7cm to about 2cm) by expelling water, but as many small jets rather than one large one.

Also found was a small colony of Barnea candida in post-glacial clays out-cropping at H.W.M. None were alive, but the find was no less important as it is believed to be only the second post 1950 record of 'in situ' Barnea in Liverpool Bay.

The success of both trips can be seen from the number of species recorded, which as usual is very much dependent on the effort spent in collecting.

D. R. B. Harrison

PSEUDAMNICOLA CONFUSA (FRAUENFELD) IN CENTRAL LONDON

A recent excavation near Tudor Street, Blackfriars (NGR TQ31608096) revealed several feet of muddy river deposits apparently of late mediaeval age, resting on thin marly silt and stiff silty clay (post-glacial Thames alluvium). The site is near to parts of the London Fen - a morass situated on the upstream side of the mouth of the Fleet river. Parts of this were reclaimed by the Knights Templars under a grant from Henry II. London Bridge is four-fifths of a mile down stream.

Two small samples of the mud yielded a distinctly "Thamesian" fauna and, rather surprisingly, 5 shells of a small snail - Pseudamnicola confusa (Frauenfeld) which I have not previously encountered. This species is a rare brackish-water denizen, although it will tolerate quite low salinity. Dr. Kerney believes that it is now extinct in the River Thames and that it has not previously been recorded so high up. Hence this note.

The complete faunal list is as follows:-

<u>Cochlicopa lubrica</u> (Müller)	<u>Gyraulus acronicus</u> (Férussac)
<u>Vallonia pulchella</u> (Müller)	<u>Gyraulus albus</u> (Müller)
<u>Vitrea crystallina</u> (Müller)	<u>Unio tumidus</u> Philipsson
<u>Theodoxus fluviatilis</u> (L.)	<u>Sphaerium corneum</u> (L.)
<u>Valvata piscinalis</u> (Müller)	<u>Pisidium amnicum</u> (Müller)
<u>Pseudamnicola confusa</u> (Frauenfeld)	<u>Pisidium casertanum</u> (Poli)
<u>Bithynia tentaculata</u> (L.)	<u>Pisidium subtruncatum</u> Malm
<u>Bithynia leachii</u> (Sheppard)	<u>Pisidium supinum</u> A.Schmidt
<u>Physa fontinalis</u> (L.)	<u>Pisidium henslowanum</u> (Sheppard)
<u>Lymnaea truncatula</u> (Müller)	<u>Pisidium nitidum</u> Jenyns
<u>Lymnaea palustris</u> (Müller)	<u>Pisidium moitessierianum</u> Paladilhe
<u>Lymnaea peregra</u> (Müller)	

Frank Berry

GENERAL NOTES

A LITTLE-KNOWN "COWRY" PUBLICATION

Some years ago I came across, on a bookstall in Chester Market, a booklet of 30pp. entitled "Collecting Cowries in Dar-es-Salaam" by Claude C. Woltz and David B. Belcher. No publisher's name is given, nor price, and it was printed in Tanzania. It is also undated, but in a list of references on p.29 a 1967 item is quoted.

44 spp. and subsp. are described and illustrated in black-and-white; dimensions are given, rarity or otherwise, and localities within the area covered by the booklet. There is also a sketch-map of the reefs in the Dar-es-Salaam area.

I have not seen the booklet listed anywhere, and Mr. Scase had not encountered it either. It seems a useful item, and I should be glad to learn more of its authors (who are portrayed on p.4).

Nora F. McMillan

ZENOBIELLA SUBRUFESCENS (MILLER) IN FOLIAGE

I have often found Z. rufescens in woods in the west of England by searching litter and herbage, but usually only in ones and twos - even when assisted by other collectors. In June 1978 I had groups of students beating tree foliage for insects in Earls Hill Nature Reserve near Pontesbury, Shropshire. Much to my surprise, a number of snails fell out of the foliage, all of which were Z. subrufescens. Four separate beatings of Wych Elm foliage over a 1m² tray produced 16 individuals. The same number of beatings on oaks, ash and hawthorn produced none. The habit of climbing trees in summer is known (see Ellis, A.E., British Snails, p.217) but the preference for particular species seems worth noting.

R. A. D. Cameron, Lecturer in Biological Sciences, The University of Birmingham

ANNUAL EXCURSION OF THE SOCIETY, 28.8.1885

.....One of the four most interesting houses in the parish of Buryan was Burnuhall. The memoirs of Burnuhall are connected with the Civil Wars. Here Miss Davies, a devoted Royalist, constructed a piece of shell-work representing Charles I fleeing from his enemies, with the legend, "This is the heir; come let us kill him, that the inheritance may be our own." An angel was represented saying, "Is it not written, Thou shalt do no murder?" The shells were collected at Porthcurnow and other neighbouring coves.

.....Attention was next directed to the very handsome altar-cloth (of St.

Buryan Church), which was worked nearly 200 years ago by two maiden ladies - the Misses Davies, who were great Royalists. The cloth, which is in excellent preservation, is still used on special occasions. (PZ.N.H. & A.S., New Series Vol. 2, 1884-85: 123-124).

(from Elizabeth Jackson)

POST OFFICE SNAILS

Mr. Colin McLeod of Dundee tells me that several newspapers have carried reports of giant West African land snails being discovered living in Aberdeen. Anyone suffering losses or delay in post recently may be interested in the following extract from 'The Sunday Post', 9th. July 1978 -

Snail Mail: A letter reached us last week in a sorry state. Frayed and torn in one corner, it looked as if it had been chewed. The explanation lay in a regrets note from the postmaster where it had been posted. It said simply - "Eaten by snails in the post-box." So that's what happens to second-class mail!

SHELLS FOR SALE. A fine selection of shells for the collector is available at Eaton's Shell Shop, 16 Manette Street, off Charing Cross Road, London, W1V 5LB (telephone: 01-437 9391).

SHELL INSURANCE. Contact us for expert advice without obligation. Jaykel Insurance Services and Finance Ltd., 135 Mitcham Road, London, SW17 9PE Tel: 01-767 2430

EXCHANGE REQUEST. A Japanese shell collector wishes to exchange shells with the members. Has very large collection of Japanese shells, particularly Southern Japanese. Write to - Mr. Tetsuko Tateshi, [REDACTED], Ushibuka - shi, Kumamoto - ken, Japan.

ANNOUNCEMENT. Ruth Fair died of cancer on June 21st. The Houston Conchology Society is setting up a Memorial Library Fund in her honour and anyone wishing to contribute could send a cheque to that Society, c/o. Frank Petway, 2431 Brookmere, Houston, Texas, 77008, U.S.A. (Notice from Marie Emerson)

THE SOCIETY'S PUBLICATIONS

Back numbers of the Conchologists' Newsletter may be obtained from J. D. R. Fryer, Dept. of Geology, King's College, Strand, London, W.C.2, at 25p each plus post. The Hon. Secretary, Mrs. E. B. Rands, can supply copies of the Marine Concordance, 30p to members and 50p to non-members, the Atlas of Non-Marine Mollusca, £2.50 to members plus 85p post/packing and £3.00 to non-members plus 85p post/packing. Mrs. Rands can take orders for back numbers of the Journal of Conchology.

Papers for Students can be obtained from Mr. A. Norris, Natural History Dept., City Museum, Municipal Buildings, Leeds, LS1 3AA.

REVISED RULES OF THE SOCIETY

At a Special General Meeting on 21st. October 1978 a revision of the Rules of the Society was approved. The last issue of the Rules was in February 1964. A number of the rules remain unchanged, some because of the requirements of the Charity Commissioners. The principal amendments are:

- 1) to make it clear that ordinary members of Council serve for a period of 3 years;
- 2) the number of ordinary members of Council is increased from 6 to 9, partly in order to give representation to the increased membership and partly to involve more members in the activities of the Society;
- 3) to state that a new President is normally nominated by the retiring President, subject to the approval of Council.

Copies of the revised Rules are available to all members, either at Meetings or on request to the Hon. Secretary enclosing a stamped and addressed envelope.

ANNUAL SUBSCRIPTIONS, 1979

Dear Members,

Please note that the Annual Subscription for 1979 falls due on 1st. January, and make a note to pay promptly without further reminder; you may claim a reduction if this is done before 31st. March. If you would like to pay by Banker's Order I shall be happy to send a Banker's Order Form on request. All cheques should be payable to the Society.

Subscriptions may be paid under Seven Year Covenant, enabling the Society to reclaim the income tax paid on the amount of the subscription. This is, of course, of great benefit to the Society and we shall be grateful to any others prepared to pay in this way. Please ask for a form of covenant and explanatory letter if you would like to consider it.

Marjorie Fogan (Hon. Treasurer)

██████████, Atherton, Manchester, ██████████

Annual Subscriptions:

Ordinary Member	£5	(U.S. \$15.00)
Joint Members	£6	(U.S. \$18.00)
Junior Member	£1	(U.S. \$ 3.00)

Ordinary Members and Joint Members may deduct the sum of 50p (U.S. \$1.50) from subscriptions paid before 31st. March.

CHRISTMAS 1978

The Newsletter Editor sends Christmas greetings and Good Wishes for the New Year to every reader.

THE NEWSLETTER IN 1979

I urgently need more contributions for your Newsletter! Particularly long articles - 2, 3 or 4 pages - with clear black and white drawings, diagrams or maps where appropriate. Also field meeting reports, comments or queries from Junior Members, news items, letters to the Editor - in fact, anything which you, yourself, would like to read. Remember, all contributions gratefully received!

P. E. Negus, Dec. 1978

COPY DATES FOR NEWSLETTER CONTRIBUTIONS

Copy for the March	issue should reach me before	6th. January
" " " June	" " " "	6th. April
" " " September	" " " "	6th. July
" " " December	" " " "	6th. October

Newsletter Editor